

A SPLIT MODEL FOR CATEGORY SPECIFICATION:
LEXICAL CATEGORIES IN TURKISH

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Dissertation Abstract

“A Split Model for Category Specification: Lexical Categories in Turkish”

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This dissertation discusses the nature of the traditionally recognized categorial distinctions ‘noun’, ‘adjective’ and ‘verb’ in Turkish and investigates whether these distinctions are specified in the lexicon or in syntax. Based on the constraints governing the morphological and syntactic distribution of lexical expressions in Turkish, this study shows that there is a lexically specified category distinction among lexical expressions which is represented in the lexicon by the $\pm$ values of a single feature N. It is argued that this distinction divides lexical items into three major groups: +N expressions which are stative, -N expressions which are nonstative and expressions which are unspecified for the value of N. It is argued that the traditional noun-adjective distinction does not represent a category distinction in the lexicon and +N expressions become nouns in syntax through case assignment and become adjectives when they occur in attributive modification structures. It is further demonstrated that there are in fact no verbs in the lexicon and that the expressions traditionally classified as verbs are composed of a -N root expression and event heads such as CAUSE, DO and BECOME. This study, in conclusion, introduces a model of category specification which is split between the lexicon and syntax and demonstrates that as there are expressions in the lexicon with specified category features, there are also expressions with unspecified category features and which are categorized in syntax.

Tez Özeti

“Ayrık bir Ulam Belirleme Modeli: Türkçe’de Sözlüksel Ulamlar”

Dilek Uygun

Bu çalışma ad, sıfat ve eylem olarak nitelendirilen geleneksel ulam ayırımlarının Türkçe’deki niteliğini tartışmakta ve bu ayırımların sözlükçede mi yoksa sözdizimde mi belirlendiğini sorgulamaktadır. Türkçe’de sözcüklerin biçimbirimsel ve sözdizimsel dağılımlarındaki kısıtlamalar incelenerek, sözlükteki öğeler arasında bir ulam ayırımının var olduğu ve bu ayırımın tek bir özelliğin, N’nin, $\pm$ değerleri ile temsil edilebileceği gösterilmektedir. Bu ulamsal ayırımın sözlükte bulunan öğeleri üç ana gruba ayırdığı tartışılmaktadır: +N durağan özellikli öğeler, -N durağan olmayan özellikli öğeler ve N özelliği için belirlenmemiş öğeler. Çalışmada Türkçe’de ad ve sıfat olarak nitelendirilen ayırımların sözlüksel değil sözdizimsel ayırımlar olduğu savunulmakta ve +N özelliğine sahip sözlükçe öğelerinin söz dizimde durum atanarak ad olarak belirlendiği, niteleme yapılarında ise sıfat olarak belirlendiği öne sürülmektedir. Ayrıca bu çalışmada eylem olarak tanımlanan sözcüklerin -N özelliğine sahip bir kök ve ET, YAP, OL gibi olay bildiren yüklemelerin birleşmesiyle meydana gelen, türemiş sözcükler olduğu gösterilmekte ve sözlükçede eylem olarak sınıflandırılmış sözcüklerin bulunmadığı savunulmaktadır. Sonuç olarak bu çalışma ulam belirlemeyi sözlüksel ve sözdizimsel olarak ikiye ayıran bir model ileri sürmektedir. Bu modele göre, sözlükte ulamı belirlenmiş öğeler bulunduğu gibi ulamı söz dizimde belirlenen öğeler de bulunmaktadır.

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ABBREVIATIONS

1	1st person
2	2nd person
3	3rd person
abl	ablative
acc	accusative
aor	aorist
br	bound root
caus	causative
com	committative
cop	copula
dat	dative
der	derivational suffix
evid	evidential
fut	future
gen	genitive
impf	imperfective
inch	inchoative
inst	instrumental
loc	locative
mod	modality suffix
neg	negation
nom	nominative
nomin	nominalizer
nonsub.rel	nonsubject relativizer
pass	passive
past	past
pf	perfective
pl	plural
poss	possessive
prog	progressive
recip	reciprocal
refl	reflexive
sg	singular
sub. rel	subject relativizer
vn	verbal noun / nominalizer

CHAPTER 1

INTRODUCTION

1.1 Goals of the Dissertation

The aim of this dissertation is to clarify the nature of the category distinctions ‘noun’, ‘adjective’ and ‘verb’ in Turkish and to determine whether lexical expressions are specified for these distinctions in the lexicon or in syntax.

The role that the lexicon has in the overall architecture of grammar and the division of labor between the lexicon and syntax has been the subject of much debate in the literature. Up to present opposing views have emerged concerning two major issues: the type of grammatical information encoded in the lexicon, and the processes that reside in this component. With respect to grammatical information, there are views arguing that lexical entries are encoded with grammatical information such as category specification and argument structure (e.g. Di Sciullo and Williams 1987; Grimshaw 1990; Pustejovsky 1991; Levin and Rappaport Hovav 1995), as well as those views claiming that lexical items are devoid of any grammatical information (e.g. Marantz 1997; Borer 2005). With respect to the lexicon-internal processes, while there is a wide range of views which argue for the presence of generative devices, processes, or syntactic modes of combination in the lexicon (e.g. Di Sciullo and Williams 1987; Pustejovsky 1991; Hale and Keyser 1993; Levin and Rappaport Hovav 1995), there are also views which argue against endowing the lexicon with any computational capacity (e.g. Marantz 1997; Borer 2005; Ramchand 2008).

This study focuses mainly on one type of grammatical information, that is, category specification, and investigates whether the items in the lexicon are labeled with category tags distinguishing them as nouns, adjectives or verbs.

Recently the approaches represented by Distributed Morphology (e.g. Marantz 1997, 2000, 2001; Harley and Noyer 1998) and Borer (2003, 2005) have eliminated the notion of 'lexical' categories altogether and claimed that lexical expressions are categoriless roots which *become* 'noun', 'adjective' or 'verb' in syntax. This 'syntactic' view of categorization represents just the opposite of the well-known 'lexicalist' views for which category distinctions such as 'noun', 'verb' and 'adjective' is an inherent property of expressions listed in the lexicon.

Data concerning category distinctions in Turkish support both the syntactic and lexicalist views of categorization demonstrating that there is no universally definable division between the lexicon and syntax concerning category specification and there may be even variation concerning the category specification of expressions within an individual language. For Turkish, the data indicate that while the majority of expressions bear a category specification in the lexicon dividing them into two major classes which correspond to the traditionally identified 'nominal' and 'verb' classes, there are also expressions which are unspecified for this category distinction. Moreover, the expressions in the lexicon are unspecified for the noun-adjective distinction and it is the syntactic environment which determines this distinction.

As this study demonstrates the presence of a lexically specified category distinction among lexical items which apparently corresponds to the traditional nominal-verb distinction in Turkish, it also investigates the exact nature of this distinction by specifically focusing on the category 'verb'. The recent line of research shows that the expressions traditionally classified as verbs can be

syntactically derived from some primitives (e.g. Huang 1997; Harley and Noyer 1998; Hale and Keyser 1993, 2002; Lin 2001; Ramchand 2008, among others). Since according to these approaches the notion 'verb' is a derivative rather than a primitive notion, several questions arise as to whether the expressions classified as verbs are built in the lexicon or in syntax and whether there are in fact lexical items in the lexicon which can be classified as verbs.

Thus, this study investigates not only the role that the lexicon and syntax have in establishing the distinctions between expressions called 'nouns', 'verbs' and 'adjectives' but also the nature of these distinctions in Turkish.

1.2 Theoretical Background: The Lexicon-Syntax Controversy

While it is uncontroversial that language has a component which comprises a list of elements for syntactic composition, there has been much debate on the nature of the information and processes that reside in this component and its interaction with syntax. The following sections present an outline of the major points where opposing views of the lexicon are gathered around.

1.2.1 Presence vs. Absence of Syntactic Information

For a line of approaches which can be referred to as lexicalist approaches (e.g. Di Sciullo and Williams 1987; Grimshaw 1990; Pustejovsky 1991; Levin and Rappaport Hovav 1995) the lexicon contains lexical entries which encode fully articulated information regarding their lexico-semantic, syntactic and morphological properties. It is this syntactic information which determines the formal properties of the

structures that lexical items can occur in. Thus, category information encoded with expressions distinguishes them as 'verb', 'noun' and 'adjective' and determines whether they could be inserted under a V node, N node or an A node in syntax. Similarly, information regarding argument structure determines whether a verb could occur in a transitive or intransitive frame in syntax.

As opposed to lexicalist approaches, the approaches recently taken by Marantz (1997, 2001) and Borer (2003, 2005) represent a view whereby lexical items possess no syntactically relevant information. Under this view the lexicon is devoid of category specification and argument structure information. It is the properties of the syntactic structure, more specifically, the functional projections which determine the category and argument structure associated with lexical items. Thus, an expression which bears no category information becomes a 'noun' or a 'verb' depending on the nature of the functional projection under which it is embedded.

1.2.2 Computational vs. Noncomputational Lexicon

There are also opposing claims regarding the processes that reside in the lexicon. For a line of approaches (e.g. Pustejovsky 1991; Di Sciullo and Williams 1987; Hale and Keyser 1993; Levin and Rappaport Hovav 1995) there are lexicon-internal processes which can manipulate lexical items and which can alter their category specification and/or argument structure prior to their insertion into syntactic nodes. Although these approaches may vary widely with respect to the nature of these processes, they all argue for a lexicon which has computational powers.

Contrary to this view of the lexicon, it has also been claimed that there are no distinct processes or modes of combination in the lexicon and that syntax is the only

combinatorial system of the language faculty (e.g. Chomsky 1995; Marantz 1997; Borer 2005; Ramchand 2008).

1.2.3 Rigidity vs. Flexibility

For approaches where lexical items are claimed to be encoded with full grammatical information ‘rigidity’ in the way lexical items are associated with syntactic structure is expected because the grammatical information that lexical items are encoded with imposes constraints on the insertion possibilities of lexical items. In other words, a lexical item bearing the categorial specification N cannot occur in a V node or an A node. Such approaches need to account for the ‘flexibility’ or variation in the behaviour of lexical items. One way to do this is to posit some lexicon internal processes which can manipulate the syntactic properties or features associated with these expressions. For instance, the possibility of having the expression *box* both as an N (e.g. *a box*) and a V (e.g. *to box*) is accounted for by a conversion process or by a zero affixation process in the lexicon which has the effect of changing the category specification of the expression *box*.

On the other hand, for those approaches which argue against encoding of grammatical information with lexical items, ‘flexibility’ or ‘variation’ is expected. Thus, an expression like *box* does not bear any category information and can occur both under an N or a V node in syntax. For these approaches, it is ‘rigidity’ which needs to be accounted for. Since lexical items are not encoded with grammatical information such as category specification or argument structure, there is nothing that would impose a constraint on their insertion possibilities. In fact, lexical items are free to be inserted under any syntactic node. For these approaches, any constraints on

the insertion of lexical items or limits on variation are argued to be due to extralinguistic factors such as world knowledge and convention.

With the above oppositions two extreme views arise concerning the architecture of grammar. On one side, there is a powerful lexicon heavily loaded with grammatical information and processes, along with a syntactic component where the properties of structure, to a large extent, are determined through relevant information projected from the lexicon. On the other side, there is an impoverished lexicon but a syntax which relies heavily on functional structure for category and argument structure information. As it will be clear from the discussion in the following chapters, the view of the lexicon in this study argues for a stand in between these two extreme positions.

1.3 Theoretical Background: Lexical categories

The classification of words into distinct categories and the identification of these word classes have a long tradition in the history of language studies. In ancient India the author of the oldest Sanskrit grammar Pāṇini divided words into two major classes based on their ability to inflect. The class of uninflected included prepositions and particles while the class of inflected words included nouns and verbs, the former inflected for case, and the latter inflected for person, number and tense. The distinction between nouns and verbs was recognized in terms of a distinction between 'subject' and 'predicate' rather than the different inflections associated with these expressions (Robins 1997: 179).

The European tradition of linguistic categorization dates back to Plato who analyzed sentences into two major components: the nominal "onoma" and the verbal

“rheme”. Similarly, Aristotle defined ‘rheme-verb’ as representing the predicate of a sentence and being associated with a time reference. ‘Rheme-verb’ when not forming part of a sentence, that is, when in isolation, was treated as an ‘onoma-noun’.

Aristotle further added a distinct class of ‘conjunctions’ including conjunctions, pronouns and the article (Robins 1997: 32).

The Greek Grammar *Téchnē Grammatiké* of Dionysius Thrax (around 100 BC) focused on the formal differences between classes of words and their correlation with particular meanings. Eight classes of words were recognized: noun, verb, participle, article, pronoun, preposition, adverb and conjunction. A noun was defined as a part of speech which is inflected for case and which signifies a concrete or abstract entity. A verb was identified as a part of speech which has inflection for tense, person, number and signifies an activity or process performed or undergone (Robins 1997: 41).

These earliest attempts to divide words into distinct categories or ‘parts of speech’ exemplify the various types of criteria researchers have employed to classify expressions as nouns, adjectives and verbs. Establishing the verb-noun distinction on the subject-predicate distinction involved partly syntactic, partly functional criteria and establishing the distinctions on the different types of inflections involved morphological criteria. Association of distinct classes with particular meanings involved notional criteria. Through the history of linguistic categorization, linguists have tried to find a balance between these different criteria by focusing only on some of them and ignoring others or by reorganizing their order of application.

1.3.1 Defining Verbs, Nouns and Adjectives

1.3.1.1 Notional Criteria

In a notional approach to categorial distinctions, the distinctions are stated by using semantic criteria, that is, in terms of what each category designates. Nouns are usually defined as lexical items that denote abstract or concrete entities, adjectives as expressions that denote properties and verbs as those which signify activities, processes, or events.

A problem for such notional approaches to categorization is that the same entity, property, or event may be referred to by different parts of speech in different languages. Wierzbicka (1988) indicates that one can even find similar meanings encoded both in a noun and in an adjective as exemplified in English by the lexical items *round* which is an adjective and *circle* which is a noun by morpho-syntactic criteria (e.g. **This is a round*, **These are rounds* vs. *This is a circle*, *These are circles*).

1.3.1.2 Morphological and Syntactic Criteria

Especially under the structuralist movement in the first part of the twentieth century, the notionally based definitions of word classes were ignored because they did not work for individual languages or were hard to apply due the reasons mentioned above. Instead, preference was given to morphological and syntactic criteria. Studies on several languages have yielded some morphological and syntactic properties that are in general considered to be typically associated with nouns, verbs and adjectives.

In many languages nouns can be identified as taking affixes indicating number, case and definiteness. In terms of syntactic distribution, nouns can occur with demonstratives, articles and they can occur in the syntactic function of argument (subject, object, etc.).

Again in many languages verbs take affixes indicating tense, aspect, mood, polarity (affirmative, negative), and voice affixes (reciprocal, reflexive, passive, causative, anticausative and others). Syntactically, verbs can usually occur as predicates without additional coding, whereas nouns and adjectives often need additional means such as copular verbs when they occur as predicates.

Adjectives usually have no inflectional properties of their own, yet, in some languages, they take affixes indicating comparison. Moreover, in some languages adjectives are inflected for agreement with the noun they modify. With respect to syntactic distribution, adjectives typically occur in comparative constructions and take degree modifiers which cannot co-occur with verbs and nouns. The most prominent distinguishing feature of adjectives is that they can occur as modifiers of nominal expressions.

The above mentioned morphological and syntactic properties associated with verbs, nouns and adjectives in several languages have generally been recognized as the morphological and syntactic criteria to be applied in the classification of expressions into distinct categories.

1.3.1.3 Functional Criteria

According to functionalist approaches categories are prototype concepts with vague boundaries and the distinctions between them are based on some semantic and/or

pragmatic distinctions. Verbs are considered to denote dynamic, short-term state of affairs while adjectives are identified with states or properties of temporally medium-length duration and nouns with entities which have long temporal duration (Hopper and Thompson 1984; Givon 1984). These temporal properties associated with different categories represent the properties of the prototype members in each category. Therefore, for the functionalists, the existence of a verb like *exist* which does not denote a dynamic, short-term state of affairs does not posit a problem since it is considered to be a non-prototypical member of the verb category.

In functionalist approaches categories are also identified with the prototypical functions they have in communication (Croft 1991; Hengeveld 1992; Bhat 1994). Thus, nouns are expressions which are typically used for referring, adjectives are typically used for modification and verbs are typically used for predication. Nouns and adjectives can also be used for predication but this requires extra morphological or syntactic means (e.g. via copulas) and verbs can be used for referring or for modification, which again require extra morphological or syntactic marking (e.g. via nominalizations or relativization).

1.3.2 The Universality of Category Distinctions

The morpho-syntactic properties of nouns, verbs, and adjectives that are mentioned above are in general considered to be sufficient to establish these classes in several languages. However, it has also been argued that such a three way distinction is not at all available for some languages. For instance, Hengeveld's (1992) typological study of the parts of speech systems in languages from different families recognizes three major types of systems: specialized, flexible and rigid. Languages with

specialized parts of speech systems make a distinction between verbs, nouns, adjectives and adverbs. Languages with flexible parts-of-speech systems combine the functions of two or more categories in one part-of-speech. In other words, a single part of speech may be used in different functions. Languages with rigid part of speech systems are languages which simply lack a category.

Thus, according to Hengeveld the observed lack of a certain category distinction in a language can be either because the language lacks that category altogether or the language has a single category of flexible expressions which demonstrate morphological and syntactic behavior associated with distinct categories.

1.3.2.1 Lack of Adjective Distinction

In some languages adjectives, in contrast to nouns and verbs, form a rather small, closed class. For instance, Tamil (southern India) and Hausa (northern Nigeria) are languages which have only about a dozen adjectives (Dixon 2006). In such languages the concepts that are denoted by adjectives in the small class correspond to the semantic classes: dimension (e.g. long, short, large, small), age (e.g. new, young, old), value (e.g. good, bad), color (e.g. black, white, red). Other concepts such as human propensity concepts for which English has adjectives (e.g. silly, angry, happy, clever, proud) and physical property concepts again indicated by adjectives in English (e.g. cold, hot, soft, heavy, hot) are then expressed by verbs or by nouns in those languages.

Some languages appear to lack the adjective class entirely. In those languages, property concepts are expressed by words that have morphosyntactic

behavior similar to verbs or nouns. For instance, in Korean, words denoting property concepts may inflect for tense and mood like verbs without the need for a copula (Haspelmath 2001):

- (1) a. *Salam-i mek-ess-ta.*
person-nominative eat-past-declarative
'The person ate.'
- b. *San-i noph-ess-ta*
hill-nominative high-past-declarative
'The hill was high.'

Moreover, in Korean property concepts require a relativization suffix, just like verbs, when they occur as a modifier of a noun:

- (2) a. *mek-un salam*
eat-relative person
'a person who ate'
- b. *noph-un san*
high-relative hill
'a high hill'

The Korean data illustrates a case where property concept expressions behave morphologically and syntactically similar to verbs. In Turkish, on the other hand, as

it will be demonstrated in section (1.4.3.), property concept expressions can be clearly distinguished from verbs on morphological and syntactic grounds but it is difficult to distinguish these expressions from nouns in terms of their morphological and syntactic behavior. Examples of languages which fail to distinguish adjectives from nouns will be presented in chapter 3 where the noun-adjective distinction in Turkish is discussed in detail.

1.3.2.2 Lack of Noun-Verb Distinction

It has been claimed that there is almost no or only a very slight distinction between nouns and verbs in several North American languages of the Wakashan, Salishan, and Iroquoian families, as well as in a number of Polynesian languages. For instance, Hengeveld and Rijkhoff (2005) argue that Mundari (an Austroasiatic language of India) and Samoan (Austronesian) are languages without distinct classes of verbs and nouns.¹ In Samoan, an expression can be both the head of a predicate phrase and the head of a referential phrase:²

- (3) a. Ua mālosi le lā
 perf strong art sun
 ‘The sun is strong.’
 Lit. ‘The sun strong.’

¹ This view is not shared by all researchers. See Evans and Osada (2005) for an argument that Mundari has clearly definable classes of verbs and nouns.

² The abbreviations in these examples are as follows:
art: article, dir: directional, genr: general aspect-tense-mood marker, perf: perfective, poss: possessive.

b. Ua lā le aso.

perf sun art day

‘The sun is shining today.’

Lit. ‘The day suns.’

(4) a. E alu le pasi i Apia.

genr go art bus dir Apia

‘The bus goes to Apia.’

b. le alu o le pasi i Apia

art go poss art bus dir Apia

‘the going of the bus to Apia’

Lit. ‘the go of the bus to Apia’

(Mosel and Hovdhaugen 1992: 80, 73, 74, cited in Hengeveld and Rijkhoff
2005: 410)

Hengeveld and Rijkhoff point out that it is morphosyntactic clues which indicate the particular function of a certain lexeme. If it occurs in clause initial position and combines with tense / aspect / mood morphology it serves as the predicate and if it appears with an article or a preposition it serves as a referential phrase. They claim that it is only for ontological (i.e., non-linguistic) reasons that certain expressions tend to be used more in one function rather than in another one.

Thus, the similarities in morphological and syntactic behavior of expressions which apparently belong to different notional / semantic classes have generally been associated with the lack of certain category distinctions in languages.

1.3.3 Approaches to Lexical Categories in the Generative Framework

Within the generative framework there have been two opposing views concerning the role of the lexicon and syntax in specifying category distinctions. The lexicalist approach assumes categorial identity to be an inherent property of lexical expressions stored in the lexicon and thus, classifies items of the lexicon into nouns, verbs and adjectives. On the other hand, the syntactic approach to categorization argues for a lexicon devoid of any lexical category specification and derives nouns, verbs and adjectives in syntax from category neutral roots.

These two opposing approaches to categorization stem from the two opposing views concerning the division of labor between the lexicon and syntax. According to the traditional lexicalist views, the lexicon is more than a simple listing of sound-meaning pairings: it encodes information regarding the categorial identity of expressions, their argument structure properties, subcategorization features and it has computational power. According to the anti-lexicalist/syntactic views, the lexicon simply contains sound-meaning pairings. Information related to category distinctions and argument structure is not encoded in the lexicon and it is syntax which has all the computational power.

The following sections, firstly, will present the lexicalist approaches and the different types of feature systems used by these approaches. Secondly, two syntax oriented treatments of categories: Distributed Morphology (e.g. Marantz 1997, 2001)

and Borer (2003, 2005) will be introduced. Then, Baker's (2003) approach to lexical categories will be discussed. Although this approach is syntax oriented, it has some lexicalist implications as well. Finally, Vinokurova's (2005) approach to lexical categories which establishes the categorial distinctions in the Turkic language Sakha through thematic properties will be presented.

1.3.3.1 Category Specification in the Lexicon

Approaches that consider categorial specifications to be an inherent property of lexical expressions differ from each other mainly with respect to the feature systems they employ to account for the differences between lexical categories.

A common feature system that has been especially employed in theories of word formation involves simply using the atomic features such as N, A, V to classify items in the lexicon into distinct groups (e.g. Aronoff 1976; Lieber 1980; Selkirk 1982; Di Sciullo and Williams 1987, among others).

On the other hand, in the earlier generative syntax tradition, lexical categories are characterized in terms of the binary distinctive features $\pm N$ and $\pm V$ (Chomsky 1970, 1981). Using these two features the four major lexical categories, nouns, verbs, adjectives, and adpositions (Prepositions and Postpositions) are characterized as in (5):

(5)	a.	Noun	+N -V
	b.	Verb	-N +V
	c.	Adjective	+N +V
	d.	Adposition	-N -V

In this type of a feature system, nouns, verbs, adjectives and adpositions are taken as complexes of features rather than primitives. However, as Baker (2003) points out, the exact interpretation of these features has remained unclear and within the generative framework there are few or no principles that refer to these features or values. Stowell (1981) proposed to interpret these features in terms of case: +N categories receive case and –N categories assign case. However, this claim was later dismissed on the grounds that nouns and adjectives can license genitive case.

Baker (2003) also argues against the natural classes that this feature system defines. The system defines the following natural classes on the basis of shared features:

(6)	a.	Nouns, Adjectives	(+N)
	b.	Verbs, Adjectives	(+V)
	c.	Verbs, Adpositions	(-N)
	d.	Nouns, Adpositions	(-V)

There are also two classes the members of which do not have any feature in common; adjectives and adpositions, nouns and verbs. Baker (2003) points out that although this feature system does not define adjectives [+N,+V] and adpositions [-N,-V] as a natural class with a common feature value, both categories behave as a natural class in English with respect to several syntactic phenomena. For instance, both APs and PPs can be used to express the goal or result of the action (e.g. pound the metal *flat*, threw the ball *into the barrel*) as opposed to NPs and VPs (e.g. *pound the metal *a sword*, *polish the table *shine*). Similarly, both APs and PPs can modify

nouns (e.g. the man *in the garden*, the man *responsible*) contrary to nouns and verbs (Baker 2003:2).

Jackendoff (1977) proposes the following alternative feature system for lexical categories:

(7)	a.	Noun	+subj -object
	b.	Verb	+subj +object
	c.	Adjective	-subj -object
	d.	Adposition	-subj +object

The $\pm$ subject feature is chosen to account for the syntactic subject relation. Both verbs and nouns can have subjects (the genitive nominal in the case of NP) whereas adjectives and adpositions do not. The $\pm$ object feature represents the ability to take a bare NP complement, which verbs and adpositions have in English whereas nouns and adjectives do not.

Note that this feature system defines different natural classes compared to the previous one. Contrary to the previous feature system, verbs and nouns form a natural class as opposed to verbs and adjectives. Moreover, adpositions and adjectives form a natural class as opposed to adpositions and nouns. A weakness of this feature system is that it does not account for data from other languages (Baker 2003:11). For example, French nouns do not take genitive subjects and some Dutch adjectives can take NP complements. Moreover, in English a noun does not have to take a subject.

In summary, the feature based approaches mentioned above seem to have weak explanatory power. However, this does not necessarily mean that feature based

approaches should be given up entirely. As Baker (2003) notes, it is still possible to develop a feature based system of categorization with more explanatory power by using different types of features. Note that these feature based approaches attempt to derive the relevant features by making reference to the syntactic environment that lexical items appear in. Nevertheless, they differ from the syntactic categorization approaches, in that, the features are inherent in the lexical expressions themselves and a category label is specified for each lexical entry.

1.3.3.2 Syntactic Approaches to Categorization

According to the recent views adopted by the proponents of Distributed Morphology (e.g. Marantz 1997, 2001; Harley and Noyer 1998) and by Borer (2003, 2005), lexical entries are generalized roots encoding concepts and categorial identity is determined by functional projections in syntax. Both Distributed Morphology and Borer (2003, 2005) argue against lexicalist approaches by claiming that these approaches run into the problem of redundancy since lexical category specification is encoded both in the lexicon and in syntax. The aim is to shift the computational load away from the lexical entry to syntactic structure so that the lexicon contains a minimal amount of structural information. Although both Distributed Morphology and Borer's approaches are syntactic approaches to categorization, they differ in certain aspects. The following is a rough outline of Distributed Morphology and Borer's (2003, 2005) proposals, the specifics of which will be elaborated mainly in chapter 2 and in the subsequent chapters.

1.3.3.2.1 Distributed Morphology

In Distributed Morphology (henceforth, DM) categorization is done by the functional heads *v*, *a*, *n* in syntax. The combination of a categoriless root with *v* head yields a verb, its combination with an *n* head yields a noun, and its combination with an *a* head yields an adjective. The functional heads *v*, *n*, *a* may or may not have overt phonological realizations. For instance, the noun *form* is derived by combining the categoriless root $\sqrt{\text{FORM}}$ with an *n* head which is phonologically unrealized in this case. Similarly, the derivation of the verb *form* also involves a phonologically null *v* head. On the other hand, the functional head *a* which is involved in the derivation of the adjective *formal* is spelled out as the morpheme *-al*. For DM all word formation is carried out in syntax and thus category changing derivational morphemes are considered to be the spell-outs of the functional heads *v*, *a*, *n*.

1.3.3.2.2 Borer (2003, 2005)

In Borer's exo-skeletal approach it is again the syntactic structure that determines the interpretation of lexical items. However, rather than functional heads like *v*, *n*, *a*, functional heads such as D(eterminer), T(ense), or Asp(ect) do the categorization. In Borer's system roots are selected to form the conceptual array but since no category specification is available they are inserted as an unordered set into a lexical phrasal domain (L-D). Categorization by functional structure is simply the result of merging a functional head with L-D. An item from the L-D array that merges with a T head becomes a verb and an item that merges with a D head becomes a noun. Derivational morphemes are also treated as functional morphemes which determine category as in

DM's approach. Thus, the expression *form* in English becomes a noun when it merges with a D (e.g. *the form*), it becomes a verb when it merges with T (e.g. *formed*) and it becomes an adjective when it merges with the suffix *-al* (e.g. *formal*).

1.3.3.2.3 Problems for Categorization in Syntax

According to the models of categorization in DM (e.g. Marantz 1997, 2001; Harley and Noyer 1998) and Borer (2003, 2005) any categoriless root can be inserted almost under any functional projection. If a certain expression is apparently incompatible in a certain morphological or syntactic environment, this means it already bears a category specification which is not compatible with the selectional restrictions associated with this morphosyntactic environment. Thus, the expression *formal* would not merge with a T(ense) head because it has already been categorized as an adjective by the suffix *-al* and T never selects an adjective as its complement.

It is clear that such an approach leads to extensive over-generation. This type of categorization works well when there is a freedom for roots to switch categories like the case in English where the same expression can belong to different categories (e.g. *a box*, *to box*, *a hit*, *to hit*, *clean*, *to clean*). However, the suitability of a theory of category neutral items for a language where there is no such flexibility is questionable because in several languages only a specific group of expressions can merge with a D(eterminer) head or only a specific group of expressions can merge with a T(ense) head. Such cases pose a major problem for syntactic categorization approaches where expressions are argued to bear no categorial specification that distinguishes them from each other prior to syntax. Both in DM and in Borer's approach such restrictions can only be explained by claiming that such expressions

already bear a categorizing head in their formal structure which restricts their morphosyntactic behavior. However, as it will be discussed in detail in chapter 2, positing internal complexity for apparently monomorphemic expressions leads to an extensive increase in null heads in a language like Turkish where a majority of lexical expressions do not illustrate the noun-verb ambiguity as illustrated by the form *box* (e.g. *a box*, *to box*) in English.

1.3.3.3 Baker (2003)

Baker's account of lexical categories both makes use of the feature systems employed previously by the traditional generative approaches and at the same time employs a syntactic approach to categorization. However, his approach is 'syntactic' in a different sense compared to DM and Borer (2003, 2005) and it even has some 'lexicalist' implications. The following sections will discuss each of these aspects.

1.3.3.3.1 Baker's Feature System

In Baker's approach verbs are distinguished from nouns and adjectives in that they can project a specifier position while nouns and adjectives require a Predicate head to do that. Nouns are distinguished from adjectives and verbs with their semantic criterion of identity whose syntactic corollary is a referential index. Adjectives, on the other hand, are distinguished from verbs and nouns because they can neither project a specifier position nor bear referential indices. Baker indicates that in his theory the feature N corresponds to having a referential index and feature V corresponds to having a specifier (2003:241). These are privative features which do

not have binary values. Thus, something is either V (has a specifier) or N (has a referential index), or none of them (has neither a specifier nor a referential index). In other words, in this system there is no place for the unspecification of a certain feature. Meanwhile, the possibility of having both V and N features is eliminated by the following constraint (Baker 2003:165):

(8) *The Reference-Predication Constraint (RPC)*

No syntactic node can both theta-mark a specifier and have a referential-index.

The above constraint captures the intuition that nothing can be both a predicate and a referring expression at the same time.

1.3.3.3.2 The Syntactic Nature of Categorization

Baker points out that his approach to lexical categories is syntactic in the sense that ‘specifier’, which verbs are argued to project, is a syntactic notion defined in terms of phrase structure. The referential index of a noun, Baker argues, is also a syntactic element. From these it follows that adjectives which are defined in terms of not having a specifier and a referential index are syntactic entities as well. Thus, in this approach the category of an expression is not determined by a functional category but rather determined by the local configuration of the expression; whether it has a specifier, bears a referential index or neither.

Baker claims that all languages have essentially the same three categories: nouns, verbs and adjectives, but he also indicates that in his approach category is

mainly a property of the leaf nodes of a syntactic representation, that is, a property of X^0 s rather than of XPs as in DM or of morphological entities such as roots or stems as in lexicalist theories.

1.3.3.3.3 Specification for Category Prior to Lexical Insertion

In Baker's theory lexical insertion cannot be free contrary to what is implied by DM and Borer's approaches. This is clearly indicated by the following quotation from Baker (2003: 295-296): "I assume, then, that some vocabulary items are explicitly tagged as being insertable into particular kinds of positions - *fog* into one that has a referential index, *shine* into one that has a specifier, *foggy* and *shiny* into one that has neither."

Then Baker's theory has a 'lexicalist' flavour in that there is place for the availability of categorial specification for vocabulary items prior to syntactic insertion. That is, there must be a kind of categorial specification available for the vocabulary item *fog* prior to lexical insertion which distinguishes it from the vocabulary items *shine* and *shiny* and which allows it to be inserted under a node with a referential index (N node) but constrains its insertion under a node without a referential index (e.g. V or A node).

1.3.3.3.4 Problems for Baker (2003)

Baker's approach to lexical categories aims to avoid the circularity implied in DM and in Borer's proposals by giving an explanation for what exactly allows a certain lexical item to merge with a tense head or to merge with a determiner or quantifier

head. In Baker these can be explained via the presence of a predicate head or referential indices. However, there are some points that need to be clarified in Baker's proposals.

Firstly, Baker proposes that for some lexical items such as *gold* which can occur both as a noun and as an attributive modifier (*the gold* vs. *gold ring*) the referential indices can be optional. Moreover, he indicates that in addition to nouns, CPs and other functional categories may bear referential indices. Since referential indices are related to the criterion of identity which is an inherent semantic property of nouns, how they can be optional and how certain functional projections come to have referential indices are left unclear. These, in fact, weaken Baker's arguments for considering referential indices as the reflex of an inherent semantic property of expressions.

Secondly, although for Baker, category is mainly a property of the leaf nodes of a syntactic representation, that is, X^0 s, rather than roots or stems, items inserted into these nodes bear a specification as to which node they should be inserted in (see section 1.3.3.3.3 above). This raises a question as to whether Baker's claim that all languages have 'verbs', 'nouns' and 'adjectives' is a claim concerning the leaf nodes of a syntactic tree or a claim concerning the categorial specification of expressions that can be inserted into these nodes.

1.3.3.4 Vinokurova (2005)

Vinokurova (2005), with reference to a Turkic language Sakha, presents a model of lexical category determination based on properties of argument structure. According to Vinokurova's analysis lexical entries are categoriless roots which encode

concepts, as it is suggested in DM and Borer (2003, 2005). However, although lexical entries are categoriless roots, the concepts they encode are associated with thematic properties. It is the thematic properties of a concept which determine whether it will merge in the syntax as a noun, adjective or verb. According to this view of categorization, non-predicative concepts are categorized as nouns, predicative concepts with one argument are categorized as adjectives and predicative concepts with more than one argument are categorized as verbs. Thus, contrary to Baker's (2003) approach where both adjectives and nouns are considered to be non-predicative expressions, in Vinokurova's approach nouns are non-predicative but adjectives are. Moreover, while in Baker's analysis nouns are distinguished from adjectives by referential indices, in Vinokurova's analysis nouns and adjectives are distinguished in terms of the underlying thematic differences.

The problems that are associated with Vinokurova's approach to categorical distinctions will be mentioned in chapter 4 where verb derivation from nouns and adjectives is discussed.

1.4 Previous Approaches to Lexical Categories and Word Classes in Turkish

In grammars of Turkish, verbs and nominals are recognized as the two major word classes, with nouns and adjectives identified as the sub-classes of the nominal class (Grönbech 1936; Deny 1941; Emre 1945; Üçok 1947; Sebüktekin 1964; Gencan 1975; Banguoğlu 1986; Ergin 1993; Kornfilt 1997; Yılmaz 2004; Göksel and Kerslake 2005, among others). This is because although through morphological and syntactic criteria it is possible to categorize (most) expressions as verbs or nominals in Turkish, attempts to classify lexical expressions as nouns or adjectives yield

unclear results. The following section introduces the general properties of the data illustrating these facts.

1.4.1 An Overview of the Data

In Turkish a group of expressions can be distinguished from others in terms of being able to occur with tense, aspect, modality, voice morphology, which have been considered to be the characteristic morpho-syntactic properties of verbs as argued in section 1.3.1.2:

- (9) a. koş-acak / uyu-yacak / kes-ecek

run-fut sleep-fut cut-fut

‘will run / will sleep / will cut’

- b. koş-abil / uyu-yabil / kes-ebil

run-mod sleep-mod cut-mod

‘can run / can sleep / can cut’

- c. koş-tur / uyu-t / kes-tir

run-caus sleep-caus cut-caus

‘cause (someone) to run / to sleep / to cut’

The examples above illustrate some expressions occurring with tense/aspect markers in (9a), with modality markers in (9b) and with causative marker in (9c).

The group of expressions which are compatible with the above mentioned type of morphology is incompatible with morphology related to case and number and they cannot serve as arguments in a clause:

(10) a. *koş-a

koş-dat

b. *koş-lar

koş-pl

c. *Ben koş-u gör-düm.

I run-acc see-past-1sg

Int. 'I saw the running, I saw the run, I saw the runner.'

This group of expressions also cannot occur as nominal modifiers unless they are used in relative clause constructions:

(11) a. *koş adam

run man

b. koş-an adam

run-sub.rel. man

'the man who is running.'

Thus, it is this group of expressions that researchers have classified as ‘verb’ in Turkish.

On the other hand, another group of expressions while being incompatible with tense, aspect, modality and voice morphology as demonstrated in (12) and (13), are compatible with case and number morphology as shown in (14) and can serve as arguments in a clause as in (15):

- (12) a. *kadın-acak
woman-fut
‘will be (a) woman’
- b. *kadın-abil
woman- mod
‘may/can be (a) woman’
- c. *kadın-dır
woman-caus
‘cause to be (a) woman’
- (13) a. *iyi-yecek
good-fut
‘will be good’

b. *iyi-yebil

good-mod

'can/may be good'

c. *iyi-t

iyi-caus

'cause to be good'

(14) a. kadın-a / iyi-ye

woman-dat / good-dat

'to (the) woman / 'to the good (one)'

b. kadın-lar / iyi-ler

woman-pl good-pl

'women / 'to the good (ones)'

(15) a. Kadın koş-tu.

woman run-past

'The woman ran.'

b. Ben iyi-yi seç-er-im.

I good-acc choose-aor-1sg

'I choose the good (one).'

Moreover these expressions can occur as modifiers in nominal projections:

(16) a. kadın doktor
woman doctor
'(a) woman doctor'

b. iyi doktor
good doctor
'(a) good doctor'

It is this group of expressions which have been traditionally recognized as members of the 'nominal' category in Turkish.

The above-mentioned differences in the morphological and syntactic behavior of expressions have been considered to be clear evidence for the existence of two distinct lexical categories in Turkish: 'verb' and 'nominal'. However, classification of expressions into two distinct classes as 'noun' and 'adjective' has been a problem due to the apparent similarities in the morphological and syntactic behavior of the members of the nominal category. It is a very common phenomenon in Turkish to have the same expression occurring as an attributive modifier or as an argument expression inflected with case and number morphology as illustrated below:

(17) a. zengin adam
rich man
'(a) rich man'

b. Bir zengin Ali-ye yardım et-ti.

a rich Ali-dat help do-past

'Someone rich helped Ali.'

(18) a. çocuk kral

child king

'(a) child king / a king who is a child'

b. kral çocuk

king child

'(a) king child / (a) child who is a king'

c. Ben çocuğ-u / kral-ı gör-dü-m.

I child-acc / king-acc see-past-1sg

'I saw the child / the king.'

This type of flexibility demonstrated by nominal expressions has led researchers to suggest that the adjective/noun distinction is not a clear cut distinction in Turkish.

The existence of a verb/nominal distinction and the lack of adjective/noun distinction among the members of the nominal category is further supported by derivational morphology.³ A group of derivational affixes are only compatible with those expressions which combine with tense, aspect, modality and voice morphology while another group of derivational affixes are only compatible with those

³ The selectional restrictions concerning the attachment of derivational suffixes in Turkish will be discussed in detail in sections 2.1.7 and 3.2.1.

expressions which can occur with case and number morphology. However, there are no derivational affixes which distinguish the members of nominal class as 'adjective' or 'noun'. In other words, selectional restrictions regarding derivational affixes do not demonstrate a systematic two-way distinction among the members of the nominal class.

1.4.2 Previous Analyses of Lexical Categories in Turkish

The presence of a clear cut morphosyntactic distinction between nominal and verbal expressions on the one hand and the lack of such a distinction between nouns and adjectives on the other has led researchers to suggest that in Turkish the two major classes are verbs and nominals, the latter one including expressions which may be identified as adjectives and nouns on notional terms (Grönbech 1936; Emre 1945; Üçok 1947; Banguoğlu 1986; Ergin 1993; Braun and Haig 2000; among others).

In some of these analyses the existence of adjectives in Turkish seem to be denied altogether indicating that there is no morphological or syntactic difference between expressions called adjectives and nouns and in fact adjectives are no different than common nouns (e.g. Grönbech 1936; Emre 1945; Swift 1963). In some others, adjectives are not exactly considered to be the same as nouns and are recognized as a subclass of a large group of expressions which include nouns as a subclass as well (e.g. Deny 1941; Banguoğlu 1986; Ergin 1993).

In spite of the general tendency to deny adjectives an independent categorial status, there have been attempts to draw a line between nouns and adjectives (e.g. Lewis 1967; Kornfilt 1997; Braun and Haig 2000). However, no single criterion has given satisfactory results so far. For instance, the ability to occur in comparative and

superlative constructions which has been proposed to distinguish adjectives (see for example Lewis 1967 and Kornfilt 1997) is problematic because there are expressions which are non-gradable but which can be classified as adjectives considering their occurrence as noun modifiers:

(19) a. evli

‘married’

b. *daha evli

‘more married’

c. evli bir çift

married a couple

‘a married couple’

(20) a. ölü

‘dead’

b. *daha ölü

‘more dead’

c. ölü bir adam

dead a man

‘a dead man’

The above type of inconsistencies that morphological and syntactic criteria yield have led Braun and Haig (2000) to conclude that no formal criterion by itself will establish a clear-cut classification of nominals into mutually exclusive classes as ‘adjective’ and ‘noun’. They argue that this is because the nominal class constitutes a continuum from prototypical noun to prototypical adjective, with a large ambiguous segment in between. To distinguish prototypical adjectives from prototypical nouns, Braun and Haig propose a combination of several criteria:

(21) *criteria for prototypical nouns*

- a. compatibility in the ‘N-N_{3SG.POSS.AGR}’ construction⁴

ağaç dal-ı

tree-branch-3sg.poss.agr

‘(a) tree branch / (a) branch of a tree’

- b. compatibility with the derivational suffix *-lı*

ağaç-lı

tree-der

‘with trees’

(22) *criteria for prototypical adjectives*

- a. compatibility in ‘X *bir* N’ construction (*bir* = ‘a’)

büyük bir ev

big a house

‘a big house’

⁴ (21a) and (22a) will be discussed in detail in chapter 3.

b. compatibility with the derivational suffix *-lık*

büyük-lük

big-der

'bigness'

c. compatibility in intensifying reduplication constructions

büs-büyük

'very big'

However, some of the expressions such as *büyük* 'big', *siyah* 'black' which are identified as prototypical adjectives by Braun and Haig's criteria can in fact serve as arguments and occur with case and number morphology as prototypical nouns:

(23) a. Ben büyük-ler-i al-acağ-ım.

I big-pl-acc take-fut-1sg

'I'll take the big (ones).'

b. Siyah san-a yakış-m-ıyor.

black you-dat look good-neg-prog

'Black doesn't look good on you.'

Thus, Braun and Haig's prototype approach does not explain how certain expressions can behave as prototypical nouns in some cases.

1.4.3 Problems

1.4.3.1 Syntactic Categorization or Not

The nominal-verb distinction apparently represents a division of lexical expressions into two distinct classes in Turkish. This poses a problem for theories that claim lexical items to be categoriless roots which can be freely inserted under functional nodes and become 'nouns', 'verbs' and 'adjectives' in syntax. Thus, a syntactic categorization approach must explain why in Turkish a group of expressions is compatible with tense, aspect, modality and voice morphology but incompatible with case and number morphology and why another group of expressions behave in just the opposite way.

On the other hand, the categorial ambiguity associated with expressions must be explained by lexicalist approaches to categorization which claim that expressions are stored in the lexicon with specific categorial labels such as N, A, V. We have seen that one type of such categorial ambiguity is demonstrated by nominal expressions in Turkish in terms of the noun-adjective distinction. Moreover, although it is possible to label most expressions as nominal or verb based on their morphosyntactic behavior, a limited number of expressions display categorial ambiguity. The following examples illustrate the categorial ambiguity associated with the expressions *ekşi* 'sour/to get sour', *acı* 'pain/to hurt' and *boya* 'paint/to paint':

(24) a. *ekşi*_A

ekşi elma

‘sour apple’

b. *ekşi*_N

Sos-a biraz *ekşi* koy-du-m.

sauce-dat a little sour put-past-1sg

‘I added some sour to the sauce.’

c. *ekşi*_V

Süt *ekşi*-di.

milk sour-past

‘The milk became sour.’

In examples (24a) and (24b) *ekşi* behaves like a nominal expression and in (24c) it behaves like a verb.

Thus, while it is necessary for a syntactic approach to categorization to account for the rigid morphological and syntactic behavior of certain expressions, it is also necessary for a lexicalist approach to categorization to explain the observed flexible behavior, that is, the categorial indeterminacy associated with expressions such as those in (25) and the categorial indeterminacy of nominal expressions with respect to the noun-adjective distinction.

1.4.3.2 The Category 'Verb'

Recently the observed relationship between the types of events that sentences refer to and the lexical semantics of verbs has given way to analyses where event structures are represented in syntax via the predicates that have been employed in the lexical semantics of verbs (e.g. Hale and Keyser 1993, 2002; Harley 1995; Huang 1997; Harley and Noyer 1998; Lin 2001). Thus, verbs are decomposed into syntactically represented primitive elements such as categoriless roots or nominal, adjectival, prepositional elements on the one hand and predicates such as CAUSE, BECOME, BE on the other.

All these claims require a deeper investigation into the nature of the category 'verb' and the expressions that have been traditionally classified as verbs in Turkish in order to understand whether 'verb' represents a lexical 'primitive', as it has been assumed by the traditional analyses, or whether it represents a complex, derived concept. The defining properties of the category verb should be understood in the context of this recent work on the lexical decomposition of verbs.

1.4.3.3 The Nature of the Noun-Adjective Distinction

Although the previous studies generally converge upon the view that in Turkish there is no clear cut adjective-noun distinction, it seems that the exact nature of this lack of distinction has not been stated clearly so far.

Firstly, there could be several ways a language could fail to have 'adjective' and 'noun' as distinct categories (Hengeveld 1992; Baker 2003). One possibility is that a language could have no nouns but only adjectives. The second possibility is

that the language has a large class of words that can be optionally used as nouns or adjectives. A third possibility is that the language has nouns but no adjectives.

The previous views on the noun-adjective distinction in Turkish imply that the first alternative has never been entertained because of the general assumption that nouns, like verbs, are universal primitives. The second and the third alternatives have different implications and most of the approaches to categorial distinctions in Turkish do not represent a clear stand in this respect. Therefore, the exact nature of the observed lack of noun-adjective distinction is another point that needs to be clarified.

Secondly, in the literature concerning word class distinctions in Turkish the terms 'noun' and 'adjective' are used both to distinguish the members of the nominal class on notional grounds and to make a distinction between the different syntactic functions of nominal expressions. Therefore, the occurrence of an expression like *büyük* 'big' as an argument, bearing case and plural markers, have been often referred to as an instance of 'the use of an adjective as a noun', 'an adjective being used as a noun', 'an adjective functioning as a noun' and the occurrence of an expression like *doktor* 'doctor' as an attributive modifier have been explained in terms of 'the use of a noun as an adjective', 'a noun being used as an adjective' or 'a noun functioning as an adjective.' Thus, in what sense these expressions are 'adjectives' or 'nouns' to start with and in what sense and how they become 'nouns' and 'adjectives' need to be clarified.

1.5 The Proposal

Firstly, this study proposes a split model for categorization which allows category specification to be determined in the lexicon for some lexical items and to be determined in syntax for others. It is claimed that lexical items may be 'unspecified' for certain category distinctions and it is argued that in that case it is the syntactic structure which determines the category specification for these items. The analysis draws upon the data regarding the category distinctions 'noun', 'adjective' and 'verb' in Turkish and provides evidence both for the presence of category information encoded in the lexicon and for category specification in syntax for lexical items with unspecified category.

As evidence for category specification in the lexicon, it is demonstrated that the traditionally recognized nominal-verb word class distinction represents a lexically specified category distinction in the lexicon. It is argued that the observed restrictions in the morphological and syntactic distribution of the expressions traditionally classified as nominals and verbs in Turkish can only be explained by the presence of a category specification in the lexicon. It is proposed that a single feature N with binary values divides lexical items into two major word classes: +N expressions which are stative and -N expressions which are nonstative. It is shown that this category specification applies not only to free forms but to bound stems and suffixes as well.

As evidence for category specification in syntax, it is shown that the expressions traditionally classified as nominals are neither specified as 'noun' or 'adjective' in the lexicon but they are 'nounized' or 'adjectivized' in syntax. In addition to this, it is shown that lexical items can be unspecified for the value of the

category feature N and that they are ‘nounized’, ‘adjectivized’ or ‘verbalized’ in syntax.

The second major proposal of this study concerns how expressions are ‘nounized’ or ‘adjectivized’ in syntax. It is argued that neither the categorizing functional heads *n* and *a* of DM nor the functional structures DP and DegP of Borer (2003, 2005) which ‘nounizes’ and ‘adjectivizes’ expressions in syntax. It is proposed that in Turkish expressions are ‘nounized’ through case marking and ‘adjectivized’ through occurring in attributive modification structures. It is also claimed that the weak-strong distinction for case marking runs across not only nominative and accusative cases but includes the genitive case as well.

The third proposal of this study concerns the nature of the category ‘verb’. It is argued that there is no category ‘verb’ in the lexicon and that the expressions traditionally classified as verbs are items which do not directly encode complete, well-formed lexical semantic and syntactic structures. Following the previous analyses where verbs are decomposed into primitive elements (e.g. Hale and Keyser 1993, 2002; Harley 1995; Huang 1997; Harley and Noyer 1998; Lin 2001), it is demonstrated that verbs are composed of a root expression and of dynamic predicates such as DO, CAUSE and BECOME. It is also suggested that the derivation of the expressions classified as verbs does not reside in the lexicon but takes place at a level of syntactic derivation where event structure is built.

Finally, this study proposes a view of the lexicon which encodes grammatical information in the form of category features but which does not have computational powers or processes that can change or manipulate these features.

1.6 The Outline of the Dissertation

Chapter 2 provides evidence for the presence of a lexically specified categorial distinction by focusing on the traditional nominal-verb distinction in Turkish. It demonstrates that this distinction represents a categorial specification which distinguishes a majority of the lexical expressions prior to syntax. It argues that neither the syntactic categorization approach in Distributed Morphology (e.g. Marantz 1997, 2001; Harley and Noyer 1998) nor that in Borer's (2003, 2005) exoskeletal approach can account for the observed restrictions in the morphological and syntactic distribution of the expressions traditionally classified as nominals and verbs in Turkish.

Chapter 3 provides evidence for the syntactic nature of categorial distinctions by focusing on the noun-adjective distinction in Turkish. It argues that there is no lexical specification distinguishing nominal expressions as 'nouns' and 'adjectives' prior to syntax. It is demonstrated that morphological and syntactic criteria fail to distinguish nominal expressions into distinct classes as 'adjective' or 'noun' and those expressions are flexible expressions which have the capacity to become 'adjective' and 'noun' in syntax. This is taken as evidence for the syntactic nature of the categorial distinctions noun and adjective in Turkish. It is argued that the 'nounization' and 'adjectivization' of expressions can neither be explained by the functional categorizing *n* and *a* heads in DM nor by considering DegP as an 'adjectivizer' and DP as a 'nounizer' as in Borer (2005). It is proposed that in Turkish expressions classified as nominals become 'adjective' by simply occurring in attributive modification structures and become 'noun' by case assignment.

Chapter 4 discusses the nature of the category 'verb'. Providing evidence from the category specification of borrowed expressions, it is argued that there are no expressions bearing the category specification 'verb' in the lexicon. After presenting an overview of the various approaches which decompose verb meaning into some primitives, it is demonstrated that the expressions traditionally classified as verbs in Turkish are decomposed into functional heads such as DO, CAUSE, BECOME and a root expression which provides the core meaning component. It is argued that the categorial distinction between the expressions traditionally classified as nominals and verbs is encoded in the lexicon in the form of a category distinction between +N (stative) and -N (nonstative) expressions. The final section of this chapter discusses the implications of noun-adjective neutralization in Turkish for verb formation within the framework of Hale and Keyser's (1993, 2002) approach where the category specification of the primitives that verbs are composed of has an influence on the argument and event structure associated with the verbs.

Chapter 5 aims at developing a model for the lexicon and grammar based on the claims made in the previous chapters. The first part of the chapter discusses the nature of the lexical category specification that lexical items bear. It is argued that a single feature 'N' with binary values $\pm$ accounts for the major lexical category distinctions in Turkish. In addition to expressions specified as +N and -N, it is shown that there are also expressions which are not specified for these features. It is argued that bound forms bear the same type of categorial specifications as free forms. The second part of the chapter, within the framework of the proposals made by Hale and Keyser (1993) and Lin (2001) discusses whether the composition of the expressions classified as verbs belong to a level of composition in the lexicon, l-syntax, which is distinct from s-syntax. With reference to Ramchand (2008) it is

argued that verb formation takes place at a level of syntactic representation where event structure is built. The last sections of the chapter present a model for the lexicon which is implied by the claims of this study and point out to some aspects of language variation.

Chapter 6 concludes by presenting the claims of this study and remarks on the remaining issues for further research.

1.7 A Note on the Terminology

Although I am aware of the drawbacks of using the terms ‘verb’, ‘noun’ and ‘adjective’ in a study which is set forth to investigate the nature of such distinctions, the use of these terms seems to be unavoidable for explanatory purposes. Therefore, these terms, unless otherwise indicated, will be used in their traditional and rather notional sense as they are commonly used in the literature. Thus, when I use the term ‘noun’ I will be, in general, referring to expressions denoting concrete and abstract entities such as *tree, book, beauty, idea*, when I use the term ‘adjective’ I will be referring to quality denoting expressions such as *small, hot, good, old*, and when I use the term ‘verb’ I will be referring to expressions denoting actions such as *eat, laugh, run, read*. The term ‘nominal’ will be used to refer to the traditionally recognized class of expressions in Turkish which include both nouns and adjectives.⁵

⁵ Sebüktekin (1964) uses the term ‘substantive’ to refer to the category of expressions which includes nouns, adjectives and adverbs as its members. However, in the literature, the term ‘substantive’ is also used to refer specifically to nouns and as it will be clear in chapter 3 the group expressions which are classified as nominals in this study are neither nouns nor adjectives.

CHAPTER 2

THE NOMINAL-VERB DISTINCTION

Lexical expressions in Turkish have been traditionally argued to fall into two distinct word classes: nominals and verbs. This chapter mainly focuses on this distinction and argues that it represents a categorial distinction that the majority of lexical expressions are specified prior to syntax. It is claimed that syntactic categorization approaches cannot account for the restrictions associated with the compatibility of lexical expressions in certain morphological and syntactic environments and that these restrictions can only be explained by the presence of a lexically determined specification which distinguishes a group of lexical expressions, traditionally classified as nominals, from another group of lexical expressions, traditionally classified as verbs.¹

The organization of this chapter is as follows. Section 2.1 mainly consists of the presentation of the data regarding the nominal-verb distinction in Turkish and, thus, provides the basis for the discussion in the subsequent sections. It illustrates the morphological and syntactic restrictions in the distribution of lexical expressions and shows that lexical expressions can be divided into two distinct groups regarding their capacity to occur as arguments, to inflect with case and number morphology, to occur as attributive modifiers, to occur with tense, aspect, modality, voice, negation markers and with derivational morphology. Section 2.2 discusses the syntactic

¹ For the present I leave out the discussion of the noun-adjective distinction which will be treated in detail in the following chapter. Thus, in this chapter expressions referred to as nominals are assumed to include both adjectives and nouns.

categorization approaches of Distributed Morphology (DM) (e.g. Marantz 1997, 2001; Harley and Noyer 1998) and of Borer (2003, 2005) and points out both to the general problems associated with this view of categorization as well as to those problems which arise in the explanation of the Turkish data. Section 2.3 concludes with a discussion that a majority of the lexical expressions in Turkish, prior to their insertion under syntactic nodes, already bear a category specification distinguishing them as nominals or verbs.

2.1 Restrictions Associated with Distribution

2.1.1 Serving as Arguments and Case/Plural Morphology

In Turkish, while a group of expressions can serve as arguments and thus, occur with case and number morphology, another group of expressions cannot:

- (1) a. *Çocuk-Ø kitab-ı kutu-ya koy-du.*
 child-nom book-acc box-dat put-past
 ‘The child put the books in the box.’

- b. *Kadın-Ø temiz-ler-i al-dı.*²
 woman-nom clean-pl-acc take-past
 ‘The woman took the clean ones.’

² The categorial status of expressions like *temiz* ‘clean’ in this example will be discussed in detail in the following chapter.

(2) a. *Çocuk *vur-u* gör-dü.

child hit-acc see-past

Int. 'The child saw the hits/the hitter.'

b. *Çocuk *koş-lar-a* bak-tı.

child run-pl-dat look at-past

Int. 'The child looked at the runners.'

c. **Git-ler* daha gel-me-di.

go-pl yet come-neg-past

Int. 'The ones who went have not come yet.'

(1) illustrates the compatibility of the expressions *çocuk* 'child', *kitap* 'book', *kutu* 'box', *kadın* 'woman', *temiz* 'clean' as arguments. In (1a) the expression *kitap* is marked with the accusative marker and *kutu* with dative marker. In (1b) the expression *temiz* occurs with the plural and the accusative markers. The ungrammatical examples in (2) illustrate the incompatibility of the expressions *vur* 'hit' in (2a), *koş* 'run' in (2b), and *git* 'go/leave' in (2c) as arguments occurring with case and plurality markers.

The expressions *çocuk*, *kitap*, *kutu*, *kadın*, *temiz* which can serve as arguments and which are compatible with the case and plural markers are those which have been classified as nominals and the expressions *vur*, *koş*, *git* are the ones which have been classified traditionally as verbs. The distinction between these two classes of expressions is displayed in attributive modification as well.

2.1.2 Attributive Modification

Nominals can serve as attributive modifiers in Noun Phrases while verbs cannot:

(3) a. *güzel kız*

beautiful girl

‘(a) beautiful girl’

b. *doktor kadın*

doctor woman

‘(a) woman who is a doctor’

(4) a. **koş adam*

run man

Int. ‘(a) man who runs/who is a runner’

b. **bat gemi*

sink ship

Int. ‘(a) ship which is sunk/which is sinking’

In (3) expressions *güzel* ‘beautiful’ and *doktor* ‘doctor’ are modifiers which attribute a certain property to the expressions that follow them. Examples in (4) show that expressions *koş* ‘run’ and *bat* ‘sink’ are incompatible as attributive modifiers.

So far we have seen that a group of expressions, traditionally classified as nominals, can serve as arguments, are compatible with case and plurality markers

and can occur as attributive modifiers while another group of expressions, traditionally classified as verbs, are incompatible in these morphological and syntactic environments. Now, the following section presents those morpho-syntactic environments where the latter group of expressions is compatible with while the former group is not.

2.1.3 Tense, Aspect, Modality Markers

Tense, aspect, modality markers can only be attached to stems classified as verbs. The following examples illustrate the modality marker *-(y)Abil*³ which may indicate a wide range of modal meanings (e.g. possibility, permission) depending on the tense, aspect markers it occurs with:

(5) a. Ali koş-abil-ir.

Ali run-mod-aor

‘Ali may/can run.’

b. Gemi bat-abil-ir.

ship sink-mod-aor

‘The ship may/can sink.’

³ The capital letters used in suffixes (e.g. *-(y)Abil*, *-DA*) represent the parts of the suffixes which can change due to phonological processes such as vowel harmony and assimilation.

(6) a. * Ali zengin-ebil-ir.
Ali rich-mod-aor
Int. 'Ali may/can be rich'

b. *Ali iyi-yebil-ir.
child well-mod-aor
Int. 'Ali may/can be well'

c. *Ali doktor-abil-ir
Ali doctor-mod-aor
Int. 'Ali may/can be a doctor'

Example (5a) and (5b) show that the modal suffix is compatible with the expressions *koş* and *bat*. (6a), (6b) and (6c) demonstrate that the suffix is incompatible with the expressions *zengin* 'rich', *iyi* 'good/well' and *doktor* 'doctor'. As the following examples illustrate, when these expressions occur as predicates in a sentence the modality marker is attached to the copular form *ol* 'be/become':

(7) a. Ali zengin ol-abil-ir.
Ali rich cop-mod-aor
'Ali may/can be rich.'

b. Ali iyi ol-abil-ir.
Ali well cop-mod-aor
'Ali may/can be well.'

c. Ali doktor ol-abil-ir.

Ali doctor cop-mod-aor

‘Ali may/can be a doctor.’

Similar to the modal suffixes, tense and aspect suffixes are compatible with verb stems but incompatible with nominal stems. The examples below illustrate the occurrence of the future suffix *-(y)AcAK* and the imperfective/progressive aspect marker *-Iyor* with expressions classified as verbs in (8a,b) and with nominal expressions in (9a,b,c):

(8) a. Ali koş-uyor / koş-acak.

Ali run-prog / run-fut

‘Ali is running / will run.’

b. Gemi bat-ıyor / bat-acak.

ship sink-prog / sink-fut

‘The ship is sinking / will sink.’

(9) a. *Ali zengin-iyor / zengin-ecek.

Ali rich-prog / rich-fut

Int. ‘Ali is becoming rich / will be rich.’

b. *Ali iyi-yor / iyi-yecek.

Ali well-prog / well-fut

Int. ‘Ali is getting well/will be well.’

c. *Ali doktor-uyor / doktor-acak.

Ali well-prog / well-fut

Int. 'Ali is going to be a doctor.'

As in the case of modal marker *-(y)Abil*, the tense/aspect markers *-(y)AcAK* and *-Iyor* attach to the copular form *ol* when the predicates are nominal expressions.

(10) a. Ali zengin ol-uyor / ol-acak.

Ali rich cop-prog / cop-fut

'Ali is becoming rich / will be rich.'

b. Ali iyi ol-uyor / ol-acak.

Ali well cop-prog / cop-fut

'Ali is getting well / will be well.'

c. Ali doktor ol-uyor / ol-acak.

Ali doctor cop-prog / cop-fut

'Ali is becoming (a) doctor / will be a doctor.'

Nominal predicates do not always require the copular form *ol* 'be/become' as illustrated in the examples below.

(11) a. Kız güzel-Ø.

girl beautiful-3sg

'The girl is beautiful.'

b. Sen güzel-sin.
you beautiful-2sg
'You are beautiful.'

c. Biz güzel-iz.
we beautiful
'We are beautiful.'

The above sentences have a default present tense interpretation. Although they apparently lack an overt copular form, it has been claimed that there is in fact a copula whose allomorphs are $\emptyset$ and *-y-* (Kornfilt 1996; Kelepir 2001; Göksel 2001; Enç 2004). The allomorph *-y-* surfaces when the nonverbal predicate ends in a vowel, otherwise the copula is phonologically unrealized. The occurrence of the past tense marker *-DI* and evidential *-mİş* with nominal predicates also involves the copula $\emptyset/y$. The following examples illustrate the occurrence of the *-y-* allomorph with the past tense and evidential markers:⁴

(12) a. Çocuk iyi-y-di.
child well-cop-past
'The child was well'

⁴ Kelepir (2001) proposes that the two copulas *ol* and $\emptyset/y$ are derived from the same verbal feature or 'be'. When the verbal feature is inserted at V it is spelled out as *ol* and when the feature is inserted at T it is spelled out as $\emptyset/y$.

b. Çocuk iyi-ymiş.

child well-cop-evid

'The child is said to be well.'

While the nominal stems require the copula $\emptyset/y$ with the past and evidential markers, these markers directly attach to verbal stems without the intervening copula:

(13) a. Çocuk uyu-du / uyu-muş.

child sleep-past/sleep-evid

'The child slept/has slept

b. *Çocuk uyu-ydu / *uyu-ymuş.

Thus, the presence of the copula $\emptyset/y$ with nominal expressions as in (12) and its absence with expressions classified as verbs as in (13) illustrates another morpho-syntactic environment where expressions can be distinguished with respect to their categorial identity.

2.1.4 Voice Suffixes

The so-called voice suffixes, that is, the causative, reciprocal, reflexive and passive suffixes are only compatible with expressions classified as verbs. The examples in (14) illustrate the compatibility of these suffixes with expressions classified as verbs and those in (15) illustrate their incompatibility with nominal expressions.

- (14) a. Ali buzu eri-t-ti.⁵ *Causative*
 Ali ice-acc melt-caus-past
 'Ali melted the ice.'
- b. Ali ve Hasan döv-üş-tü. *Reciprocal*
 Ali and Hasan fight-recip-past
 'Ali and Hasan fought.'
- c. Ali kendisiyle öv-ün-dü. *Reflexive*
 Ali himself praise-refl-past
 'Ali praised himself.'
- d. Mektuplar Ali-ye ver-il-di. *Passive*
 letters Ali-dat give-pass-past
 'The letters were given to Ali.'
- (15) a. *Doktor Ali-yi iyi-t-ti. *Causative*
 doctor Ali-acc well-caus-past
 Int. 'The doctor made Ali well / The doctor caused Ali to get well.'
- b. *Ali ve Ayşe birbirlerine aşık-ış-tı. *Reciprocal*
 Ali and Ayşe each other-dat love-recip-past

⁵ The causative suffix in Turkish has the following forms: *-Dİr, -t, -It, -Ir, -Ar, -Art*. The form of the suffix, to a certain extent, determined by the form of the stem. Monosyllabic stems most of which are intransitive take one of the forms: *-It, -Ir, -Ar or -Art*. Polysyllabic stems which end with a vowel or with the sounds *[l]/[r]* occur with the form *-t*. Elsewhere, the form *-Dİr* is used (Göksel and Kerslake 2005).

Int. 'Ali and Ayşe loved each other / were in love with each other.'

c. *Ali kendisiyle gurur-un-du.

Reflexive

Ali himself proud-refl-past

Int. 'Ali felt proud of himself.'

d. *Mektuplar Ali-ye teslim-il-di.

Passive

letters Ali-dat hand.in-pass-past

Int. 'The letters were handed in to Ali.'

As the above examples indicate, the causative, reciprocal, reflexive and passive suffixes provide another morpho-syntactic environment where nominal and verb stems can be systematically distinguished from each other.

2.1.5 Negation Marker *-mA*

The negation marker *-mA* is another suffix that distinguishes verbs from expressions classified as nominals. This suffix can only be attached to stems classified as verbs as illustrated in (16) and it is incompatible with nominal stems as shown in (17):

(16) Ali gel-me-di / koş-ma-dı / uyu-ma-dı.

Ali come-neg-past / run-neg-past / sleep-neg-past

'Ali didn't come / run / sleep.'

(17) *Ali iyi-me-di / hasta-ma-dı / doktor-ma-dı.

Ali well-neg-past / sick-neg-past / doktor-neg-past

Int. 'Ali wasn't well / sick / (a) doctor.'

With nominal predicates as in (18) again the copular form *ol* is required to attach the suffix *-mA*:

(18) Ali iyi / hasta / doktor ol-ma-dı.

Ali well / sick / doktor / cop-neg-past

'Ali didn't become well / sick / (a) doctor.'

These selectional restrictions associated with the negation marker *-mA* provide further evidence for the nominal-verb distinction among lexical expressions. The following section presents another group of suffixes which are again only compatible with verbal stems.

2.1.6 Subordinate Clause Forming Suffixes

In Turkish the formation of subordinate clauses usually involves suffixation. These suffixes are only compatible with verbal stems and a copula is required when the predicate of the subordinate clause is a nominal. Two examples of these suffixes, *-mA*, which is involved in the formation of noun clauses, and *-(y)IncA*, which is used in the formation of adverbial clauses are presented below:

- (19) a. Ali-nin sus-ma-sın-1 iste-di-m.
 Ali-gen shut.up-nomin-3sg-acc want-past-1sg
 'I wanted Ali to shut up.'

- b. Hava aç-ınca dışarı çık-acağ-ız.
 weather clear-adv outside go-fut-1pl
 'When the weather clears we will go out.'

- (20) a. *Ali-nin cevap-ma-sın-1 istedim.
 Ali-gen answer-nomin-3sg-acc want-past-1sg
 Int. 'I wanted Ali to answer me.'

- b. *Hava güzel-ince dışarı çık-acağı-ız .
 weather nice-adv outside go-fut-1pl
 Int. 'When the weather is nice we will go out.'

The grammaticality of the examples in (19) where the subordinating suffixes are attached to verb stems as opposed to the ungrammaticality of the examples in (20) where the subordinating suffixes are attached to nominal stems, once again, illustrate the distinction between the verbal and nominal expressions.

2.1.7 Derivational Morphology

In addition to the above mentioned restrictions demonstrated by lexical expressions in terms of their syntactic distribution and compatibility with inflectional

morphology, restrictions concerning the attachment of the so-called derivational affixes also support the nominal-verb distinction among lexical expressions. Some derivational affixes target verb roots to the exclusion of nominals and another group of derivational affixes selectively target nominal roots to the exclusion of verbs.⁶

2.1.7.1 Derivational Affixes Which Target Only Verb Roots

A group of derivational affixes can only be attached to verb roots. Some examples are presented below:

(21) *-GI*

sil 'to erase' → *sil-gi* 'eraser'

sev 'to love' → *sev-gi* 'love'

(22) *-(I)m*

böl 'to divide' → *böl-üm* 'division'

seç 'to choose' → *seç-im* 'election/choice'

(23) *-(A)y*

ol 'to be/to happen' → *ol-ay* 'event'

düş 'to fall' → *düş-ey* 'vertical'

⁶ In this study, the terms 'inflectional morphology/affixes' and 'derivational morphology/affixes' will simply be used in their traditional sense for explanatory purposes. The exact nature of the distinction between inflectional and derivational morphology/affixes does not bear upon the analyses and discussions here.

It is not possible to find derived forms where the above suffixes are attached to nominal roots. These restrictions governing the attachment of these suffixes provide further evidence for the distinction between nominal and verb expressions.

2.1.7.2 Derivational Affixes Which Target Only Nominal Roots

As opposed to the above group of affixes, another group of affixes can only be attached to roots which are nominals. Some examples are presented below:

- (24) *-lik*
- | | | |
|----------------------|---|--------------------------------|
| <i>iyi</i> ‘good’ | → | <i>iyi-lik</i> ‘goodness’ |
| <i>çöp</i> ‘garbage’ | → | <i>çöp-lük</i> ‘garbage place’ |

- (25) *-cil*
- | | | |
|------------------------|---|--------------------------|
| <i>ev</i> ‘home/house’ | → | <i>ev-cil</i> ‘domestic’ |
| <i>ön</i> ‘front’ | → | <i>ön-cül</i> ‘premise’ |

- (26) *-le*
- | | | |
|-------------------|---|---------------------------|
| <i>göz</i> ‘eye’ | → | <i>göz-le</i> ‘watch out’ |
| <i>iz</i> ‘trace’ | → | <i>iz-le</i> ‘to trace’ |

The above derivational suffixes, as those presented in the previous section, also make a distinction between nominal and verb roots, but this time by selectively targeting the former group and excluding the latter.⁷

2.1.8 Summary

So far I have presented the morphological and syntactic environments where lexical expressions can be systematically distinguished from each other and classified into two distinct groups which correspond to the traditionally identified word classes in Turkish: nominal and verbs. The above mentioned morphological and syntactic environments do not exhaust all the constructions where nominals and verbs can be distinguished, but they are adequate to illustrate the restrictions lexical expressions display regarding their morphological and syntactic distribution. What these restrictions suggest is the existence of some kind of a specification which distinguishes lexical expressions from each other. For lexicalist approaches this

⁷ A few derivational suffixes seem to be compatible with both nominal and verb roots. For some of these cases it is clear from the semantic and formal properties of the derived form that what we are dealing with are two different suffixes which have the same form. The suffixal form *-IK* illustrates such a case. It can be attached to verb roots deriving nominal expressions as in (i) and attached to nominal roots deriving verbs as in (ii):

(i) kes '(to)cut' + *-Ik* → kes-ik '(a) cut'

(ii) göz 'eye' + *-Ik* → göz-ük '(to)appear'

The occurrence of *-IK* in the above examples represent two different homophonous suffixes. However, in some cases it is not clear whether what we are dealing with are two different suffixes or the same suffix. The suffix *-mAn* illustrates such a case. It can be attached both to nominal and verb roots but derives only nominal expressions contrary to *-Ik*. However, the forms derived from nominals and verbs do not seem to have common semantics.

(iii) say 'to count' + *mAn* → sayman 'treasurer'

(iv) kat 'level, fold' + *mAn* → katman 'layer'

The possibility of having a suffix compatible both with nominal and verb roots does not constitute evidence against the presence of a category distinction between nominals and verbs, since, there are derivational suffixes which clearly distinguish between the two groups of expressions.

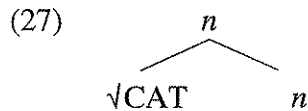
specification is a lexical category label which expressions are tagged with in the lexicon. Now let us see whether syntactic categorization approaches, which argue that lexical expressions are devoid of any categorial specification in the lexicon, can account for the facts illustrated by the Turkish data.

2.2 Syntactic Categorization: Problems

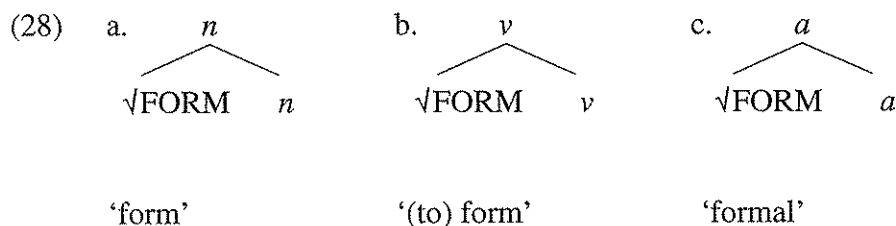
In the above section we have seen that the morphological and syntactic restrictions regarding the distribution of lexical expressions indicate the presence of two distinct classes of lexical expressions: nominals and verbs. The following section presents two syntax-oriented treatments of lexical categories, namely, Distributed Morphology (e.g. Halle and Marantz 1993; Marantz 1997, 2001; Harley and Noyer 1998) and Borer's exo-skeletal approach and discusses the problems that the Turkish data poses for these approaches.

2.2.1 Distributed Morphology and Categorization

In Distributed Morphology (henceforth, DM) syntactic terminals consist of category neutral roots which denote generalized concepts and functional features such as tense, number, person and so forth. The basic idea behind DM's account of categorization is to introduce functional heads such as *v*, *n*, *a*, which categorize roots in syntax. According to DM, all computation, including the derivation of words, takes place in syntax. Thus, in this approach, the noun *cat* in English would be derived by the combination of the category neutral root CAT with a functional *n* head which is phonologically null in this case.



Similarly, in the formation of the noun *form* and of the verb *form*, the root FORM would combine with a null *n* head to derive the noun and a null *v* head to derive the verb and in the formation of the adjective *formal* the root would combine with the functional *a* head which has a spell out as *-al*.



In DM any root has an equal potential of being a noun, a verb or an adjective. The following quote from Marantz (2001:12) illustrates DM's stand on this issue:

The interaction of root semantics and the semantics of the heads that create nouns, verbs and adjectives determines how good a combination of a root and such a head will be. So, while 'cat' as a noun is fine, as is 'cat' as an adjective ('catty'), 'cat' as a verb has no obvious meaning/use, although it can be given fine meanings contextually ("Meowing and scratching in imitation of his pet feline, Fred catted around the house for hours").

As the above quote indicates, any root can be inserted under a lexical node and combine with one of the category determining functional heads *v*, *n* or *a*. Meanwhile, restrictions observed in the morpho-syntactic distribution of lexical items are generally explained by the presence of a categorizing head or by semantic incompatibility, both of which may constrain the morphological and syntactic

environments that a lexical item occurs in. Thus, the expression *formal* would be incompatible with the past tense or progressive suffixes (e.g. **formaled*, **formaling*) due to the fact that it is a morphologically complex form which has been already categorized as an adjective by the *a* head spelled out as *-al* while the suffixes in question select for a *v* projection.

In the absence of categorizing heads, that is, when affixes combine directly with categoriless roots, selection for particular roots may be due to semantic compatibility. Thus, the suffix *-ity* might be inserted either into an *n* node which selects for an *a* projection, $[[\text{acceptable}_a] \text{-ity}_n]$, or into an *n* node which combines with roots, $[[\sqrt{\text{ATROC}}] \text{-ity}_n]$, if, "...the semantics of the root were similar enough in the relevant dimensions to the semantics of adjectives" (Marantz 2001:16).

In the following sections I will present the problems associated with this approach to categorization, discussing first the semantic compatibility that Marantz mentions in the previous sentence.

2.2.1.1 The Problem of Semantic (In)compatibility

As the above quotation from Marantz (2001:16) suggests, in DM one way to account for the selectional restrictions observed in the attachment of affixes is to resort to the semantic properties of roots. However, saying that some functional head combines with a particular root because the root has some semantic properties that are similar to adjectives or to nouns or to verbs does not have much explanatory power since similar concepts may be encoded as expressions belonging to different categories (Wierzbicka 1988). This is illustrated by the following examples where the words in

each of the pairs, *stupid-fool* and *round-circle*, correspond to similar concepts but different categories.

- (29) a. (*a) stupid vs. *(a) fool
b. (*a) round vs. *(a) circle

As it is indicated by the compatibility of the expressions with articles, *stupid* is an adjective while *fool* is a noun and *round* is an adjective while *circle* is a noun. Such examples show that notional criteria may be inadequate in explaining the restrictions associated with morpho-syntactic behavior of lexical expressions. It would be implausible to say that *n* head *-ity* can combine with $\sqrt{\text{STUPID}}$ (e.g. *stupidity*) but not with $\sqrt{\text{FOOL}}$ (e.g. **foolity*) because $\sqrt{\text{STUPID}}$ has adjectival semantics but $\sqrt{\text{FOOL}}$ does not. Note that this kind of an approach is not much different than a categorization approach based on notional criteria.⁸

Semantic compatibility fails to account for the restrictions concerning the morphological and syntactic distribution of lexical expressions in Turkish in several cases. For instance, in section (2.1.4) it has been mentioned that the causative suffix in Turkish can attach to verb stems but cannot attach to nominal stems. The examples in (14a) and (15a) repeated below:

- (30) a. Ali buz-u eri-t-ti.
Ali ice-acc melt-caus-past
'Ali melted the ice.'

⁸ The aim of my discussion here is not to exclude altogether the possibility of having semantic incompatibility as an underlying source of the apparent morpho-syntactic restrictions displayed by lexical expressions. In fact, in the next chapter, I will account for the restrictions nominal expressions display as attributive modifiers by semantic incompatibility.

b. *Doktor Ali-yi iyi-t-ti.

doctor Ali-acc well-caus-past

Int. 'The doctor made Ali well/caused Ali to get well.'

It seems that there is no semantic reason why the eventualities expressed by the predicate *eri* 'melt' in (30a) can be caused but the one indicated in (30b) by the predicate *iyi* cannot be caused and occur with the causative suffix. In fact, the predicate *iyi* in the above examples can occur in a periphrastic causative construction formed with the expression *et* 'cause' as exemplified below in (31):

(31) Doktor Ali-yi iyi et-ti.

doctor Ali-acc well cause / make-past

'The doctor made Ali well / caused Ali to get well.'

The above example show that sentences with nominal predicates can occur in causative constructions, thus, the incompatibility of the causative suffix with certain expressions cannot be due to semantic incompatibility.

Another restriction which cannot be explained by semantic incompatibility is illustrated by the selectional restrictions of the negation marker *-mA* which has been mentioned in section (2.1.5). This suffix is compatible with verb expressions but incompatible with nominals. The examples in (16) and (17) are repeated below:

(32) Ali gel-me-di / koş-ma-dı / uyu-ma-dı.

Ali come-neg-past / run-neg-past / sleep-neg-past

'Ali didn't come / run / sleep.'

(33) *Ali iyi-me-di / hasta-ma-dı / doktor-ma-dı.

Ali well-neg-past / sick-neg-past / doktor-neg-past

Int. 'Ali wasn't well / sick / (a) doctor.'

The reason for the grammaticality in (32) and the ungrammaticality in (33) cannot be explained by resorting to semantic compatibility because the above sentences in (33) can be negated by attaching the negation marker *-mA* to the copular form *ol*:

(34) Ali iyi / hasta / doktor ol-ma-dı.

Ali well / sick / doctor cop-neg-past

'Ali didn't become well / sick / doctor.'

Thus, the inadequacy of semantic (in)compatibility in explaining the systematic differences in the morphological and syntactic behavior of nominal and verb expressions indicates the presence of some kind of a categorial specification distinguishing these two groups of expressions from each other and restricting their occurrence in certain morpho-syntactic environments.

2.2.1.2 The Problem of Null Categorizing Heads

Another problem concerning the approach to categorization in DM is that this view of categorization leads to an extensive increase in the number of null heads, as it is evident from the representations in (27) and (28a,b). Thus, the noun 'cat', the noun 'form', the verb 'to form' are all argued to have phonologically null categorizing *n* or *v* heads contrary to their apparently mono-morphemic forms.

The problem of null categorizing heads also appears when we attempt to explain the facts illustrated by the Turkish data within the categorization framework suggested in DM. Since in DM the category specific behavior of expressions can be explained by positing morphological complexity for these expressions, the restrictions mentioned in section 2.1 regarding the morphosyntactic distribution of lexical items in Turkish would be accounted for by saying that the lexical items we are dealing with are in fact forms which have already been categorized by *v*, *n*, or *a* heads. Thus, all the expressions which appear to be mono-morphemic have to be analyzed as morphologically complex forms which involve null categorizing heads.⁹

Take, for instance, all these lexical items listed below which can occur in argument positions with case markers but which are incompatible with tense, aspect, modality markers:

⁹ Nakipoğlu and Üntak (2008) in their thorough study of verbs in Turkish which involves a morpheme based analysis indicate that the number of verbs in Turkish is around 4700 and of these only 200 are monosyllabic bare verb roots. Therefore, apart from the 200 monosyllabic bare roots, the rest of the expressions classified as verbs can be analyzed as morphologically complex expressions which in fact involve a verbalizing head *v* as suggested in DM. However, there still remain the 200 morphologically simplex expressions whose verbal behavior needs to be accounted for. Moreover, certain forms which, on historical grounds, are considered to be morphologically complex by Nakipoğlu and Üntak should be considered monomorphemic expressions at present. For instance, a group of verbs which end in *-rp* are classified as morphologically complex by Nakipoğlu and Üntak.

- (i) *çarp-* 'strike; bump; palpitate'
 çirp- 'tap, pat'

Analyzing the above expressions as being derived from categoriless roots $\sqrt{\text{ÇA}}$ (e.g. *çarp*) and $\sqrt{\text{ÇI}}$ (e.g. *çirp*) and a verbalizing head *v* spelled-out as *-rp* does not seem to be plausible for the following reasons.

Firstly, if $\sqrt{\text{ÇA}}$ and $\sqrt{\text{ÇI}}$ were bound roots, we would expect some other expressions derived from these bound roots. However, there are no such expressions and $\sqrt{\text{ÇA}}$ and $\sqrt{\text{ÇI}}$ occur only in the above examples. Secondly, the ending *-rp* cannot be considered to represent some kind of a verbalizing suffix, that is a functional *v* head, because there are nominal expressions which have the same endings:

- (ii) *sarp-* 'steep',
 harp- '(a) war'

Thus, there is nothing in the forms in (i) that tells us they have some kind of a verbalizing suffix. A DM type of approach to categorization should again need to posit null *v* heads to account for the verbal behavior of the expressions in (i) and posit null *n* heads to account for the nominal behavior of the expressions in (ii).

- (35) *saç* 'hair', *at* 'horse', *cam* 'glass', *süt* 'milk' *buz* 'ice', *tuz* 'salt', *iz* 'trace',
çay 'tea', *kıl* 'hair', *kel* 'bald', *kin* 'grudge', *ay* 'moon', *bal* 'honey', *kuş*
 'bird'

For all these expressions a DM type analysis must posit the presence of a categorizing head *n* to account for their occurrence in argument positions and to account for their incompatibility with tense, aspect and modality markers. However, since these forms are apparently mono-morphemic and since there is no evidence for the presence of a noun deriving suffix, a phonologically null *n* must be posited.

The same analysis would apply to the mono-morphemic expressions listed below, which are compatible with tense, aspect, modality suffixes but which are incompatible as arguments with case and plural markers:

- (36) *bat* 'sink', *gel* 'come', *koş* 'run', *sız* 'leak', *al* 'get', *bil* 'know',
iç 'drink', *gez* 'travel', *yut* 'swallow', *as* 'hang', *dur* 'stop', *kır* 'break'

In DM the restrictions in the morpho-syntactic behavior of these expressions can only be explained by the presence of a null verbalizing head *v*.

The problem of null heads also becomes evident in those cases where expressions illustrate flexibility in terms of their morpho-syntactic distribution. The following examples illustrate such flexibility:¹⁰

¹⁰ In chapter 5, while discussing the nature of listed items in the lexicon, I will revisit such expressions which seem to be categorially ambiguous with respect to the nominal-verb distinction. I will argue that these are the types of expressions which lack any category specification prior to syntax. However, contrary to DM I will not posit null categorizing heads but follow Borer (2003, 2005) and argue that these expressions are categorized by the syntactic configuration they appear in.

(37) a. Bu yoğurt ekşi-yor.
 this yogurt sour-prog
 ‘This yogurt is getting sour.’

b. Ben ekşi sev-me-m.
 I sour like-neg-1sg
 ‘I don’t like sour (food)’

c. ekşi limon
 sour lemon
 ‘sour lemon’

In (37a) the lexical item *ekşi* is a verb as indicated by its compatibility with the aspectual *-(I)yor* which is only compatible with expressions classified as verbs. In (37b) *ekşi* is a noun since it serves as an argument. In (37c) it serves as an attributive modifier and thus it is an adjective. For DM all these occurrences of *ekşi* would be explained by the combination of the root EKŞİ with a phonologically null categorizing *v* head in (37a) with a null categorizing *n* head in (37b) and with an null categorizing *a* head in (37c).

In short, for DM all the apparently monomorphemic expressions which may be classified as nouns, adjectives or verbs on the basis of their morphosyntactic distribution are expressions which have already been categorized by null categorizing heads. This is, in fact, why restrictions may be observed in their morphosyntactic distribution. It is clear that this type of an analysis leads to an unnecessary proliferation in the number of null heads. Moreover, since these null

heads have no more function than categorizing, positing them does not have any more explanatory power than claiming that these expressions bear a category specification distinguishing them as nouns, verbs or adjectives.

2.2.1.3 The Problem of Licensing Vocabulary Items

In DM phonological expressions called Vocabulary Items which are inserted at syntactic nodes at spell-out have licensing conditions associated with them specifying the syntactic environment in which they may appear. In other words, a Vocabulary Item comes with subcategorization information specifying the possible syntactic contexts in which it may appear. Thus, although in DM categoriless roots may be inserted under any node, some kind of specification is necessary to constrain the insertion of phonological expressions called Vocabulary into syntactic structures at spell-out (Harley and Noyer 1998). Thus, a vocabulary item such as *big* in English is specified with a subcategorization feature $-v$ indicating that it cannot be inserted in the context of v . On the other hand, the vocabulary item *open* has a subcategorization feature as $\pm v$ which makes it possible to be inserted in a verbal or a nonverbal environment. However, this kind of a specification is in effect not much different than listing lexical expressions with category labels. In other words, saying that a lexical expression has a subcategorization feature licensing it in a $-v$ environment is not much different than saying that it has a category feature as $-v$.

2.2.2 Borer (2003, 2005) and the Exo-Skeletal Approach

In Borer's exo-skeletal approach, lexical items listed in the lexicon are devoid of any grammatical information such as argument structure and category specification, which is deterministic of the syntactic structures they can occur in. It is rather the syntactic structure itself which determines not only the argument structure but also the categorial properties of lexical items. In other words, syntactic properties such as argument structure and category type, are, in fact, properties of structures and not properties of the listed items themselves. Thus, Borer's approach, in this sense, is exo-skeletal since it is the 'outside' syntactic structure that drives the interpretation of lexical items inside this structure; lexical items themselves only modify structures and do not determine them. This view of structure building represents the opposite of lexicalist views where the information carried by lexical items regarding argument structure, syntactic category and syntactic projection environment determine the structure built around lexical items.

Now let us see the specifics of how lexical items are categorized by syntactic structure in this approach.

2.2.2.1 Categorization in Borer (2003, 2005)

According to Borer roots are sound-meaning pairs devoid of any categorial information. They are inserted as an unordered set into an unmarked lexical phrasal domain (L-D). During derivation a particular functional category label will merge with L-D and project functional structure. The particular kind of functional structure

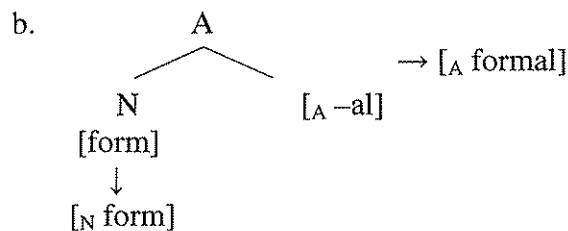
projected will categorize L-D. The following illustrates how the expression form is categorized:

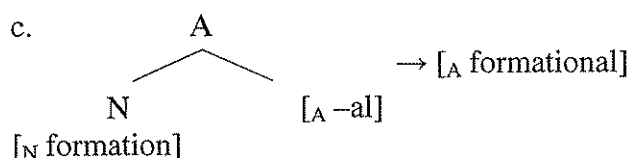
- (38) a. [T <...>T [L-D form]] L-D → VP
 b. [D <...>D [L-D form]] L-D → NP

(38a) shows the categorization of the expression *form* as a VP by T and (38b) shows its categorization as an NP by D. When L-D is embedded under a T it becomes a V(P) and when it is embedded under a D it becomes an N(P). Thus, in this approach all Ø-marked N-V alternations in English such as *a walk-to walk*, *a drive-to drive*, *a talk-to talk* represent category neutral lexical items inserted in different syntactic environments.

In this approach, categorization can also be accomplished by a morphological structure, distinguished from inflectional/functional features. Morphemes such as *-ation*, *-ize*, *-al*, etc. are not only themselves associated with a category, but can also categorize their morphological complements if they are not already associated with a category specification. The following exemplifies categorization by the affix *-al*:

- (39) a. *-al*, A, [[N] ___A]

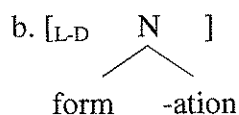




The affix *-al* is associated with the specification in (39a) which indicates that *-al* has a category specification as A and that it categorizes or selects its complement as N. When it takes the categoriless expressions *form* as its complement it projects an A and in the meantime categorizes *form* as an N, as illustrated in (39b). Its complement may be an expression such as *formation* which has already been categorized as N by the morpheme *ation* as shown in (39c).

When a category neutral item such as *form*, residing in the L-domain is associated with an inserted nominal affix *-ation*, giving rise to the structure in (40b), it will force the existence of an NP, and would only allow the projection of nominalizing functional structure, e.g., DP, NumP as shown in (40c), but not the projection of verbalizing functional structure, such as TP or ASP as in (40d):

(40) a. [L-D form]



c. [DP [NumP [NP formation]

d. *[TP [ASP [NP formation]

The ungrammaticality of (40d) is due to the fact that formation is an expression which has already been specified categorially as a noun and thus it is incompatible in the environment of verb selecting (or verbalizing) functional projections ASP (or TP).

2.2.2.2 Problems for Borer (2003, 2005)

Compared to the categorization approach in DM, in Borer (2003, 2005) categorization depends less on the use of null categorizing heads. For instance, while in DM the derivation of the verb *box* and noun *box* would both require null categorizing heads, a null *v* head for the former and a null *n* head for the latter, in Borer there is no need to posit separate null categorizing heads since the expression *box* would be nominalized by being embedded under a DP and would be verbalized by being embedded under a TP (or ASP). However, Borer's approach to categorization seems to be inadequate in explaining certain restrictions concerning the distribution of lexical items as discussed below.

It is clear that Borer's account of categorization relies heavily on the flexibility of expressions such as *box*, *run*, *hit*, *break*, *talk* in English which are compatible in morphosyntactic environments typically associated with nouns (e.g. DP) as well as those typically associated with verbs (e.g. TP). Thus, such lexical items unmarked for being either a noun or a verb can be argued to be categorized by syntactic structure. For this view of categorization, the flexibility displayed by the expressions *ekşi* in example (37) would be an ideal case to account for. The example is presented below again.

(41) a. Bu yoğurt *ekşi*-yor.
 this yogurt sour-prog
 ‘This yogurt is getting sour.’

b. Ben *ekşi* sev-me-m.
 I sour like-neg-1sg
 ‘I don’t like sour (food).’

c. *ekşi* limon
 sour lemon
 ‘sour lemon’

In Borer’s categorization approach the categoriless expression *ekşi* would be categorized as a verb in (41a) by being embedded under the aspect head represented by the progressive *-Iyor*. It would be categorized as a noun by being embedded under a DP structure as in (41b) and categorized as an adjective by being embedded as an attributive modifier in DP structure as in (41c).

However, although there are some expressions which display this type of flexibility in terms of nominal vs. verb distinction as illustrated by the expressions *ekşi* above, the majority of lexical expressions lack this kind of categorial ambiguity. In other words, they display restrictions in the morphological and syntactic environments they occur in as illustrated in section (2.1).¹¹

¹¹ Nakipoğlu and Üntak (2008) give the following list of expressions as those which display nominal-verb ambiguity:

acı- ‘hurt; feel pity’, *ağrı*- ‘pain: to ache’, *boya*- ‘paint; to paint’, *damla*- ‘drop; to drip’, *etki*- ‘effect; to affect (in chemistry)’, *gerek*- ‘requirement; be needful’, *kayşa*- ‘landslide; fall due to a landslide’,

The presence of root expressions which are not compatible with certain affixes or which cannot be embedded under certain syntactic environments is problematic for Borer's approach as well. In this framework, rigidity observed in the morpho-syntactic behavior can be explained by appealing to internal complexity. In other words, if an expression is not compatible with certain morphological or syntactic environments, it is because that expression has a derivational history which has already endowed it with a syntactic category restricting its combinatorial possibilities. Then, within this framework, we are led to say that all the monomorphemic forms in Turkish such as those in (35) which display nominal behavior are already embedded under some nominalizing structure and all the monomorphemic forms as in (36) which display verbal behavior are already embedded under a verbalizing structure. In Borer's framework such internally complex items are handled by listing them as idioms. However, such a solution is highly unattractive, because a major portion of the lexical items in Turkish would be listed in this way. It seems that the same effect can be achieved by listing lexical items together with categorial feature specifications.

tat- 'taste; to taste', *tepki-* 'reaction; to undergo a chemical reaction', *üvey-* '(of a dove) coo', *yama-* 'patch; to patch', *zıbar-* '(contemptuously) go to bed; die', *bavlı-* 'train a dog/falcon to hunt', *ekşi-* 'sour; to become sour', *eski-* 'old; to be worn out', *köhne-* 'outmode; to become outmode'

In addition to the above, there are also the following:

dik- 'upright/to hold upright', *don-* 'frost/to freeze', *doku-* 'texture/to weave', *göç-* 'migration/to migrate', *güven-* 'trust/to trust', *kuru-* 'dry/to dry', *küs-* 'being cross/to get cross with someone', *şiş-* 'swollen/to swell', *sancı-* 'pain/to pain', *sik-* 'penis; to fuck', *sıva-* 'plaster/to plaster'

2.3. Conclusion

In this chapter I have presented the restrictions displayed by lexical expressions in various morphological and syntactic environments and argued, on the basis of these restrictions, that the traditional nominal-verb distinction in Turkish represents a distinction determined prior to syntax for a majority of the lexical expressions. In chapter 4, I will elaborate on the real nature of this distinction while I discuss the category 'verb'. Now, in the following chapter, I will focus on the expressions classified as nominals and investigate whether, in the lexicon, a further specification distinguishing these expressions as 'noun' and 'adjective' is required.

CHAPTER 3

THE NOUN-ADJECTIVE DISTINCTION

In the preceding chapter, I argued that the distinction between lexical expressions traditionally classified as nominals and verbs in Turkish represents a lexical specification which distinguishes (the majority of) expressions prior to syntax. I leave the discussion of the exact nature of this distinction and of the category 'verb' to the following chapter and focus in this chapter on the nature of adjective-noun distinction.

The major claims of this chapter are that nominal expressions listed in the lexicon bear no further category specification as 'noun' and 'adjective' dividing them into distinct lexical classes and that the noun-adjective distinction is syntactic in nature. I argue that it is this lack of lexically specified distinction between adjectives and nouns which enables the same lexical expression to be used in syntax both as an attributive modifier ascribing a property to some entity and as an expression referring to the entity itself.

The first section presents the criteria which have been suggested in the literature for distinguishing the categories 'adjective' and 'noun'. In section 2, I present an overview of the data which supports the lack of a category distinction between adjectives and nouns in Turkish. In section 3, I set forth three possible types of categorial specification that would be available for a language which displays neutralization between adjectives and nouns. I argue that Turkish cannot be a language where all nonverbal expressions are specified as 'noun' in the lexicon nor

can it be language where all of them are specified as ‘adjective’, and conclude that in Turkish adjectives and nouns belong to a single lexical class which contains flexible expressions with a capacity to become ‘nouns’ and ‘adjectives’ depending on the syntactic environment they occur in. In section 4, I discuss the flexibility associated with these expressions and explain those restrictions concerning the occurrence of the so-called adjective expressions in argument positions and the so-called noun expressions in attributive modification structures. Section 5 focuses on what makes expressions NPs or APs in syntax. I propose that in Turkish expressions classified as nominals are ‘adjectivized’ by simply occurring in attributive modification structures and ‘nounized’ through case assignment.¹

3.1 Morphological and Syntactic Criteria to Distinguish Nouns and Adjectives²

3.1.1 Criteria to Distinguish Nouns

The ability to constitute argument phrases and referential expressions is generally considered to be the primary distinguishing characteristic of nouns (Croft 1991; Hengeveld 1992; Bhat 1994, among others). This property is closely related to the capacity of noun expressions to occur with articles, demonstratives, numerals and other expressions of cardinality, including morphological markers for case and

¹ I will use the term ‘nounize’ instead of ‘nominalize’ since in this study the term ‘nominal’ is used for the group of nonverbal expressions which are unspecified for the adjective-noun distinction.

² Once again I draw attention to my use of the terms ‘noun’ and ‘adjective’ like I did previously in the Introduction chapter. For explanatory purposes, I will continue to use the terms adjective and noun in their traditional sense in this chapter. I will also refer to ‘noun’ or ‘adjective’ usage of lexical expressions, the former representing the occurrence of an expression as an argument/referring expression and the latter representing its occurrence as an attributive modifier.

number. I will mainly focus on these morphological and syntactic environments to illustrate the similarities and differences in the behavior of nominal expressions. However, I will also refer to the restrictions associated with the attachment of the so-called derivational affixes in Turkish during my discussion.

3.1.2 Criteria to Distinguish Adjectives

Distinguishing adjectives as a distinct word class in languages has always been more difficult and controversial than the identification of nouns or verbs as a distinct word class (Dixon 1982; Schachter 1985; Bhat 1994; Wetzer 1996, among others). In some languages expressions denoting property concepts are argued to exhibit grammatical properties similar to nouns (e.g. for Totonac see Levy 2006) and in some others these property expressions are similar to verbs in their morphosyntactic behavior (e.g. for Korean see Sohn 2006 and for Wolof see Mc Laughlin 2006).

For all these languages the independent status of the word class adjective has been the subject of much discussion and the research done so far has introduced different types of language specific morpho-syntactic criteria that distinguish adjectives from nouns and verbs. Of all the various types of criteria, the ability to modify nouns has been considered to be the most distinctive and prototypical characteristic of adjectives (Croft 1991; Hengeveld 1992; Bhat 1994, among others) and thus has been the most common way of recognizing a distinct class of adjectives in descriptive grammars.³

³ Baker (2003) notes that in English and in several languages (e.g. Slave) there are adjectives that cannot be used as attributive modifiers, but only as predicates (eg. The dog is asleep vs. *an asleep dog). Thus, he argues that attributive modification may not always provide a reliable criterion to distinguish adjectives.

Another defining property of adjectives has been argued to be the capacity to combine with degree words (e.g. *too nice*, *very nice*) which in fact derives from the semantic property of gradability. However, gradability may not extend to the whole class of adjectives in a language. Some adjectives may denote absolute, ungradable properties such as *pregnant*, *dead*, *married* and thus cannot appear with degree heads (e.g. **very pregnant*).

The attributive modification structures will be the main testing ground for the ‘adjective’ category during the discussion though I will resort to other criteria when necessary.

3.2 The Neutralization of the Distinction between Adjectives and Nouns

As it was previously mentioned in Chapter 1, the existence of a grammatical distinction between adjectives and nouns has been the subject of much debate in Turkish due to the apparent similarities in the morphological and syntactic behavior of adjectives and nouns. In the following sections, I will first discuss the lack of adjective-noun distinction among the members of the nominal category concerning their capacity to occur with derivational affixes. Then, I will briefly mention the flexibility observed in the behavior of nominal expressions in terms of their capacity to occur both in attributive modification structures and in argument positions with case and number morphology. I postpone the main discussion concerning the nature of this flexibility to section 3.3.

In Turkish, all property denoting expressions can be used as attributive modifiers. Moreover, there seem to be no property denoting expressions which can only occur as predicates but not as attributive modifiers. Thus, attributive modification structures are syntactic environments where to check the distribution of nominal expressions.

3.2.1 Lack of Distinction in Derivational Affixation

The previous chapter demonstrated that derivational affixes make a distinction between verb expressions and nominal expressions. In contrast, derivational affixes fail to distinguish adjectives and nouns as distinct categories. That is, there seem to be no derivational affixes which can be identified as targeting adjective stems to the exclusion of nouns, nor are there affixes which can be identified as targeting only noun stems to the exclusion of adjectives. The way derivational affixes have been classified in Turkish is a clear indication of this fact. In Turkish grammars, derivational affixes are classified as those which attach to nominal stems and those which attach to verbal stems but usually no further classification is made between derivational affixes as affixes which attach to noun stems and those which attach to adjective stems (Ergin 1972; Gencan 1975; Korkmaz 2003; Adalı 2004, among others).

The following illustrate examples of derivational affixes which can be attached both to nouns and to adjectives.

- (1) a. *-lık*
- kitap ‘book’ → kitap-lık ‘a place for books/library’
- iyi ‘good’ → iyi-lik ‘goodness’
-
- b. *-lık*
- göz ‘eye’ → göz-ük ‘appear’
- aç ‘hungry’ → ac-ık ‘to get hungry’

c. -lA

fırça 'brush' → fırça-la 'to brush'

temiz 'clean' → temiz-le 'to clean something'

d. -sA

önem 'importance' → önem-se 'consider important'

garip 'strange' → garip-se 'consider strange'

The first example given for the suffixes is an expression which can be classified as a noun on the basis of notional criteria and the second is an adjective as the given meanings in English indicate. Thus, the above suffixes are compatible with both types of expressions.

The restrictions that may be observed in the attachment of certain derivational suffixes are semantic, rather than categorial in nature. For instance, the suffix – (*I*)*mtrak* attaches to only expressions of color and taste:

(2) sarı 'yellow' → sarı-mtrak 'yellowish'

acı 'hot/bitter' → acı-mtrak 'somewhat hot / bitterish'

This suffix also cannot be argued to distinguish adjectives as a distinct category because color terms in Turkish are expressions which cannot be classified as adjectives or nouns independently of the syntactic environment they occur in. The following examples illustrate both 'noun' and 'adjective' usage of these terms.

- (3) a. Sana *sarı* yakış-ma-z.
you-dat yellow look good-neg-aor
'Yellow doesn't look good on you.'

- b. *Sarı* çiçek-ler çok güzel.
yellow flower-pl very nice
'The yellow flowers are very nice.'

The color expression *sarı* 'yellow' occurs as an argument expression in (3a) and can be classified as a noun, while it occurs as an attributive modifier in (3b) and can be classified as an adjective.

The same categorial ambiguity holds for expressions referring to taste as well:

- (4) a. Ben *acı* ye-me-m.
I hot/spicy eat-neg-1sg
'I can't eat hot/spicy food.'

- b. Çorba-ya *acı* biber koy-du-m.
soup-dat hot pepper put-past-1sg.
'I added hot pepper to the soup.'

On the basis of these examples, it would be implausible to say that the suffix –(I)*mtrak* selectively target the members of a specific grammatical category. This

suffix, rather than distinguishing expressions with a specific category, adjective, selects expressions with a certain semantic property, that is, color and taste.

Now let us see how nominal expressions display categorial ambiguity in terms of syntactic distribution and inflectional morphology.

3.2.2 Lack of Distinction in Syntactic Distribution and Inflectional Morphology

The lack of distinction among nominal expressions in derivational affixation can also be observed in the syntactic distribution of these expressions as illustrated by the following examples:

- (5) a. *genç* adam
young man
b. Ali o *genç-ler-i* tanı-mı-yor.
Ali that young-acc know-neg-prog
'Ali didn't know those young people.'

- (6) a. *kör* adam
blind man
'blind man'
b. Şu *kör-e* yardım ed-in.
that blind-dat help do-2sg/pl
'Help this blind person.'

(7) a. *kare* bir masa

square a table

'a square table'

b. Kağıd-a bazı *kare-ler* çiz-di-m.

paper-dat some square-pl draw-past-1sg

'I drew some squares on the paper.'

(8) a. *hasta* adam

sick man

'a sick man/ a man who is sick'

b. Doktor bir *hasta-yla* konuş-uyor.

doctor a patient-com talk-prog

'The doctor is talking to a patient.'

The examples above show that the same expressions can serve as attributive modifiers, which has been considered to be typical of adjective class members, and occur as arguments with articles, demonstratives and case/plural morphology, which is typical of the noun class members. Thus, as in the case of derivational affixes, there seems to be a lack of a distinction among the members of the nominal category in terms of their syntactic distribution and occurrence with inflectional morphology as well.

3.3. The Nature of the Absence of a Distinction

As it has been mentioned in the Introduction chapter section 1.3.2, the above mentioned lack of an adjective-noun distinction among the members of the nominal word class with respect to derivational morphology, syntactic distribution and inflectional morphology have led researchers to suggest that adjectives and nouns do not form distinct word classes in Turkish. Although the views on the matter vary from denying the existence of a word class 'adjective' altogether to considering both nouns and adjectives as members of a single word class, most of the claims converge upon the view that in Turkish property denoting expressions do not constitute a word class distinct from the word class 'noun'. However, the claim that Turkish does not make a word class distinction between nouns and adjectives does not have much explanatory power because cross-linguistic studies on word classes indicate that for different languages there might be different ways of lacking an adjective-noun distinction. Baker (2003: 245) indicates that if a language does not distinguish adjectives and nouns as distinct word classes there might be three possible explanations for that:

- (9) a. The language has no adjectives but only nouns.
- b. The language has no nouns but only adjectives.
- c. The language has one class of words which can optionally be noun or adjective.

Now let us see which of these possible explanations holds for Turkish.

3.3.1 A Language without Adjectives

According to Baker in a language where quality denoting expressions are all nouns, those expressions would be similar to the abstract nouns such as *richness* or *wealth* in English rather than being similar to the adjectives *rich* or *wealthy*. Chichewa is a language which comes closest to being a language with no adjectives but only nouns.⁴ It has the following properties.

In Chichewa there is no direct attributive modification with quality denoting expressions. Instead an abstract noun is connected to a head noun by a preposition like element.

- (10) m-kango *(w-a) nzeru
 3-lion 3-assoc 10.intelligence
 ‘a lion of intelligence, a smart lion’
 (Baker 2003: 246, example 95)

The language does not have degree words that are functional heads such as *more* in ‘more intelligent’:

- (11) Mi-kango ndi y-a mphanvu ku-posa njovu.
 4-lions pred 4-assoc strength inf-pass 10-elephants
 (lit., ‘Lions are of strength to pass elephants.’)

⁴ Although Chichewa is a language where most of the quality denoting expressions are nouns, it has been argued by Bresnan and Mchombo (1995), Baker (2003), that it does not lack the adjective category altogether and there are around six words (e.g. *kulu* ‘big’, *tali* ‘long’) which behave like true adjectives.

'Lions are stronger than elephants.'

(Baker 2003: 246, example 96)

The language does not have resultative/depictive secondary predicate constructions:

(12) *Ndi mkango u-mene a-lenje a-na-meny-a (w-a) u-kali.

pred 3-lion 3-which 2-hunters 2s-past-hit-fv 3-assoc fierce(ness)

'It is the lion that the hunters beat fierce/ (to) fierceness.'

(Baker 2003: 246, example 97)

Now let's take a look at the quality denoting expressions in Turkish.

3.3.1.1 Quality Denoting Expressions in Turkish

Turkish has quality denoting expressions belonging to the four core semantic classes which Dixon (2006:3) identifies to be typically associated with the word class adjective in languages. These semantic classes are dimension, age, value and color. Some of the lexical expressions in Turkish which correspond to these semantic types are given below.

(13) DIMENSION: *büyük* 'big', *küçük* 'small', *kısa* 'small', *uzun* 'long', *dar* 'narrow', *geniş* 'wide'

AGE: *yeni* 'new', *eski* 'old' (for inanimate), *genç* 'young', *ihiyar* 'old' (for animate)

VALUE: *iyi* 'good', *kötü* 'bad', *çirkin* 'ugly', *güzel* 'beautiful', *şirin* 'cute'

COLOR: *beyaz, ak* 'white', *siyah, kara* 'black', *mavi* 'blue', *yeşil* 'green',

sarı 'yellow'

In Turkish there are also property denoting expressions belonging to the semantic classes which Dixon considers to be peripheral and to be associated with medium-sized and large adjective classes in languages:

(14) PHYSICAL PROPENSITY: *sert* 'hard', *temiz* 'clean', *pis* 'dirty', *sıcak* 'hot'

HUMAN PROPENSITY: *cimri* 'stingy', *kibar* 'kind', *zeki* 'smart'

SPEED: *yavaş/ağır* 'slow', *çabuk* 'fast'

In addition to the above, there are expressions of semantic types which Dixon indicates to be associated with large adjective classes in some languages:

(15) DIFFICULTY: *kolay* 'easy', *zor, güç* 'difficult'

SIMILARITY: *aynı* 'similar', *değişik* 'different', *benzer* 'similar'

POSITION: *uzak* 'far', *yakın* 'near'

These quality denoting expressions in Turkish differ from the ones in Chichewa in several ways as the following discussion shows.

3.3.1.2 Direct Attributive Modification

The following examples demonstrate that, unlike Chichewa, Turkish allows direct attributive modification with property denoting expressions:

- (16) a. Ali yeni elbise-yi dolab-a koy-du.

Ali new dress-acc closet-dat put-past

‘He put the new dress in the closet.’

- b. Ali sıcak bir çorba içti.

Ali hot a/one soup drink-past

‘He drank hot soup.’

- c. Küçük çocuk ağla-dı.

small child cry-past

‘The small child cried.’

As it can be seen in the examples above, property denoting expressions can be used as attributive modifiers without the help of additional functional structure or a prepositional element.

3.3.1.3. Degree Words in Turkish

In Turkish quality denoting expressions may be modified by degree heads and occur in comparative and superlative constructions as illustrated by the following examples

- (17) a. çok büyük bir masa
very large a table
'a very large table'
- b. Mine Ayşe-den daha güzel.
Mine Ayşe-abl more beautiful
'Mine is more beautiful than Ayşe.'

Thus, the property denoting expressions in Turkish differ from the ones in Chichewa in allowing degree modification as well.

3.3.1.4. Secondary Predicate Constructions: Depictives and Resultatives

In Turkish quality denoting expressions can occur in depictive and resultative constructions as secondary predicates.⁵

- (18) Ali çay-ı sıcak sev-er.
Ali tea-acc hot like-aor

⁵ For a full discussion of depictive and resultative constructions in Turkish, see Schroeder (1999) and Meral (2005).

‘Ali likes the tea hot.’

(19) Ali saç-ın-ı kısa kes-ti.

Ali hair-3poss.sg-acc short cut-past

‘Ali cut his hair short.’

As the above examples demonstrate, property denoting expressions in Turkish can occur in secondary predication constructions unlike property expressions which are nouns in Chichewa.

In conclusion, quality denoting expressions in Turkish, examples of which are given in section 3.3.1.1, cannot be expressions specified as nouns in the lexicon. However, this does not exactly mean that all the nominal expressions are adjectives. I will argue below that this does not hold for Turkish either.

3.3.2 A Language without Nouns

The claim that a language may not have nouns sounds quite radical at first since the category ‘noun’ is considered to be a more basic and universal category than the category ‘adjective’ (Dixon 1982; Bhat 1994). Yet there is the possibility for a language to have only adjectives and build its nominal referring expressions by using functional categories such as pronouns and determiners (e.g. *the book(ish) one*, *the book (like) one* instead of *the book*) or through secondary predicate constructions (eg. *the one which is book*).

Baker's study on non-configurational languages (2001) argued that Australian languages like Warlpiri and Jiwari have verbs and adjectives but no nouns.⁶ Baker proposed that the strongly nonconfigurational properties of these languages follow from the absence of 'noun' expressions in those languages.⁷ On this view, 'nominal' expressions in Warlpiri and Jiwari are in fact adjectives and as such they cannot occupy argument positions. The overt 'nominals' in those languages are secondary predicates which are related to null pronouns in argument positions. Thus, a Jiwari sentence like (20a) has the structure illustrated in (21b):

- (20) a. *Piji-nha mantharta-nha wanka-rla-rninyja ngu-lu martaru-lu.*

many-acc man-acc live-make-past that-erg gum-erg

'That gum has cured many people.'

(Baker 2003: 170, example 155)

- b. [*PRO_k* Pred people (like)] *pro_i* cured *pro_k* [*PRO_i* Pred gum(like)]

(lit. 'It cured them peoplelike gumlike')

(Baker 2003:171, example 156)

A consequence of having predicate 'nominals' is the availability of separating demonstratives and adjectives from their related 'nominals' as illustrated by the following examples from Warlpiri:

⁶ Baker's (2003) recent approach to categorial distinctions argues against his previous analysis of Warlpiri and Jiwari grammars (Baker 2001) and claims that all languages make a distinction between adjectives and nouns.

⁷ Bhat (1994: 168-169) also draws attention to the relation between non-configurationality and the lack of noun-adjective distinction in languages.

(21) *Wawirri kapi-rna panti-rni yalumpu.*

kangaroo aux-1sgs spear-nonpast that

‘I will spear that kangaroo.’

(Baker 2001: 431 cited from Hale 1983:6)

(22) *Kurdu-jarra-nguku ka-pala maliki wajili-pi-nyi wita-jarra-rlu.*

child-dual-erg pres-3ds dog chase-nonpast small-dual-erg

‘Two small children are chasing the dog.’

(Baker 2001: 430 cited from Simpson 1991: 257)

(21) illustrates that in Warlpiri the demonstrative can be freely split from the ‘nominal’ and (22) shows that the ‘adjective’ can also be separated from the associated ‘noun’. Basically, any multiple-word NP in Warlpiri can be a discontinuous modifier as Baker indicates.

As it is well known Turkish is a language which exhibits free-word order and it is possible to have subject and object nominals and certain adverbial modifiers dislocated from their canonical positions.⁸ However, demonstratives, numerals, the

⁸ It has been indicated by several researchers that free word-order is not a homogenous phenomena and that free word-order languages may exhibit different types of non-configurationality (Hale 1983, Baker 2001, Pensalfini 2004). Although Turkish is a free word-order language, it is clear that it does not exhibit the Warlpiri type of non-configurationality. There are different views in the literature concerning the (non)configurational properties of Turkish.

Kornfilt (1990) argues that there is an identifiable VP layer in Turkish which includes the verb and object to the exclusion of the subject and claims that Turkish is a configurational language.

Göksel (1993) points out that free word-order and discontinuous constituency are notions related to linearity and in fact they have nothing to do with hierarchy. She uses the term configurational to refer to the combinatorial aspects of a construction and not to aspects of surface order and argues that the disjunction between linearity and configurationality to be a fundamental property of linguistic structure.

Öztürk (2005) proposes an analysis where case and referentiality features are checked within the domain of a single functional head-i.e. a theta role introducing functional head and thus eliminates vp as a functional projection from the phrase structure of Turkish. She argues that although the theta-role introducing heads are hierarchically ordered, the absence of case driven agree with higher

indefinite article 'bir' and adjectives cannot be separated from the head nouns they are associated with.

- (23) a. Şu çocuk gül-üyor.
that child laugh-prog
'That child is laughing.'

b. *Çocuk şu gül-üyor.
child that laugh-prog
Int. 'That child is laughing.'

c. *Şu gül-üyor çocuk.
that laugh-prog child
Int. 'That child is laughing.'

- (24) a. Ben küçük çanta-yı beğen-di-m.
I small bag-acc like-past-1sg.
'I liked the small bag.'

b. *Ben çanta-yı küçük beğen-d-im.
I bag-acc small like-past-1sg.
Int. 'I liked the small bag.'

functional heads, e.g. *v* (and the lack of *vp* which follows from that) creates a non-configurational phrase structure effect in Turkish.

The exact relationship between free-word order properties of Turkish and the lack of noun-adjective distinction remains to be further investigated.

c. *Ben küçük beğen-di-m çanta-yı.

I small like-past-1sg. bag-acc

Int. 'I liked the small bag.'

d. * Ben çanta-yı beğen-di-m küçük.

I bag-acc like-past-1sg. small

Int. 'I liked the small bag.'

The examples (23b) and (23c) show that the demonstrative cannot be separated from the nominal head. In (24b), (24c) and (24d) the adjective is separated from the nominal expression it is associated with and the examples are again ungrammatical.⁹

⁹ There are cases in Turkish where an adjectival modifier seems to be dislocated from the noun it is associated with. This occurs when: the adjectival modifier itself is modified by a degree expression (ii vs. iii); the nominal head is associated with an indefinite reading (ii vs. iv); dislocation must be to a post verbal position (ii vs. v,vi):

- (i) Ali (çok) güzel bir kız gör-dü.

Ali (very) beautiful a girl see-past

'Ali saw a (very) beautiful girl.'

- (ii) Ali bir kız gör-dü çok güzel.

Ali a girl see-past very beautiful

'Ali saw a very beautiful girl.'

- (iii) ??Ali bir kız gör-dü güzel.

Ali a girl see-past beautiful

Int. 'Ali saw a beautiful girl.'

- (iv) *Ali kız-ı gör-dü (çok) güzel.

Ali girl-acc see-past very beautiful

Int. 'Ali saw the (very) beautiful girl.'

- (v) *Çok güzel Ali bir kız gör-dü.

very beautiful Ali a girl see-past

If the nominal expressions above were secondary predicates, these types of dislocation would be allowed as it is in Warlpiri. In other words, argument expressions in Turkish are not secondary predicate constructions and thus they cannot be constructions with predicate adjectives.

The discussion above shows that in Turkish expressions classified as nominals cannot be expressions specified as adjectives in the lexicon. That is, Turkish cannot be a language which lacks nouns and only have adjectives.

So far I have shown that in Turkish the members of the nominal category belong neither to the grammatical category 'noun' nor to the grammatical category 'adjective'. This does not necessarily mean that there are no nouns or no adjectives in Turkish. There is still the possibility that these expressions bear a general categorial specification distinguishing them from verbs and become 'noun' and 'adjective' through functional structure in syntax. Now let us see what this possibility implies.

3.3.3 A Language with a Class of Expressions Usable as Either Nouns or Adjectives

The claim that there is a single category which is neither specified as 'adjective' nor 'noun' implies that the members of this category have the potential both to form

Int. 'Ali saw a very beautiful girl.'

(vi) *Ali bir kız çok güzel gör-dü.

Ali a girl very beautiful see-past

Int. 'Ali saw a very beautiful girl.'

It is possible that the structure in (ii) is not derived from the one in (i). That is, the adjectival expression which appears to be dislocated may represent a secondary depictive predicate whose original position is indeed the post verbal position. This explains why the adjectival expressions must appear in a post verbal position since depictive predicates occur post verbally. However, I have no explanation at present for the ungrammaticality in (iii) and (iv). I leave this issue for further inquiry.

argument expressions and to occur in attributive modification structures. Then, what needs to be clarified is whether adjective like expressions have the same potential to be arguments as noun like expressions and whether noun like expressions have the same potential to be attributive modifiers as adjective like expressions.

3.4 Flexibility of Nominal Expressions in Turkish

3.4.1 Adjectives as Arguments

In several languages property denoting expressions seem to occur in argument positions with determiners and/or noun associated morphology such as case and number. The following presents examples of such phenomenon in Quechua (25) and in French (26):

- (25) Hatun-ta rikaa. (cf: Rumi-ta rikaa)
 big-acc I-see stone-acc I-see
 'I see a/the big one' 'I see a/ the stone
 (Baker 2003: 174 cited from Weber 1989)

- (26) Je préfère les fins.
 'I prefer the thin(s).'

This type of data has either led researchers to suggest a lack of noun-adjective distinction in the language analyzed or to argue that such cases, in fact, involve an

adjective plus null noun head combination. For instance, ‘the+A’ constructions in English are argued to include a null N head as illustrated in (27) (Longobardi 1994, Chierchia 1998):

- (27) a. The rich annoy John.
 b. [DP the [NP rich_A [NP Ø]]]

The reason for positing a null N head instead of a category changing operation for the adjective expression is because words like *rich* behave quite differently than other nouns in English. As the following examples demonstrate, they cannot have a singular count meaning (28a), they cannot take the plural suffix (28b) and they cannot appear without the definite determiner (28c).

- (28) a. *I saw a rich.
 b. *The pouds annoy me.
 c. *Proud annoy(s) me.

In Turkish adjectives occurring in argument positions behave differently. They can be singular (29a) or plural (29b), can be definite (29c) or indefinite (29a) and occur with case markers (29c) just like other nouns.

- (29) a. Bir zengin Ali-ye yardım et-ti.
 a rich Ali-dat help do-past
 ‘(Someone) rich helped Ali.’

b. Büyük-ler küçük-ler-e yardım et-ti.

old-pl young help do-past

‘The old (ones) helped the young (ones).’

c. Ben o genc-i tanı-yor-um.

I that young-acc know-prog-1sg

‘I know that young.’

d. Ben bir uzun bir de kısa al-dı-m.

I a long a also short buy-past-1sg

‘I bought a long (one) and a short (one).’

It could be the case that the properties of null N and the licensing conditions for it are different in Turkish and in English. In fact, it has been suggested that the above cases in Turkish might involve the deletion of a noun head (Gencan 1975; Demircan 1999). However, I will argue that there is no evidence indicating the existence of such a null N head in Turkish and in fact the data provide evidence against positing such a null head.

3.4.1.1. No Null N Heads

It could be the case that the null N is only licensed by the definite article in English and that it has plural properties (the rich are.. vs. *the rich is...), while in Turkish it could be a null pronominal head whose reference is retrieved from the context,

maybe a pronominal expression like 'one' in English which allows both definite and indefinite, plural and singular interpretations.

(30) a. Ben büyük *pro-ü* al-acağ-ım.

I big (*one*)-acc buy-fut-1sg.

'I will buy the big one.'

b. Ben bir uzun *pro* bir de kısa *pro* al-dım.

I a long (*one*) a also short (*one*) buy-past-1sg

'I bought a long one and a short one.'

An argument against the null pronominal head analysis is that in Turkish there is no overt pronoun like 'one' in English and if there was such a pronominal head in the above constructions the question is why it always has to occur in a null form and never has a phonologically realized form in Turkish.

There is a pronominal expression *biri* in Turkish which may be argued to represent the overt form of the null pronoun. It has both singular and plural forms as shown in the following examples:

(31) a. zengin biri

rich one/someone

'someone rich'

b. zengin birileri

rich someone (pl)

‘some rich people’

However, this pronominal expression does not allow definite readings and it can only have human reference.

(32) a. küçük biri

small someone

(i) ✓ someone small/young

(ii) ✗ something small

(iii) ✗ the small one

Thus, the null pronoun cannot be the null form of *biri* since we cannot explain how definite readings are possible (e.g. 30a) and how reference can be made to inanimate objects as shown in (30).¹⁰

Moreover, if there were a null N head in the above structure it would mean that the adjectival expressions are attributive modifiers of that null N head. However, there is evidence indicating that the adjectival expressions in question are not attributive modifiers. Note that the indefinite article *bir* can either follow or precede an attributive adjective.¹¹

¹⁰ The expression *biri* rather than corresponding to the pronominal ‘one’ in English seems to correspond to the existential quantifier ‘someone’ which also has human reference and has an indefinite reading.

¹¹ In the literature there are different analyses proposed for the expression *bir* in Turkish. It has been claimed to be ambiguous between the numeral ‘one’ and the indefinite article similar to ‘a/an’ in English (Tura 1973; Underhill 1976; Nilsson 1985; Kennely 1997; Schroeder 1999). Aygen (2002) argues against the claim that *bir* is an indefinite article ‘a/an’ in Turkish and claims that it is ambiguous between the numeral and existential interpretation ‘some’. Öztürk (2005) also claims that

(33) a. *bir zengin adam*

a rich man

‘a rich man’

b. *zengin bir adam*

rich a man

‘a rich man’

If the following structure involved a null N head we would expect both (34a) and (34b) to be possible. However, it is only (34a) which is grammatical.

(34) a. *Bir zengin (Ø) e rastladı.*

a rich-Ø-dat meet-past

‘He met someone rich.’

b. **Zengin bir (Ø) e rastladı.*

(34b) indicates that the adjectival expression itself is a noun to which the expression *bir* is attached. Since *bir* never occurs following a noun the example in (34b) is ungrammatical.

bir is not the indefinite article and there are two types of *bir*. The unstressed *bir* is an atomicity denoting predicate modifier which modifies the NP just like any other adjective while the stressed form *BİR* is an adverbial which modifies the event indicated by the pseudo-incorporation of the object with the verb. A recent analysis by Arslan-Kechriotis (2006) considers *bir* to be an expression base generated in Spec DP when D bears a [–definite] feature.

I will keep on glossing *bir* with the indefinite article ‘a/an’ since nothing in the analysis proposed in this study hinges upon the status of *bir*.

Similarly, if the following example in (35a) was derived from a structure such as in (35b) by the deletion of the head noun, N, we would expect the same deletion to apply to (36) as well. However, such a deletion yields an ungrammatical structure as (36) illustrates:

- (35) a. Onların arasında bir büyük ol-acak-tı.
them among a big be-fut-past
Lit. 'Among them there would be a big.'

- b. Onların arasında bir büyük N ol-acak-tı.
them among a big N be-fut-past
Lit. 'Among them there would be a big (one).'

- (36) Onların arasında büyük bir N olacaktı.
them among big a N be-fut-past
→ *Onların arasında büyük bir (Ø) olacaktı.
Int. 'Among them there would be a big (one).'

Another problem with the head deletion analysis is that it cannot explain why the same deletion cannot apply in the following cases as well:

- (37) a. Bazı/bütün öğrenci-ler çok çalış-tı.
some/all student-pl a lot work-past
'Some/all students worked a lot.'

b. Bazı N ler çok çalış-tı.

→*Bazı-Ø-lar çok çalış-tı.

Int. 'Some of them worked a lot.'

c. *Bütün N ler çok çalış-tı.

→*Bütün-Ø-lar çok çalış-tı.

Int. 'All of them worked a lot.'

If there was a head N deletion process, it would be expected to apply structures as in (37a) as well. However, as (37b) and (37c) show such type of a head deletion yield ungrammatical structures.

So far I have argued that the structures as in (29) do not involve an attributive adjective and a deleted null head. However, there is still another possible structure where the adjectival expression occupying the argument position can in fact be an adjective rather than a noun. It is the headless relative clause construction which I will discuss below.¹²

¹² Another test that can be used to see whether the adjectival expressions above are attributive modifiers or not would involve finding adjectival expressions which can be used only predicatively but not attributively such as *aware*, *ablaze*, *afraid* in English.

(i) a. *an afraid boy

b. The boy is afraid.

So far, I have not encountered such expressions in Turkish. Any adjectival expression that can be used predicatively seems to be used attributively as well. However, there are expressions which can only be used attributively but not predicatively such as *former* in English (e.g. the former president, * the president is former).

3.4.1.2 No Headless Relative Clause

It might be claimed that the occurrence of the italicized quality denoting expression in (38a) involves a headless relative clause construction as in (38b):

- (38) a. *Yeni-yi* dolaba koy-du-m.
new-acc closet put-past-1sg
Lit. 'I put the new in the closet.'
- b. [*Yeni* ol-an] Ø-1 dolaba koy-du-m.
new cop-sub.rel Ø-acc closet-dat put-past-1sg
'I put the one which is new in the closet.'

However, one problem with positing an underlying relative clause construction as in (38b) for structures as in (38a) is that in some cases there may be no corresponding relative clause construction that the structure in question can be derived from.

Göksel (2006), on independent grounds, argues that in Turkish the participle constructions such as in (39a) do not involve any deleted lexical head and that they cannot have been derived from the full relative clause structures as in (39b).

- (39) a. (bizim) ara-dık-lar-ımız
(our) call-nonsub.rel-pl-1pl.poss
'the ones whom we called'

- b. (bizim) ara-dığ-ımız insan-lar
 (our) call-nonsub.rel-1pl.poss people-pl
 'the people whom we called'

According to Göksel, a piece of evidence against deriving (39a) from (39b) comes from ordering facts associated with suffixes. She indicates that if (39a) was derived from (39b) with the deletion of the head noun, the plural suffix on the head noun would follow the possessive suffix.

- (40) (bizim) ara-dığ-ımız insanlar → *(bizim) ara-dığ-ımız-lar
 (our) call-nonsub.rel-1pl.poss people-pl (our) call-nonsub.rel-1pl.poss-pl
 Int. 'those we called'

As the above example shows the deletion of the head in a relative clause and the derivation of a headless relative clause construction from the full relative clause in (40) would yield the ungrammatical order *poss-lAr* (e.g. *aradığ-ımız-lar), rather than the order *lAr-poss* in (39a) (e.g. aradık-lar-ımız). In short, structures as in (39a) do not have corresponding full relative clause constructions.

Similarly, positing an underlying relative clause construction for structures as in (38a) runs into problems because there may be no corresponding relative clause construction that they can be derived from. For instance, (41a) below cannot have been derived from the relative clause construction in (41b) since it is an ungrammatical construction.

(41) a. Ben bir küçük bir de büyük al-dı-m.

I one/a small one/a big buy-past-1sg

'I bought a small one and a big one.'

b. *Ben bir küçük ol-an Ø bir de büyük ol-an Ø al-dı-m.

I one/a small cop-sub.rel one/a big cop-sub.rel buy-past-1sg

Int. 'I bought one which is small and one which is big.'

c. Ben bir küçük ol-an Ø-dan bir de büyük ol-an Ø-dan al-dı-m.

I one/a small cop-sub.rel-abl one/a also big cop-sub.rel-abl buy-past-1sg

Lit. 'I bought one from the small and one from the big.'

Although (41c) is a grammatical relative clause construction, (41a) cannot have been derived from it. Note that (41c) involves the ablative case marker while (41a) does not. In other words, if a deletion were to apply to (41c) it would yield the following structure rather than (41a):

(42) Ben bir küçük ~~ol-an~~ Ø-dan bir de büyük ~~ol-an~~ Ø-dan al-dı-m.

→ Ben bir küçük-ten bir de büyük-ten al-dı-m.

I one small-abl one big-abl buy-past-1sg

Lit. 'I bought one from the small and one from the big.'

Since (41a) does not involve the ablative case marker, (41c) cannot be the relative clause construction from which it is derived.

Another problem with the relative clause analysis concerns the predicate status of the property denoting expression in the relative clause construction. Note that in the following relative clause construction the adjectival expression *küçük* ‘small’ is semantically the predicate of the relative clause:

- (43) *küçük ol-an çanta*
 small cop-sub.rel bag
 ‘the bag which is small’

Thus, if the occurrence of the property expressions as arguments in (29) involved a relative clause construction, these expressions would be predicative adjectives in the underlying relative clause construction. However, as I will argue below, there is evidence indicating that these expressions cannot be predicative adjectives.

Although adjective stacking is possible in attributive modification structures as the example in (44) shows, it is not allowed when adjective expressions are used as predicates as illustrated in (45a). The example in (45b) demonstrates that a coordination structure is necessary when there is more than one predicative adjective.

- (44) *küçük kırmızı çanta*
 small red bag
 ‘the small red bag’

- (45) a. **Çanta küçük kırmızı.*
 bag small red

‘*The bag is small red.’

b. Çanta *küçük ve kırmızı*.

bag small and red

‘The bag is small and red.’

The above facts indicate that the structure below in (46a) cannot have been derived from the ungrammatical relative clause construction in (46b) where the italicized expressions are stacked adjective predicates.

(46) a. Ben *küçük kırmızı*-yı beğen-di-m.

I small red-acc like-past-1sg

Lit. ‘I liked the red small.’

b. *Ben *küçük kırmızı* ol-an-ı beğen-di-m.

I small red cop-sub.rel-acc like-past-1sg

‘*I liked the one which is small red.’

The example in (46b) would be grammatical when, in speech, a pause is given between the italicized expressions or, in written form, a comma is used. The presence of the pause or comma indicates the presence of a coordinate structure where the coordinating conjunction is null.

(47) a. Ben [*küçük ve kırmızı*] ol-an-ı beğen-di-m.

I small and red cop-sub.rel-acc like-past-1sg

‘I liked the one which is small and red.’

b. Ben [*küçük, kırmızı*] ol-an-ı beğendim.

I small Ø red cop-sub.rel-acc like-past-1sg

Lit. ‘I liked the one which is small and red.’

However, (46a) cannot have been derived from these coordinate structures since a pause (in spoken form) or a comma (in written) form is ungrammatical as shown below:

(48) *Ben küçük, kırmızıyı beğendim.

I small red-acc like-past-1sg

Int. ‘I liked the one which is small and red.’

The ungrammaticality of (48) is due to the fact that the expressions *küçük* and *kırmızı* are expressions which are in fact in a modifier-head relation and which, therefore, cannot be separated by a comma or a pause. That is, the ungrammaticality displayed in (48) is no different than the one displayed in (49b).

(49) a. Ben *küçük çanta-yı* beğen-di-m.

I small bag-acc like-past-1sg

‘I liked the small bag.’

b. *Ben *küçük*, *çanta-yı* beğen-di-m.

I small bag-acc like-past-1sg

‘*I liked the small and bag.’

Thus, (46a) does not involve any underlying relative clause construction and the expression *kırmızı* ‘red’ is in fact an N head which is modified by the expression *küçük* ‘small’.

In addition to the above, expressions which can be used as attributive modifiers but which cannot be used predicatively also provide evidence against the relative clause analysis. In Turkish the expression *eski* is similar to the adjective *former* in English in that it is allowed as an attributive modifier but it cannot be used predicatively.

(50) a. the former president

b. *The president is former.

(51) a. *eski* nişanlı / koca / başkan

former fiancé / husband / president

b.* Nişanlı / koca / başkan *eski*.

fiancé / husband / president former

‘The fiancé / husband / president is former.’

Note that in the following example *eski* serves as an argument expression marked with the plural and case suffixes.

(52) Yeni başkan *eski*-ler-i toplantı-ya çağır-dı.

new president old-pl-acc meeting-dat call-past

Lit. 'The new president called the former (ones) to the meeting.'

The occurrence of the expression *eski* as an argument cannot be explained by a relative clause construction since it cannot occur as a predicate in a relative clause structure.

(53) *Yeni başkan *eski* ol-an-lar-ı toplantı-ya çağır-dı.

new president old cop-sub.rel-pl-acc meeting-dat call-past

Int. 'The new president called the ones who are former to the meeting.'

Moreover, the ambiguity associated with the meaning of the expression *eski* provides further evidence against the relative clause analysis. The expression *eski* has two possible meanings: old and former. When *eski* is used as a modifier of human terms it necessarily has the meaning 'former' and does not refer to 'old age'. However, it is ambiguous between 'old' and 'former' when it is an attributive modifier of inanimate terms.

(54) Bu Ali-nin *eski* arabası.

this Ali-gen old/former car-3sg.poss

- (i) 'This is Ali's old car.'
- (ii) 'This is Ali's former car.'

The expression *eski* cannot have the meaning 'former' when it is used predicatively. Thus, with inanimate terms only the interpretation 'old' is possible as in (55).

- (55) Bu arabalar *eski*.
 this car-pl old
 (i) 'These cars are old.'
 (ii) '*These cars are former.'

Note that in (56) below, where *eski* occurs as an argument, the expression is ambiguous between 'old' and 'former' readings.

- (56) a. Ali *eski-ler-i* ne yap-acak?
 Ali old/former-plur-acc what do-fut
 'What is Ali going to do with the old/former ones?'

The possibility of both 'former' and 'old' readings for *eski* in the above construction indicates that the occurrence of *eski* does not involve a construction where it is a predicate in a relative clause. In other words, the structure in (56) cannot have been derived from (57) below.

(57) Ali *eski* olan-lar-ı ne yap-acak?

Ali old cop-sub.rel-plur-acc what do-fut

‘What is Ali going to do with the ones which are old/*former?’

Since (57) has only ‘old’ interpretation possible, it cannot be the underlying structure for (56).

The discussion so far indicates that quality expressions occurring in argument positions can neither be attributive modifiers of a null N head nor predicative adjectives in headless relative clauses. They are in fact expressions which head NPs occupying argument positions. Yet there are some restrictions that can be observed in the occurrence of these expressions as argument expressions. The following section aims at explaining these restrictions.

3.4.1.3 Explaining the Restrictions

3.4.1.3.1 Semantic Restrictions

Certain nominal expressions seem to be more limited in their ‘noun’ usage. Firstly, a group of expressions like *kör* ‘blind’ can apply both to animals (58a) and to people (58b) when they are used as attributive modifiers but they refer to human beings in their ‘noun’ use (59):

(58) a. *kör* köpek

‘blind dog’

b. *kör* adam

‘blind man’

(59) a. Ali bir *kör-e* yardım etti.

Ali a blind-dat help did

‘Ali helped a blind man.’

Moreover, some expressions in their noun use tend to have lexicalized meanings. For instance, *güzel* means ‘beautiful, nice’ when it is used attributively. It means ‘a beautiful woman’ in its noun use.

(60) Ali bir *güzel-e* aşık oldu.

Ali a beautiful-dat love become-past

‘Ali fell in love with a beautiful woman.’

In (60) the expression *güzel* ‘beautiful’ can only be interpreted as referring to a beautiful woman. However, note that *güzel* can also be used to refer to something beautiful as well if there is a pre-established reference in the discourse to the entity that has the property in question.

(61) Sen o *güzel-ler-i* şuraya koy.

you that beautiful-pl-acc there put

‘You put the beautiful ones over there.’

This type of lexicalization in the meaning of certain expressions as illustrated in (59) and (60) is not only observed with expressions denoting human qualities. The following example illustrates the special meaning which is associated with the expression *büyük* 'large/big'.

(62) Biz bir *büyük* iç-ti-k.

we a big drink-past-1pl

(i) 'We drank a big bottle of rakı.'

(ii) Lit. 'We drank a big glass/bottle.'

For most native speakers *büyük* above is understood to be referring to a big bottle of *rakı*. However, it can also be used for referring to a big bottle or glass of water or, in fact, anything big depending on the discourse context.

I propose that these types of semantic differences between the 'adjective' and 'noun' usage of expressions are not an indication of differences in the categorial specification of expressions listed in the lexicon. In other words, it is not the case that there is a lexical expression *güzel* specified as A(djective), meaning 'beautiful', another lexical expression *güzel* specified as N(oun) and meaning 'beautiful woman' or 'something beautiful'. There is a single lexical expression *güzel* which becomes a 'noun' or an 'adjective' depending on the syntactic environment it occurs in. The meaning differences that arise are aspects of the encyclopedic meaning of expressions. In the lexicon model, which will be discussed in chapter 5, the lexicon simply contains a list of the expressions which can be inserted into syntactic nodes

and these expressions contain only that type of information which is required for the syntactic well-formedness of the constructions they occur in.

3.4.1.3.2 Restrictions for the Bare Forms

Another type of restriction is observed in the occurrence of adjectives as arguments when they are in the bare form. For instance, the occurrence of expressions like *komik* 'funny', *küçük* 'small/little' as object arguments of the verb sound unacceptable compared to the occurrence of expressions like *kitap* 'book' in the same position .

- (63) a. *Ben *komik* oku-du-m.

I funny read-past-1sg

'I read something funny.'

- b. *Ali *küçük* aldı.¹³

Ali small buy-past-3sg

'Ali bought something small.'

If expressions *komik*, *küçük* have the capacity to serve as arguments as *kitap*, then the question is why they give rise to the ungrammaticality/unacceptability in (63b). Note

¹³ The example in (63a) is acceptable if it is interpreted with an implicit object and with the expression *komik* 'funny' referring to the manner of reading. Thus, it is grammatical with interpretation 'Ali read (something) in a funny manner'. Similarly, the example in (63b) is acceptable again with an implicit object with *küçük* 'small' being interpreted as a secondary depictive predicate as in 'He bought it/them small'. The status of adverbs will be discussed in section 5.1.3.2.

that when these expressions bear the accusative, plural markers the examples are acceptable.

(64) Ben *komik*-ler-i oku-du-m.

I funny-pl-acc read-past-1sg

'I read the funny (ones).'

(65) Ben *küçük*-ü al-dı-m.

I small-acc buy-past-1sg

'I bought the small one.'

Thus, the unacceptability of *komik* 'funny' in (63a) and *küçük* 'small' in (63b) is related to their being in bare forms. I suggest that the expressions in (63) are bare nouns which are pseudo-incorporated into the verb and as such they are subject to some semantic restrictions which apply to pseudo-incorporation.

Pseudo-incorporation, as initially proposed by Massam (2001) and Dayal (2003), refers to a process whereby a non-referential bare nominal is pseudo-incorporated into the verb forming a complex predicate with it.¹⁴ Öztürk (2005), following Massam (2001) and Dayal (2003), argues that preverbal bare nominals in Turkish, as the ones below, are also pseudo incorporated into the verb.¹⁵

¹⁴ As opposed to head incorporation in the sense of Baker (1988), pseudo-incorporation allows the incorporation of phrasal categories (NPs) rather than heads (Ns) (Massam 2001) and does not require the incorporated nominal to form a syntactic or morphological unit with the verb (Dayal 2003). Moreover, Öztürk (2009) argues that pseudo-incorporation is not subject to the constraints that govern head movement and the choice of theta roles for the incorporated nominal and thus, it is possible to have subjects (or agents) to be pseudo-incorporated into the verb, which is strictly disallowed in head incorporation (Baker 1988).

(66) a. Ali *balık* tut-tu.

Ali fish catch-past

‘Ali caught fish.’

b. Ali *kitap* oku-du.

Ali book read-past

‘Ali read book(s).’

Dayal (2003) indicates that for complex predicate formation to take place the pseudo-incorporated NPs should be appropriately classificatory, that is, the activity denoted by the complex predicate which is formed through pseudo-incorporation should be relatively frequent and sufficiently distinct from other similar activities. Thus, the unacceptability of the examples in (63) is due to the fact that the expression *komik* ‘funny’ is not appropriate to classify the activity of reading as the expression *kitap* ‘book’ is. This seems to be a plausible conclusion to arrive at when the following example is considered:

¹⁵ There are also ‘head incorporation’ analyses of preverbal bare nominals in Turkish (Knecht 1986; Nilsson 1986; Kornfilt 1995). The problems associated with the head-incorporation analyses are discussed in detail in Ketrez (2005), Öztürk (2005, 2009) and Arslan-Kechriotis (2006). Ketrez (2005) argues that bare nominals behave like phrasal categories rather than heads and proposes a complex predicate formation account for the behavior of bare nominals. However, she focuses on object bare nominals and does not give an explanation for bare nominals which are subjects. Öztürk (2005, 2009), arguing against the head incorporation analyses, provides an account for both subject and object bare nominals in Turkish in terms of pseudo-incorporation as suggested by Massam (2001) and Dayal (2003). Arslan-Kechriotis (2006) also argues against the head-incorporation analyses and accounts for the behavior of bare nominals by a process called ‘adhesion’. She mainly argues that a bare NP, not having a functional projection that assigns referentiality to it, needs to adhere to the V⁰ in order to be licensed. The differences in Öztürk’s (2005, 2009) and Arslan-Kechriotis’s (2006) analyses of bare nominals and their licensing mainly stem from the differences in their proposals concerning how referentiality and case is assigned in Turkish and whether there is a DP projection that assigns referentiality to nominal projections. These issues are beyond the scope of this study. I will adopt Öztürk’s (2005, 2009) pseudo-incorporation analysis considering the fact that it takes into account the semantic restrictions that apply to the complex predicate formed.

- (67) *Acı ye-di-m, mide-m ağrı-yor.*
 hot eat-past-1sg stomach-1sg.poss ache-prog
 'I ate (something) hot, my stomach aches.'

In example (67) the expression *acı* refers to something that has 'hot/spicy' taste. As an expression related to taste, it can classify the activity when it forms a complex predicate with the verb *ye-* 'eat'. Thus, as long as expressions such as *büyük* 'big', *küçük* 'small', *komik* 'funny', *acı* 'hot' are appropriate to classify the activity indicated by the verb they can occur as bare NP constituents pseudo-incorporated into the verb.

3.4.1.3.3 Restrictions on Occurrence with *bir*

Another type of restriction which is observed in the 'noun' usage of adjectives concerns their occurrence with the expression *bir*.¹⁶

- (68) a. *Yol-da genç bir adam gör-dü-m.*
 road-loc young a man see-past-1sg
 'I saw a young man on the road.'
- b. *Yol-da bir genç gör-dü-m.*
 road-loc a young see-past-1sg
 'I saw a young person on the road.'

¹⁶ In the examples, the expression *bir* is glossed with the indefinite article a(n) in English. However, see footnote 11 for alternative analyses of *bir* in Turkish.

- (69) a. Dolap-ta *kısa* bir etek bul-du-m.
 closet-loc short a skirt find-past-1sg
 'I found a short skirt in the closet.'
- b. ?? Dolap-ta bir *kısa* bul-du-m.
 in the closet a short find-past-1sg
 'I found something short in the closet.'

In (68a) the expression *genç* 'young' as an attributive modifier and in (68b) it is an argument expression with an indefinite interpretation. The expression *genç* is acceptable both in its 'adjective' and 'noun' uses. On the other hand, as (69a) demonstrates that *kısa* is acceptable as an attributive modifier but less acceptable as an argument as in (69b). The examples below indicate that it is the nonspecific indefinite interpretation induced by the expression *bir* which causes the unacceptability.

- (70) Ben o *kısa*-yı beğen-di-m.
 I that short like-past-1sg
 'I liked the short (one).'

In the example above *kısa* is acceptable as an argument referring to a specific entity which has the property of 'shortness'. In fact, its occurrence in (70) implies the presence of a set of entities whose identity has been pre-established in the discourse.

Therefore, when placed in appropriate discourse context *bir kısa* is perfectly acceptable.

- (71) Bütün etek-ler uzun-du, ama sonunda dolap-ta *bir kısa* bul-du-m.
all skirt-pl long-past but end closet-loc one short find-past-1sg
'All the skirts were long, but in the end I found a short (one) in the closet.'

The above example is acceptable in a context when skirts are already under discussion and the speaker uses the expressions *kısa* to refer to a skirt that is short.

The difference between (68b) and (69b) raises a question as to the nature of the difference between the expressions *genç* and *kısa*. In fact, there seems to be a difference with respect to the inherent referential properties of the two expressions. However, there is no need to attribute this difference to some distinct lexical category specification since there are also differences in the referential properties of expressions traditionally classified as proper nouns and common nouns. This distinction does not require postulating a lexical category specification distinguishing common nouns from proper nouns and both groups of expressions have been classified as nouns (nominals in this study). Similarly, the differences in the referential properties of *genç* and *kısa* do not require a lexical category distinction between the two expressions.

In conclusion, the apparent restrictions observed in the occurrence of nominal expressions as arguments can be explained without resorting to a lexically specified category distinction between nominal expressions as adjectives and nouns. Now it is time to show that there is no lexically specified category distinction among nominal

expressions in terms of their occurrence in attributive modification structures. The following section argues that expressions traditionally classified as nouns can serve as attributive modifiers as expressions classified as adjectives do.

3.4.2. Nouns as Attributive Modifiers

3.4.2.1. Classes of Nouns Used as Attributive Modifiers

In several languages expressions referring to professions (doctor, teacher), material (gold, silver), sex (male, female, woman, man) are ambiguous between nouns and adjectives, that is they can be attributive modifiers as adjectives as well as arguments like nouns (Baker 2003: 176). In Turkish expressions which indicate profession, material and sex can be used both as nouns and adjectives.

(72) *profession*

doktor-lar, doktor kadın

doctor-pl, doctor woman

‘doctors’, ‘(a) doctor woman’

(73) *material*

altın-lar, altın yüzük

gold-pl, gold ring

‘golds’, ‘(a) gold ring’

(74) *gender*

erkek-ler, erkek doktor

man-pl, man doctor

'men', '(a) male doctor'

Baker (2003) indicates that for the above mentioned classes of expressions, it is common to observe this type of categorial ambiguity in several languages and that it should not be taken as an indication of a lack of noun-adjective distinction. However, in Turkish expressions which can occur both as attributive modifiers and as arguments are not limited to the above semantic classes. Expressions which are proposed to be typically associated with the 'noun' class in languages can be used as attributive modifiers. The following illustrate examples from these semantic classes which Dixon (2004) defines to be typically associated with the noun class in languages. Although some of them might sound more natural to the native speaker, others are perfectly acceptable in the appropriate context:

(75) *human terms, terms for relatives, associates*

baba/anne aslan

'father/mother lion'

komşu kadın

'neighbor woman'

çocuk kral

‘child king’

(76) *terms for flora, fauna*

ağaç ev

‘tree house’

gül dudak

‘rose lip’

yarasa adam

‘bat man’

örümcek adam

‘spider man’

(77) *celestial, environment*

gök göz

‘sky eye’

yağmur adam

‘rain man’

su ada

‘water island’

kum sahil

‘sand beach’

(78) *body and parts*

kıl fırça

‘hair brush’

kalp yüzük

‘heart ring’

The above illustrate how expressions which are argued to belong to the class of nouns can be used for attributive modification. Although constructions as above have usually been treated under the topic of compounds in Turkish (e.g. Ediskun 1963; Lewis 1967; Dede 1978; Schaaik 2002; Göksel and Haznedar 2007), several researchers have drawn attention to the attributive modification function of the first expression in such constructions (e.g. Dede 1978; Schaaik 2002; Korkmaz 2003; Gökdayı 2004). Dede (1978) calls such structures ‘attributive compounds’ and draws attention to the similarity between these structures and NP structures which involve the modification of a head noun by an adjective. According to Dede both constructions are paraphrases of a relative clause in which the modifier is a predicate and the modified is the subject:

(79) a. *berber kız*

barber girl

'barber girl'

b. *berber ol-an kız*

barber cop-sub.rel girl

'the girl who is (a) barber'

(80) a. *güzel kız*

pretty girl

'(a) beautiful girl'

b. *güzel olan kız*

pretty cop-sub.rel

'(a) girl who is beautiful'

Another similarity Dede notes between the two constructions is that the first member cannot be pluralized:

(81) a. **yüksek-ler duvar*

high-pl wall

'*highs wall'

b. *taş-lar duvar

stone-pl wall

‘*stones wall’

(Dede 1978: 11, example 11)

Moreover, in both constructions *bir* can either precede the combination or can be placed between the modifier and the modified.

(82) a. bir güzel kız

a pretty girl

‘a pretty girl’

b. güzel bir kız

pretty a girl

‘a pretty girl’

(83) a. bir berber kız

a barber girl

‘a barber girl’

b. bir berber kız

a barber girl

‘a barber girl’

(Dede 1978: 10, example 3)

However, Dede also points out to some ordering restrictions involved in attributive compounds:

(84) a. yüksek bir taş duvar

high a stone wall

‘(a) high stone wall’

b. *taş bir yüksek duvar¹⁷

stone a high wall

‘(a) high stone wall’

(Dede 1978: 13, example 19)

Thus, an adjective modifier like *yüksek* ‘high’ must precede the noun modifier *taş* ‘stone’ as illustrated by the example above. I will discuss such ordering restrictions in the following sections.

Schaaik (2002) similarly points out to the attributive modification relation between the first expression and the second one in the following structures.

(85) a. taş köprü

stone bridge

‘(a) stone bridge’

¹⁷ Although this example is presented as an ungrammatical example by Dede (1978), not all native speakers seem to agree upon the ungrammaticality of this example.

b. *kadın* doktor

woman doctor

‘(a) woman doctor’

(Schaaik 2002: 101, example 51a,b)

Schaaik argues that in the constructions above, the general properties that are associated with the first expression are attributed to the following expression and as such these constructions can be considered as being built up by a head and an expression based on an adjective. According to Schaaik, the first expression is an adjective “.....brought about by noun-to-adjective conversion” and the formation of above structures, other than the conversion rule, involve no different rules than the formation of regular attributive modification structures.

Thus, there seems to be no reason for not considering the structures as illustrated in (75-78) as instances of attributive modification. The syntactic rules or principles that apply to these structures are not much different than the rules or principles that apply to attributive modification structures (e.g. strong man) which involve expressions traditionally classified as adjectives (e.g. strong).¹⁸ Moreover, I claim that there is in fact no need for the type of conversion rule as the one proposed by Schaaik (2002) which changes a lexical expression specified as ‘noun’ into an ‘adjective’ in such constructions because what we have is an expression which is neither specified as noun or adjective prior to its insertion into syntactic frames but a

¹⁸ In section 3.4.2.2 I will discuss the differences among nominal expressions with respect to their capacity to serve as attributive modifiers and explain the nature of the restrictions which can be observed in their ordering with respect to the head they modify.

nominal expression which becomes an ‘adjective’ through being an attributive modifier, as I will argue in section 3.5.

In the following section, I will discuss some restrictions that apply to the attributive modification structures formed by nominal expressions which have been traditionally classified as nouns.

3.4.2.2 Explaining the Restrictions in Attributive Modification

3.4.2.2.1 Semantic Restrictions

There seem to be differences among nominal expressions in terms of their capacity to serve as attributive modifiers. Some expressions may not sound acceptable when they are used for noun modification. Although in (86a) the expression *küçük* ‘small’ is perfectly all right as an attributive modifier, the expression *masa* ‘table’ in (86b) does not appear to be acceptable:

(86) a. *küçük* koltuk

small armchair

b. ??*masa* koltuk

table armchair

Int. ‘an armchair which is a table’

If, as I claim in this study, both *küçük* 'small' and *masa* 'table' bear the same categorial specification in the lexicon then the question is why one is more appropriate for attributive modification and the other one is not.

Attributive modification is usually intersective in nature in that when a modifier attaches to a noun the resulting expression is an expression which has both the property described by the head noun and the property denoted by the modifier.¹⁹ For instance, 'fresh fruit' refers to something which has both the property of 'freshness' and the property of 'fruitness'. Therefore, an expression like 'table armchair' might sound unacceptable because for something to be both a table and a chair at the same time seems to be a far possibility as long as there is some object designed by someone which can be used both as a table and as a chair. On the other hand, *silah çakmak* 'gun lighter' sounds more natural for those who are familiar with spy stories and for those who can imagine a lighter which can be used as a gun.²⁰

In conclusion, the differences between expressions with respect to their acceptability in attributive modification do not necessarily indicate a difference in categorial identity which is specified lexically. It is simply our knowledge about the

¹⁹ It is a well known fact that not all modification yields intersective readings. Thus, a former president does not refer to someone who is both former and president in the meantime and 'an alleged murderer' does not refer to someone who is a murderer. These types of adjectives are called intensional adjectives and modify the intension of the noun they are associated with rather than its extension.

²⁰ It is especially those expressions which refer to artifacts such as *sandalye* 'chair', *radio* 'radio', *masa* 'table', expressions which are related to abstract notions such as *fikir* 'idea', *keder* 'sorrow', *ümit* 'hope' and expressions which refer to activities *savaş* 'war', *barış* 'peace' are also rarely used as attributive modifiers. However, note that even those cases it is possible to have these expressions in attributive modification:

- (i) *hayal kadın*
dream woman
- (ii) *rüya ev*
dream house

world that tells us whether something can have X property as well as Y in the meantime.

3.4.2.2.2 Ordering Restrictions

Differences among nominal expressions can be observed in terms of their order when they are used as attributive modifiers. Expressions classified as nouns behave differently than the expressions classified as adjectives as the following examples illustrate.

(87) a. garip küçük hayvan-lar

strange small animal-pl

‘strange small animals’

b. küçük garip hayvan-lar

small strange animal-pl

‘small strange animals’

(88) a. küçük fare adam-lar

small mouse man-pl

‘small mouse men’

b. *fare küçük adam-lar

mouse small man-pl

Int. 'mouse small men'

(87) shows that it is possible to have either of the modifiers *garip* 'strange' and *küçük* 'small' next to the head. On the other hand, for the modifiers *küçük* 'small' and *fare* 'mouse' in (88) the position that is next to the head is obligatory for the expression *fare* 'mouse'. I suggest that this restriction is due to an ordering restriction which governs the attachment of attributive modifiers according to their semantic properties. The expressions *garip* 'strange' and *küçük* 'small' are modifiers which are more of an evaluative and descriptive nature but a modifier like *fare* 'mouse' is of a restrictive nature, that is, it restricts the denotation of the head noun *adam* 'man' and this why it must occur closer to the head noun.

The presence of ordering restrictions for attributive modifiers has been recognized for several languages. For instance, in English the following order is observed (Payne& Huddleston 2002):

(89)

evaluative > general property²¹ > age > colour > provenance > manufacture > type

(an) attractive tight new pink Italian lycra women's

(shirt)

²¹ General property modifiers denoting properties that can be objectively distinguished using senses: size (e.g. *big, small*), dimension (e.g. *long, tall, narrow, fat*), sound (e.g. *loud, faint*), touch (e.g. *rough, smooth*), taste (e.g. *sweet, sour*). Expressions denoting human properties are also under this heading, *cruel, intelligent, kind, wise*. Payne and Huddleston (2002) indicate that when a sense modifier and a human property modifier apply nonrestrictively there is no real preferred order: 'her fat cruel husband', 'her cruel fat husband'.

Although the order is of a labile nature (e.g. a new cotton shirt, a cotton new shirt), the most restrictive ones, those of a classifying nature, are attached at the lowest level of structure, thus, occur closer to head noun than other modifiers which are rather descriptive.²²

Sproat and Shih (1988) suggest that adjectives expressing absolute properties occur closer to the head than those expressing relative properties. Larson (1999) refers to the individual-level and stage-level properties of expressions in explaining the ordering of modifiers. Following Chierchia (1995), he argues that when a noun is modified by more than one expression the individual-level expression is structurally closer to the head noun than the stage-level ones.

(90) a. The [visible I-LEVEL stars] visible S-LEVEL include Capella

b. The visible S-LEVEL [visible I-LEVEL stars] include Capella

(90a) and (90b) are interpreted as “The inherently visible stars that happen to be visible at the moment include Capella” (Larson 1999).

²² In the literature there are different proposals concerning what type of semantic categories of adjectives exist, in what order and where these categories are generated and whether there is a universal order which applies to all languages (e.g. Sproat and Shih 1988, Crisma 1996, Fassi Fehri 1997). A recent analysis by Scott (2002) follows Cinque (1994) and links a fixed hierarchy of adjectives with a corresponding hierarchy of functional heads inside the noun phrase, claiming that adjectives are projected in the specifier position of these functional projections. While Cinque (1994) leaves these functional projections open or without a specification, Scott (2002) makes a preliminary sketch of what the relevant functional heads can be:

(i) subjective comment > ?evidential > size > length > height > speed > ?depth > width > weight
> temperature > ?wetness > age > shape > color > nationality/origin > material > compound
element

A full treatment of adjective ordering in Turkish is beyond the scope of this study and awaits further research.

Thus, a modifier expression such as *fare* ‘mouse’ in (88) represents a more stable, individual level, absolute property, compared to the modifier expressions *garip* ‘strange’ and *küçük* ‘small’ in (87) and (88). Moreover, the expression *garip* ‘strange’ involves an evaluation of the speaker and *küçük* ‘small’ denotes a relative rather than an absolute property since the smallness of a mouse man is different than the smallness of an elephant man.

It seems that the lexical meaning of some modifiers is compatible with different semantic interpretations, which allows them to occur in different positions:

(91) a. *kurt adam*

wolf man

‘werewolf’

b. *çok kurt bir adam*

very wolf a man

‘a very wolf-like man’, Lit. ‘a dangerous, cunning man’

In (91a) all the properties denoted by the expression *kurt* ‘wolf’ is directly attributed to the head noun ‘man’. The whole phrase denotes a creature which has the properties of both a wolf and a man. On the other hand, in (91b) the expression *kurt* ‘wolf’ is attached at a higher level of structure as indicated by the intervening expression *bir*. It denotes a specific property associated with wolves: the property of being dangerous and cunning. The possibility of having a degree modifier *çok* ‘very’ with it shows that it denotes a relative property rather than an absolute one.

In conclusion, differences illustrated in the distribution of ‘noun-like’ modifiers and ‘adjective-like’ modifiers can be explained by general ordering restrictions associated with the semantic properties of modifiers.

So far I have argued that the expressions classified as nominals in Turkish do not bear a category specification distinguishing them as nouns and adjectives and as such they are flexible expressions which potentially can serve both as arguments and as attributive modifiers. This flexibility demonstrated by nominal expressions provides evidence against the existence of ‘referential indices’ which Baker (2003) claims to be an inherent property of expressions classified as nouns and which distinguish nouns from adjectives (see section 1.2.3.3.3). In the following section, I will argue that the flexibility associated with nominal expressions in Turkish renders positing inherent referential indices for lexical expressions unnecessary.

3.4.3 Referential Indices (Baker 2003)

For Baker (2003) the property that distinguishes nouns from adjectives is that nouns are associated with referential indices while adjectives are not. It is those referential indices which allow nouns to occur in argument positions and which prohibit them from occurring in attributive modification structures. However, Baker also notes that for some expressions referential indices can be optional, which allows them to occur both in argument positions and in attributive modification structures (2003: 176). Expressions designating material (e.g. *stone table*, *a stone*), nationality (e.g. *Italian flag*, *Italians*) and sex (e.g. *male falcon*, *males*) are those expressions which Baker argues to have optional referential indices. As I have shown so far, the range of

expressions that can occur both in argument positions and as attributive modifiers goes beyond the classes of expressions that are indicated by Baker. Positing optional referential indices for all these expressions would not be different than saying that these expressions are unspecified for the noun-adjective distinction. Therefore, there seems to be no reason for encoding lexical expressions in the lexicon with some referential indices and distinguishing them as 'nouns' from the other members of the nominal category.

The claim that lexical expressions do not bear a category specification distinguishing them as 'adjective' or 'noun' in the lexicon does not mean that there are no syntactic categories 'noun' and 'adjective'. I argued in sections 3.3.1 and 3.3.2 that in syntax there are indeed constituents which can be identified as 'noun' or 'adjective'. Then the question to be answered is how nominal expressions are 'nounized' or 'adjectivized' in syntax. The following section aims to answer that question.

3.5 What Makes an Expression a 'Noun' or 'Adjective' in Syntax?

In this section, I will first discuss the problems associated with the 'adjectivizing' and 'nounizing' functional heads in syntax which have been proposed by the syntactic categorization approaches in DM and Borer (2005). Then, I will claim that what makes an expression an adjective in syntax is simply being embedded as a modifier in a nominal projection and what makes an expression a noun in syntax is case assignment.

3.5.1 The Functional Heads *n* and *a* in DM

In DM it is a functional little *n* head that makes a root a noun and it is a functional *a* head that yields an adjective (Marantz 2000). However, with that approach we have to posit null *n* heads for the ‘noun’ usage of nominal expressions and null *a* heads their ‘adjective’ use. Thus, in the following examples, for (92a) we have to assume that there is null *a* head in the attributive modification structure which makes *zengin* ‘rich’ an adjective and in (92b) there must be a null *n* head in the nominal projection which makes *zengin* ‘rich’ a noun. Similarly, in (93a) there would be a null *a* head which makes *kadın* ‘woman’ an adjective and in (93b) a null *n* head which makes it a noun.

- (92) a. Zengin bir adam Ali-ye yardım et-ti. [[√ZENGİN] Ø_a]

rich a man Ali-dat help do-past

‘A rich man helped Ali.’

- b. Bir zengin Ali-ye yardım et-ti. [[√ZENGİN] Ø_n]

a rich Ali-dat help do-past

‘A rich (man) helped Ali.’

- (93) a. O kadın doktor buraya gel-di. [[√KADIN] Ø_a]

that woman doctor here come-past

‘That woman doctor came here.’

b. O kadın buraya gel-di.

[[√KADIN] Ø_n]

that woman here come-past

‘That woman doctor came here.’

This kind of an approach leads to an extensive increase in null heads and more importantly, it does not say much about the exact nature of these null *n* and *a* heads. They just seem to be heads with a ‘noun’ feature in one case and an ‘adjective’ feature in the other.

3.5.2 DegP and DP in Borer (2005)

In Borer’s approach the nature of the functional heads which derive NPs and APs are clearer and hence has more content than the categorizing heads in DM. Deg(ree)P is a functional projection which adjectivizes a listeme.²³ In other words, a categoriless expression which merges with a Deg head becomes an AP. The functional head Determiner (D) is a typical nounizer and a categoriless lexical expression which merges with a D head becomes an NP.²⁴

In the following section we will first show that Deg head cannot be an adjectivizing functional head and argue that there is in fact no need to posit a functional adjectivizing head because ‘adjectival’ interpretation comes for free when

²³ Borer (2005:48) indicates that Deg(P) may also “adverbialize” a lexical expression. Whether a Deg(P) yields an adjective or adverb depends on structural conditions. A Deg (P) which is a sister of V/A or its extended projection is an adverbializer whereas a DegP which is a sister of N or one of its extended projections is an adjectivizer.

²⁴ In both Marantz’s and Borer’s approaches to categorization derivational morphemes such as *-ness*, *-al*, *-ify* in English may represent nounizing, adjectivizing or verbalizing functional heads. I will bring up this issue in Chapter 5 where I discuss the Lexicon and the status of derivational affixes.

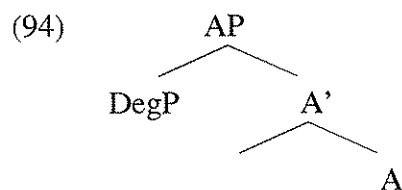
nonverbal expressions occur as attributive modifiers in nominal projections.

Secondly, we will discuss what exactly makes nonverbal expressions 'nouns' in syntax.

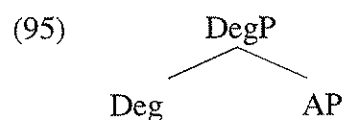
3.5.2.1 DegP as an 'Adjectivizer': Problems

The claim that DegP is a functional projection which adjectivizes the expressions embedded under it gives rise to the question whether the data related to phrase structure in Turkish in fact motivate the presence of such a functional projection.

Degree words such as *too*, *much*, *more* in English which occur with adjectives previously were considered to be occupying the specifier position of APs as illustrated below:



More recently, it has been suggested that (Abney 1987; Corver 1997; Kennedy 1999; among others) degree words are heads of Deg(ree) P(hrase)s which are functional extended projections of APs just like DPs are extended functional projections of NPs as shown in (95):



As Borer (2005) assigns the function of adjectivization to DegP, she assumes the structure in (95). Thus, a lexical expression which is embedded under the functional projection DegP becomes an AP.

To consider degree words to be Deg heads and to posit a DegP dominating AP does not seem to be problematic for a head initial language like English where degree words precede the adjectives they are related to.

(96) [DegP [Deg too [APbeautiful]]]

However, in Turkish the presence of a functional projection DegP as an extended projection of AP seems to be questionable. Considering the fact that Turkish is a head final language, the distribution of degree words before the adjectives they are related to is unexpected:

(97) a. çok güzel
very beautiful
'very beautiful'

b. daha güzel
more beautiful
'more beautiful'

c. en güzel
most beautiful

‘most beautiful’

If we assume the existence of a DegP dominating an AP in Turkish, it is clear that degree words can’t occupy the right hand head position of such a functional projection. Their occurrence to the left of the adjectives they are related to can only be explained by claiming that they occupy the specifier position of DegP. However, even if we accept that degree words occupy the specifier position of DegP, it remains unexplained why Deg head is never phonologically realized and always null.

Even if we accept the existence of a functional projection DegP with a null Deg head, the claim that it is an adjectivizer also poses some problems.

Firstly, if Deg(P) were an ‘adjectivizer’ then the modification of N or any of its projections would be possible only in the context of a DegP. However, as the following examples illustrate, expressions which are incompatible with degree modification can be modifiers in a nominal projection:

(98) a. ucuz araba-lar / ucuz bir araba

cheap car-pl / cheap a car

‘cheap cars / a cheap car’

b. çok ucuz araba-lar / çok ucuz bir araba

very cheap car-pl / very cheap a car

‘very cheap cars / a very cheap car’

- (99) a. *oyuncak araba-lar / oyuncak bir araba*
 toy car-pl / toy a car
 ‘toy cars / a toy car’
- b. **çok oyuncak araba-lar / *çok oyuncak bir araba*
 very toy car-pl / very toy a car
 Int. ‘very toyish cars / a very toyish car’

In (98a) it can be argued that there is a null Deg head which adjectivizes the category neutral expression *ucuz* ‘cheap’ since (98b) seems to involve an overt realization of the DegP with a degree expression *çok* ‘very’. However it is not possible to argue for the existence of an adjectivizing null Deg head in (99a) because the expression *oyuncak* ‘toy’ is not compatible with a degree modifier anyway (99b).

A second argument against the adjectivizing function of DegP is that degree modification is not something that is restricted to the adjectival domain, as it has been pointed out by several researchers (e.g. Bolinger 1972; Abney 1987). The following example demonstrates that a nominal can also occur with a degree expression.

- (100) *tam bir öğretmen / tam bir doktor / tam bir aptal*
 total a teacher / total a doctor / total an idiot
 ‘totally a teacher / doctor / idiot’
 Lit. ‘an excellent teacher / doctor / idiot’

Finally, to consider DegP an adjectivizer also poses problems for those cases where an expression with a degree modifier occurs as an argument.

(101) Çok küçük-ler-i al-ma-dı-m.

very small-pl-acc buy-neg-past-1sg

'I didn't buy the very small ones.'

(102) Ben en iyi-yi seç-er-im.

I most good-acc choose-aor-1sg

'I choose the best.'

In (101) and (102) the expressions *küçük* 'small' and *iyi* 'good' have the degree expressions *çok* 'very' and *en* 'most' respectively but they also occur in argument positions inflected with nominal inflectional suffixes referring not to properties but to entities having those properties. Both in Borer's (2005) approach and in my approach, *küçük* 'small' and *iyi* 'good' are expressions which are neither specified as nouns nor adjectives. However, if, as Borer claims, degree expressions are 'adjectivizers', then in the above constructions *küçük* and *iyi* would be first categorized as adjectives by the degree expressions and then would be nominalized by the functional projection DP. The question is why there is need for such an 'adjectivization' in the first place. Moreover, this kind of a categorization process would require the presence of a null Deg head and a null D head leading to unnecessary increase in null heads which I have already argued against.

As the above discussion has shown, a Deg head cannot be a functional head which ‘adjectivizes’ its complement when even the presence of such a functional head is questionable for Turkish. I propose that it is the attributive modification structure itself which ‘adjectivizes’ constituents. In other words, an expression is ‘adjectivized’ when it is embedded as a modifier in an NP. This will be clearer in the following sections when I discuss the relationship between case assignment and ‘nounization’ but first let us see the problems associated with positing DP as a ‘nounizer’.

3.5.2.2 DP as a ‘Nounizer’: Problems

To consider DP a ‘nounizer’ would pose problems for those cases when there is an NP projection which lacks a DP layer. In Turkish there are in fact such projections which are NPs but not DPs. Preverbal bare nouns which lack morphological case marking and determiners as have been argued to be nonreferential NPs (e.g. Dede 1986, Enç 1991, Öztürk 2004, Arslan-Kechriotis 2006). The following examples illustrate such NPs:

(103) a. Ali *kitap* oku-du.

Ali a book read-past

‘Ali read book (s).’

b. Ayşe *çanta* al-dı.

Ayşe bag buy-past

‘Ayşe bought bag(s).’

The reason why such constituents are considered to be NPs is because they allow attributive modification as regular nouns do.

(104) a. Ali eski kitap sat-ıyor.

Ali old book sell-prog

'Ali sells old book(s).'

b. Ayşe ucuz çanta al-dı.

Ayşe cheap bag buy-past

'Ayşe bought cheap bag (s).'

Bare NPs as the ones above do not introduce an actual or a potential discourse referent and do not refer to an entity that the speaker or the hearer has in mind. Assuming that referentiality is encoded in DP (Longobardi 1994), those constituents lack a DP layer because they are nonreferential.²⁵ The problem is how these expressions are 'nounized' in the absence of the functional projection DP.

Moreover, these bare nominals not only lack a DP projection but also lack the functional projections, Classifier Phrase and Quantity Phrase which Borer (2005) argues to be projected above N. Classifier Phrase is responsible for dividing mass stuff into individuals and Quantity Phrase assigns quantity to the individual units (Borer 2005). Arslan-Kechriotis (2006) argues that bare nouns lack those functional projections as well since they do not denote individual units and do not bear a specification for number, that is, they neither denote plurality nor singularity of

²⁵ See Öztürk (2005) for an analysis of Turkish as a language which lacks the DP projection and encodes referentiality through case assignment.

individual units. In other words, (103) and (104) can be used in a context where there is only one book/bag or more than one book/bag.

Therefore, positing DP or Classifier Phrase or Quantity Phrase as a ‘nounizer’ poses problems in Turkish since there are NPs which do not involve any of these projections.

In the following sections I will propose that it is, in fact, case assignment through which expressions are ‘nounized’ in syntax. To have a better understanding of how case assignment works as a ‘nounizer’, let us first have a look at the well-known relationship between case assignment and licensing of NPs.

3.5.3 Case Assignment and the Licensing of NPs

In Generative Grammar, Case Theory deals with the licensing conditions for NPs. The two crucial principles of the theory are the Case Filter (Chomsky 1981) and its revised version, the Visibility Condition (Chomsky 1986) which are stated below:

(105) *Case Filter*

Every lexical NP must be assigned case.

(106) *Visibility Condition*

An NP can receive a theta-role only if it is in a position to which case is assigned or is linked to such a position.

The above principles represent the licensing conditions for NPs and imply that all phonologically realized argument NPs are necessarily assigned case. Since case is a necessary condition to be an NP, to claim that case assignment is what categorizes an expression as a noun would not be implausible.

A recent analysis by Pesetsky (2008) considers case suffixes to be instantiations of syntactic categories. According to Pesetsky, a genitive marked word is a stem to which a suffix of category N has been attached, a nominative marked word is a stem with a suffix of category D, and an accusative marked word bears a suffix of category V. Dative, instrumental or locative marked words bear suffixes of category P:

(107)	Genitive = N	Accusative = V
	Nominative = D	Oblique = P

The major difference between Pesetsky's analysis of case and the analysis of case as a 'nounizer' is that in Pesetsky's analysis it is the genitive and nominative cases which are associated with nominal projections while in the analysis I propose all types of case are associated with NP licensing. Moreover, Pesetsky specifically points out that NGEN is not to be understood as functional n head in the sense of DM which forms an NP from a category neutral phrase because "... nouns enter the syntax as nouns- with NGEN already affixed." (Pesetsky 2008:3). On the other hand, the present study claims that nonverbal expressions (nominals) enter the syntax without being specified as nouns or adjectives and they are 'nounized' through case assignment.

If, as I claim, case assignment is what ‘nounizes’ lexical expressions in syntax, the next thing to be discussed is the case properties of bare NPs.

3.5.3.1 Case and Bare NPs

In section 3.5.2.2 it was argued that bare NPs are non-referential expressions which do not introduce potential discourse referents. Although these NPs do not bear overt case marking, such bare object NPs have an influence on the choice of case morphology for other NPs in the sentence indicating that they are associated with a case specification.

It has been proposed that in Turkish there is a constraint on case which prohibits the occurrence of the same case morphology on more than NP in the same (Zimmer 1976; Erguvanlı-Taylan 1979; Göksel 1993; Öztürk 2009). This fact is illustrated by the case properties of NPs in causative constructions. When an intransitive verb is causativized as in (108a), the former agent is marked with accusative morphology as in (108b). However, when a transitive verb as in (109a) is causativized the agent must be marked with the dative case, not the accusative as demonstrated in (109b):

- (108) a. Çocuk gül-dü.
child laugh-past
‘The child laughed.’

b. Ali çocuğ-u gül-dür-dü.

Ali child-acc laugh-caus-past

‘Ali made the child laugh.’

(109) a. Kız çamaşır-ı yıka-dı.

girl laundry-acc wash-past

‘The girl washed the laundry.’

b. Ali kız-a / *kız-ı çamaşır-ı yıka-t-tı.

Ali girl-dat / girl-acc laundry-acc wash-caus-past

‘Ali made the girl wash the laundry.’

The following example shows that sentences with bare NPs demonstrate the same case pattern when the transitive verb is causativized:

(110) a. Kız çamaşır yıka-dı.

girl laundry wash-past

‘The girl washed laundry.’

b. Ali kız-a / *kız-ı çamaşır yıka-t-tı.

Ali girl-dat / girl-acc laundry-caus-past

‘Ali made the girl wash laundry.’

That a bare NP has the same effect on the distribution of case as an accusative marked NP indicates that it is associated with case. However, the difference between the overt accusative marked NP (109a) and the one in (110a) which does not bear an overt case marker is that the former is associated with strong case and the latter with weak case. Öztürk (2009), along the line of De Hoop (1996), proposes a strong/weak case distinction, where the strong case feature is associated with a referential interpretation, while weak case is associated with a nonreferential reading. She argues that bare NPs are pseudo incorporated NPs in the sense that they form a complex predicate with the verb and yet they bear weak case features and associated with a theta role. In Öztürk's analysis non-referential subject NPs are also associated with weak case, that is, a weak form of the nominative case. In the following examples (111a) illustrates a subject NP with a referential interpretation and thus a strong form of the nominative case and (111b) illustrates a subject NP which is non-referential and associated with a weak form of the nominative case.

(111) a. Arı Ali-yi sok-tu.

bee Ali-acc sting-past

'The bee stung Ali.'

b. Ali-yi arı sok-tu.

Ali-acc bee sting-past

'Bee(s) stung Ali.'

Lit. 'Ali got bee stung.'

As the glosses indicate the NP in (111a) refers to a specific bee, while the one in (111b) does not. In fact the NP in (111b) is not associated with any number features either just like bare object NPs. Thus, these NPs should also represent instances of weak case assignment. In the following, I will propose another instance of weak case assignment, weak genitive case, which licenses non-referential NPs.

3.5.3.2 Bare NPs with Weak Genitive Case

Another construction which involves a bare non-referential NP is the N-N construction which is distinguished from the attributive modification construction discussed in section 3.4.2.1 by special morphology. The example in (112a) represents an attributive modification structure while the one in (112b) is a construction where the first constituent is a bare NP:

(112) a. oyuncak araba

toy car

'(a) toy car'

b. oyuncak araba-sı²⁶

²⁶ This suffix has the same form the third person singular agreement suffix in possessive constructions as in (ii).

(i) oyuncak araba-sı
toy car-3sg
'(a) car for toy(s)'

(ii) oyuncak-ın araba-sı
toy-gen car-3sg
'the car of the toy'

‘(a) car for toys’

In (112a) the expression *oyuncak* ‘toy’ denotes a property attributed to car, thus, the whole expression denotes an object, a car, which has the property of being a toy. In (112b) *oyuncak* does not represent a property of the head expression because the expression *oyuncak arabası* denotes a car used for carrying toys or designed for toys and the car itself does not have the property of being a toy. Therefore, what distinguishes (112a) from (112b) is that, while in the former the first expression is a property denoting expression which is a modifier of the second constituent as argued in section 3.4.2.1, in the latter it is a nonreferential NP which represents an argument of the second constituent. The ‘adjective’ modifier status of *oyuncak* is demonstrated by the fact that it cannot be modified by another property denoting expression.

(113) *küçük oyuncak araba*

small toy car

‘a toy car which is small’

Researchers usually draw a distinction between the two constructions and identify the construction in (i) as a compound construction and the one in (ii) as a genitive construction and thus distinguish the suffix $-(s)I(n)$ in (i) from the one in (ii). In constructions like (i) the suffix is claimed to be a compound marker whereas in constructions like (ii) it is claimed to be the third person singular agreement marker (e.g. Swift 1963, Dede 1978, Kornfilt 1997, Schroeder 1999, Schaaik 2002 among others). However, the suffix $-(s)I(n)$ cannot simply be a compound marker because it is not involved in compound formation which takes a property denoting expression as one of its elements:

(iii) *sarı-kanat*
yellow wing
‘yellow wing fish’

As the above example shows $-(s)I(n)$ is not present when the first element of a compound denotes a property or rather ascribes a property to the head constituent and has an attributive modifier function. Therefore, the absence of $-(s)I(n)$ indicates the ‘adjectivization’ of the first element while its presence is related to its ‘nounization’.

In (113) *küçük* ‘small’ can only be interpreted as modifying *oyuncak araba* ‘toy car’ but not *oyuncak* ‘toy’. On the other hand, as the example below shows N-N_{SI} constructions allows the modification of the first constituent *oyuncak* ‘toy’ as well. Thus, the example below allows two readings:

- (114) *küçük oyuncak araba-sı*
 small toy car-3sg.poss
 (i) ‘a small car for (of) toys’
 (ii) ‘a car for (of) small toys’

As the glosses indicate *küçük* ‘small’ can either be an attributive modifier of the whole expression *oyuncak araba-sı* ‘car for toys’ or *oyuncak* ‘toy’.²⁷ The availability of modification for the expression *oyuncak* ‘toy’ indicates that it is an NP constituent. However, it is a non-referential NP as the object and subject bare NPs discussed in the previous section. In other words, it does not introduce an individual discourse referent and is unspecified for number.

Now, the question to be answered is what licenses *oyuncak* ‘toy’ as an NP. Since the structure where the initial constituent represents an NP (e.g. 112b) is distinguished from the one where the initial constituent represents an attributive

²⁷ Özsoy (2004) indicates that the two different interpretations are associated with different stress patterns and junctures in phonological terms. When the modifier expression is an attributive modifier of the whole N-N construction the modifier expression receives primary stress, followed by a juncture and the first N receives secondary stress.

- (i) [eskí+ [saât kayışı]]
 old watch strap
 ‘(a) watch strap which is old’

On the other hand, when the modifier expression is an attributive modifier of the first N, only the modifier expression receives stress and a juncture follows the first N expression:

- (ii) [eskí saat] + kayışı]]
 old watch strap
 ‘(a) strap for an old watch’

modifier (e.g. 112a) by the presence of the marker $-(s)I$ ²⁸ on the head expression , then it must be this marker which plays a role in licensing the first constituent as an NP. I propose that the morphological marker $-(s)I$ is the spell out of a postpositional element which assigns case to the first element in N-N constructions. The case assigned is a weak form of the genitive case and is similar to the weak form of the accusative and nominative cases which is associated with a non-referential interpretation. The relation between the three types of strong-weak case assignments and the referential properties of NPs associated with them is illustrated below.

- (115) a. Ari Ali-yi sok-tu. strong nominative case

bee Ali-acc sting-past

‘The bee stung Ali.’

- b. Ali-yi ari sok-tu. weak nominative case

Ali-acc bee sting-past

‘Ali got bee stung.’

- (116) a. Ali kitab-ı oku-du. strong accusative case

Ali book-acc read-past

‘Ali read the book.’

²⁸ The full form of this suffix is in fact $-(s)I(n)$ as indicated in footnote 26, but I will refer to it as $-(s)I$ for illustrative purposes since the final sound [n] appears only in certain contexts such as before case markers:

- (i) oyuncak araba-sın-a
toy car-3sg.poss-dat
‘to the toy car’

- (ii) oyuncak araba-sın-da
car-3sg.poss-loc
‘at the toy car’

In summary, it is case assignment, strong or weak, that ‘nounizes’ expressions rather than the functional projection DP, since, as the above discussion has shown it is possible to have N projections or ‘nounization’ of expressions without a DP layer.

3.6 Conclusion

In this chapter I argued that there is no lexically specified category distinction between expressions traditionally classified as nouns and as adjectives in Turkish. Both groups of expressions belong to a single category whose members are ‘adjectivized’ when they occur as attributive modifiers in a nominal projection and ‘nounized’ through strong or weak case assignment. Thus, for the category distinctions ‘adjective’ and ‘noun’ I have claimed them to be of syntactic in nature, contrary to the distinction between the expressions traditionally classified as verbs and nominals in Turkish, which, in the previous chapter, I have claimed to be lexically determined. The following chapter will have a closer look at the category ‘verb’ and clarify further the nature of this category.

old book cover-3sg.poss
‘cover of an old book’
(Yükseker 1998:468, example 13b)

According to Yüksekseker since *kitap* ‘book’ is an N⁰ expression it does not allow modification. However, the above example in fact allows an interpretation where *eski* ‘old’ can be understood to modify *kitap* ‘book’ (e.g. a cover for old book(s)). In other words, the interpretation marked as ungrammatical by Yüksekseker is allowed. Moreover, as it has been shown in example (114) modification of the bare nominal expression is possible in several other cases. For these cases it is not possible to argue that the bare nominals in question are caseless N⁰ expressions which escape case filter.

CHAPTER 4

THE CATEGORY VERB

In the previous chapters I showed that while a specification distinguishing a group of lexical expressions, nominals, from another group of lexical expressions, verbs, is necessary in the lexicon, a lexical specification further distinguishing nominal expressions as 'nouns' and 'adjectives' is not required due to the fact that the traditional adjective-noun distinction is purely syntactic in nature. In this chapter I focus on the category 'verb' and discuss the nature of this category. I argue that there are no expressions in the lexicon bearing the category specification 'verb', that is, the lexical category 'verb' simply does not exist. Following the compositional approaches to verb formation (Huang 1997; Harley and Noyer 1998; Folli and Harley 2005; Hale and Keyser 1993, 2002; Lin 2001; Ramchand 2008, among others), I argue that 'verb' meaning is compositional and constructed by the combination of a root expression providing the core meaning component and event forming functional heads.

In the first section I provide evidence from the category specification for borrowed forms that there is no lexical category 'verb' in the lexicon. Section 2 sets the theoretical background of a decompositional approach to 'verb' meaning. In section 3, I introduce the basic predicates DO, CAUSE, BECOME and provide syntactic and semantic evidence for their existence. I also argue that in Turkish there are no stative 'verb' expressions which decompose into BE or HAVE and stative interpretation is to a large extent derived from properties of aspectual marking. Then

I propose that it is ‘stativity’ which underlies the categorial distinction between the expressions traditionally classified as nominals and verbs. Nominal expressions are expressions which are inherently specified as stative while verbal expressions being composed of dynamic event heads such as CAUSE, BECOME, DO, GET are nonstative expressions. Section 4 discusses the implications of the lack of lexical category distinctions ‘noun’ and ‘adjective’ on the derivation of verbal expressions from nominal stems in Turkish within the framework of Hale and Keyser’s (1993, 2002) compositional approach to verb meaning.

4.1 No Verbs in the Lexicon: The Category Specification of Loan Words

The strongest evidence for the absence of a lexical category V in the lexicon comes from the category specification of borrowed forms. In Turkish all loan forms, regardless of their category in the source language they are borrowed from, enter the lexicon as N(ominal)s (Lewis 1967, Haig 2004)¹. The ‘verbal’ predicates are derived from the nominal forms with the common processes of word formation which may involve affixation or complex predicate constructions with forms like *ol* ‘be/become’ or *et-* ‘do/cause’. The following illustrates the usage of the borrowed form *telefon* ‘phone’:

¹ Haig (2004) indicates that the Persian borrowed form *köhne* ‘old/to become old/to become out fashioned, outdated’ is the only exception to the observation that borrowed forms cannot enter the lexicon as verbs. This form is in fact can both be an adjective or verb as shown in the examples below:

- (i) Bunlar köhne-miş.
these become outdated-pf
‘These have become outdated.’
- (ii) köhne ev
old house
‘(an) old house’

For such forms, it will be argued in chapter 5 that they bear no category specification at all.

- (1) a. *Telefon* çal-ıyor.
 phone ring-prog
 'The phone is ringing.'
- b. Ali ile *telefon*-laş-ıyor-um.
 Ali with phone-der-prog-1sg
 'Ali and I are calling each other.'
- c. Ali *telefon* ed-ecek.
 Ali phone do-fut.
 'Ali will make a phone call.'
- d. *Ali *telefon*-acak.
 Ali phone-fut
 Int. 'Ali will phone (someone).'

(1a) illustrates the usage expression *telefon* as a nominal expression. The expression signifies the object used for calling people. The verbal expressions are derived from the nominal stems by the suffix *-laş* as in (1b) or by using the verb *et-* 'do' as in (1c). The example in (1d) indicates that the expression *telefon* is not a verbal expression. This can be seen from its incompatibility with the future suffix which is compatible only with expressions classified as verbs as it was shown previously in chapter 2.

In the following there are some examples of borrowed forms from French.

- (2) a. Bu şarkıyı Türkçe-ye *adapte* ed-eceğ-iz.
 this song-acc Turkish-dat adapt do-fut-2pl
 'We will adapt this song to Turkish.'
- b. *Bu şarkıyı Türkçe-ye *adapte*-yeceğ-iz.
 this song-acc Turkish-dat adapt-fut-2pl
 Int. 'We will adapt this song to Turkish.'
- c. Ali yeni duruma hemen *adapte* ol-acak.
 Ali new situation immediately adapt be-fut
 'Ali will adapt to the new situation immediately.'
- d. *Ali yeni duruma hemen *adapte*-yecek.
 Ali new situation immediately adapt be-fut
 Int. 'Ali will adapt to the new situation immediately.'
- (3) a. Ali-yi *şok*/*şoke* et-tim.
 Ali shock do-past-1sg
 'I shocked Ali.'
- b. *Ali-yi *şok*-dum / *şoke*-di-m.
 Ali-acc shock-past-1sg
 Int. 'I shocked Ali.'

c. Ben *şok* / *şoke* ol-du-m.

I shock become-past-1sg

'I was shocked.'

d. *Ben *şoke*-di-m.

I shock-past-1sg

Int. 'I was shocked.'

The ungrammatical examples in (2b,d) and (3b,d) as opposed to the examples in (2a,c) and (3a,c) show that the borrowed expressions *adapte* and *şok/şoke* cannot be used as verbs combining with the tense/agreement suffixes and either *et-* 'do' or *ol-* 'become' is required.

The following example in (4) is from colloquial speech and it illustrates the usage of the expression *dilit* which is borrowed from English.

(4) a. John deleted the files.

b. *Cem dosya-lar-ı *dilit*-ti.

Cem files-pl-acc delete-past

Int. 'Cem deleted the files.'

c. Cem dosya-lar-ı *dilit* et-ti.

Cem files-pl-acc delete do-past

'Cem deleted the files.'

Although the expression is a verb in English as (4a) illustrates, it cannot be used as a verb in Turkish (4b). The example in (4c) shows that the expression *dilit* together with the verb *et-* ‘do’ can form a complex predicate which semantically corresponds to the verb *delete* in English.

Examples in (5) below illustrate further cases where ‘verb’ formation from a loan expression involves the affix *-la*. The fact that this affix is typically used for deriving ‘verbs’ from nominal stems indicates that the base to which it attaches must also be a nominal expression like *dilit*.

(5) a. *gugıl-la*
‘(to) google’

b. *zap-la*
‘(to) zap’

c. *forvird-la*
‘to forward’

The above examples demonstrate that loan forms, when they enter the lexicon, cannot be stored as expressions categorially specified as ‘verbs’. This is because there are no expressions in the lexicon bearing a categorial specification as ‘verb’ and, in fact, the category ‘verb’ is derivational in nature as it will be shown in the following sections.

4.2. Decomposing Verbs

Research on verbs in lexical semantics, generative semantics and theoretical syntax has converged on a compositional approach to verb formation and has shown that verbs are not unanalyzable units but complex expressions built from various parts. In this section I will present an overview of the approaches where verb meaning is decomposed into some primitives and of the claims which argue for a syntactic representation of these primitives.

4.2.1 Verb Classes and Event Types

Vendler (1967) marks the beginning of a tradition in the lexical semantics literature where verbs are decomposed into a structured representation depending on the event types they are associated with. Vendler set forth a typology of verb classes based on their temporal properties such as temporal termination, temporal duration, internal temporal structure and the lack of temporal structure. Four verb classes are identified: states, activities, achievements and accomplishments. They have the following properties:

- (6) *States*: Atemporal properties with no internal structure or change.

(e.g. John knows French.)

Activities: An ongoing event with internal change and duration, but no necessary temporal end point.

(e.g. John ran along the river.)

Accomplishments: Events with duration and an obligatory temporal endpoint.

(e.g. John ate the apple.)

Achievements: Events with punctual change of resultant state, with an instantaneous endpoint.

(e.g. John arrived in Paris.)

Although various revisions and alternations have been proposed for Vendler's typology, the classification has provided a rich tool for analyzing verb meaning into a representation of the event it designates (Dowty 1979; Jackendoff 1990; Van Valin 1990; Pustejovsky 1991, 1995; among others). The following illustrates the representations suggested by Van Valin (1990: 224):

- (7) a. STATE: predicate' (x) or (x,y)
 b. ACTIVITY (+/- Agentive): (DO (x)) [predicate' (x) or (x,y)]
 c. ACHIEVEMENT: BECOME predicate' (x) or (x,y)
 d. ACCOMPLISHMENT: ϕ CAUSE ψ , where ϕ is normally an activity predicate and ψ an achievement predicate.

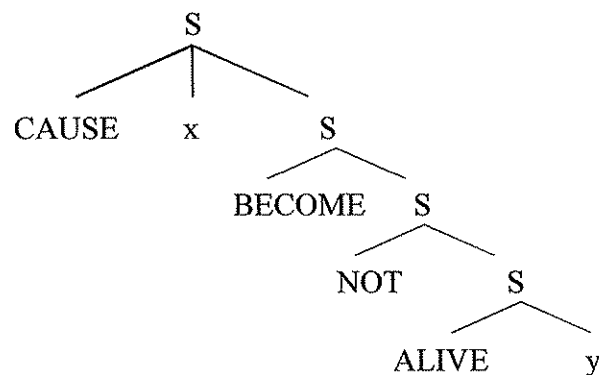
Van Valin's representations suggest the common view in the literature that achievements embed a state, and accomplishments are complex events including an activity and achievement. The basic building blocks are activities and states, and more complex event structures are generated by combining operators like CAUSE and BECOME with the state and activity primitives. Thus, the event structures corresponding to non-causative and causative changes of state are arrived at.

BECOME is responsible for adding change of state semantics, while CAUSE adds causative semantics, part of which includes the introduction of a causing subevent.

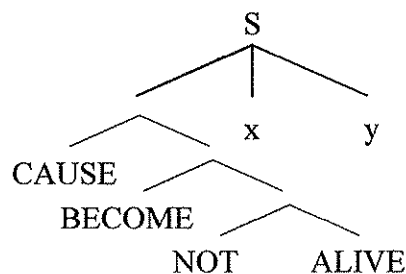
4.2.2 Generative Semantics Tradition

Within the generative framework, Generative Semantics has made extensive use of the compositional approach to verb meaning as illustrated by Mc Cawley's (1968) analysis of the verb 'kill' being derived from an underlying semantic structure such as 'cause to become not alive'.

(8) a.



b.



According to this analysis, the predicates Alive, Not, Become, and Cause compose the underlying semantic structure of the verb *kill* as illustrated in (8a). They undergo

cyclic Predicate Raising and form a unitary complex as in (8b), which is then replaced by the lexical item *kill*.

Several well-known criticisms have been raised against considering this level of structure to form a part of syntax. Fodor (1970), for instance, argues against a syntactic derivation of 'kill' from the underlying semantic structure 'cause to become not alive'. He points out that the sentence in (9a) is acceptable, while the one in (9b) is not:

- (9) a. John caused the man to die on Sunday by shooting him on Saturday.
 b. *John killed the man on Sunday by shooting him on Saturday.

Fodor indicates that the ungrammaticality in (9b) is unexpected under the 'cause to become not alive' analysis of *kill*.

In several later works, decomposition of verb meaning into some basic predicates has held a place in some sort of conceptual or lexical semantic representations of verbs (Dowty 1979; Jackendoff 1987, 1990; Pustejovsky 1995; Levin and Rappaport Hovav 1995, Kiparsky 1997; among many others). In these approaches the semantic relations between verbs and their arguments are defined with respect to the primitives in the decomposition. For instance, verbs of putting are proposed to have the following decompositional structure (Jackendoff 1990, Levin and Rappaport Hovav 1995):

- (10) Verb of putting: [x CAUSE [y BECOME P_{loc} z]]

The two denominal verbs, *butter* and *pocket* both are associated with the above representation but differ only in the choice of constants and the positions that they fill:

(11) a. *butter*: [x CAUSE [BUTTER BECOME P_{loc} z]]

b. *pocket*: [x CAUSE [y BECOME P_{loc} POCKET]]

A line of research which involves a decomposition of verb meaning into some primitives (Hale and Keyser 1993, 2002; Kural 1996; Huang 1997; Harley and Noyer 1998; Lin 2001; Folli and Harley 2005, among others) represents a revival of the generative semantics tradition in the sense that the main concern of these approaches to verb decomposition has been to show that eventuality predicates such as DO, CAUSE and BECOME are not only semantic primitives but they are represented as syntactic entities as well.

4.2.3 Syntactic Representation of Event Structure

4.2.3.1 Different Values of *v*

A group of approaches to verbal meaning (Harley 1995; Harley and Noyer 1998; Embick 2004; Folli and Harley 2005; among others) propose that roots themselves do not carry information regarding the event structure of the sentence and whether an expression denotes an activity, a spontaneous change of state, a change of state

c. pang Inchoative

'become fat'

[BECOME [x pang]]

d. xihuan Stative

'like'

[HOLD [x xihuan y]]

e. qi-si Causative

'to anger someone to death'

[x DO [x CAUSE [BECOME [y qi-si]]]]

Following a similar kind of compositional approach to verb meaning, Lin (2001) argues that all arguments of a verb are licensed via predication through light verbs. Lin proposes a wide range of light verbs such as DO, EXIST, PROCEED, INCLUDE, USE, CAUSE as well as predicates such as AT and FOR to introduce subjects, objects and oblique objects.

Both in Huang's and Lin's analysis light verbs are syntactic entities which are eventuality predicates with concrete thematic functions. They play an important role in the shaping of the eventualities and serve as building blocks for sentences by introducing arguments into the sentence structure.

Along the approaches mentioned above we will also argue that verb meaning can be decomposed into some syntactically represented primitives. The basic

primitives we will discuss in the following sections are DO, CAUSE, BECOME and BE.

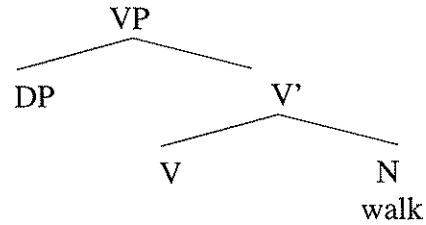
4.3 Primitives in the Decomposition

The following sections introduce the basic primitives that verbal expressions in Turkish can be decomposed into and discuss the aspects of the data which motivate the existence of these primitives in verbal meaning. The discussion is not intended to be a definitive characterization of all the possible predicates that verbal expressions in Turkish may be decomposed into. Rather the aim is to illustrate the compositional nature of the category ‘verb’ and to demonstrate how this type of an analysis can account for the various types of argument structures and event structures associated with the expressions traditionally classified as verbs.

4.3.1 DO

In predicate decomposition approaches the functional head DO licenses activities (e.g. *dance, walk, run*), accomplishments (e.g. *wash, read, make, build*) and it requires a DP occurring in the specifier position to be interpreted as an agent (Huang 1997, Lin 2001, Folli and Harley 2005). Hale and Keyser (2002) argue that verbs such as *walk, run, laugh* are derived from underlyingly transitive structures where N incorporates into a V head.

(13)



In Hale and Keyser's approach, the above configuration denotes an activity which involves the creation or production of the entity denoted by the N head.

In Turkish there is evidence indicating that activity predicates can be decomposed into a root and a functional head DO. Predicates denoting action have similar syntactic and semantic properties with predicates formed with a nominal base and the predicate *et* which semantically corresponds to the predicate *do* in English. The example in (14a) involves a complex predicate formed with the predicate *et* and the nominal expression *dans*. The one in (14b) has the verbal root *koş* run:

(14) a. Ayşe dans et-ti.

Ayşe dance do-past

'Ayşe danced.'

b. Ayşe koş-tu.

Ayşe run-past

'Ayşe ran.'

Both predicates involve an Agent, someone who performs the action, and the eventuality expressed is an activity. Moreover, the complex predicate involving *et* (e.g. *dans et* 'dance') and the predicate which involves the 'verbal' expression (e.g.

koş 'run') behave similarly with respect to causative formation and impersonal passive formation.

- (15) a. Ali Ayşe-yi dans et-tir-di.
Ali Ayşe-acc dance do-caus-past
'Ali made Ayşe dance.'

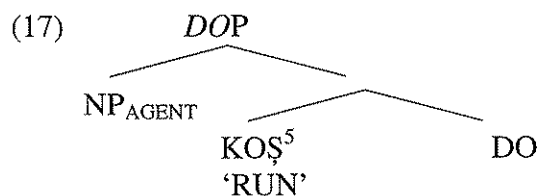
- b. Ali Ayşe-yi koş-tur-du.
Ali Ayşe-acc run-caus-past
'Ali made Ayşe run.'

- (16) a. Bura-da dans ed-il-di.
here-loc dance do-pass-past
'Here was danced.'
Lit. 'There was dancing here.'

- b. Bura-da koş-ul-du.
here-loc run-pass-past
'Here was run.'
Lit. 'There was running here.'

(15a) and (15b) show that the two types of predicates can be causativized by adding the causative marker. (16a) and (16b) demonstrate that the two predicates behave similarly with respect to impersonal passive formation as well.

The semantic and syntactic similarities between the verbal expression *koş* and the complex predicate *dans et* suggest that verbal expressions such as *koş* which designate activities are indeed composed of a root expression and a functional head DO which has a phonologically spelled out form as *et*.³ Thus, an activity predicate such as *koş* 'run' involves the following representation:⁴



According to this representation the functional head DO merges with the root KOŞ and projects a specifier position to be occupied by the Agent NP. In other words, DO is a functional head which introduces the Agent argument that is associated with the expression *koş*. The interpretation that is associated with the above syntactic representation is 'x DO KOŞ' which can be generalized as 'x DO y' for activity denoting expressions. Thus, it is similar to the interpretation associated with the complex expression *dans et* which can be represented as 'x DO dance'.

³ It seems that the phonological form *et* is not only the spell-out of the predicate DO but also the phonological spell-out of the predicate CAUSE as well. In the following example *et* represents the phonological spell-out of the predicate CAUSE:

- (i) Bu ilaç beni hasta et-ti
 this medicine me ill cause/make-past
 'This medicine made me ill/caused me to get ill.'

The reason why it is necessary to distinguish the predicate DO from the predicate CAUSE will become clear in section 4.3.2.2.

⁴ The exact nature of these representations, whether they are l-syntactic representations in the lexicon or whether they belong to syntax, will be discussed in the following chapter.

⁵ I will use capital letters to distinguish the primitive elements (e.g. KOŞ, 'RUN') from the composite expressions which are composed of these primitive elements (e.g. *koş*, '(to) run').

4.3.2 CAUSE

Predicates like *break*, *open* which are associated with accomplishments are argued to involve complex event structures involving the predicate CAUSE (Dowty 1979; Levin and Rapoport 1988; Hale and Keyser 1993; Kural 1996). Under this view the sentence 'John broke the window' involves an inner event in which the window undergoes a change of state and an outer event in which John acts agentively or as a cause.

There have been different proposals concerning the syntactic and semantic representation of the predicate CAUSE. According to one approach, the predicate CAUSE is represented as a relation between a causer argument and an event (e.g. Jackendoff 1983; Levin and Rapoport 1988; Hale and Keyser 1993). The causative sentence with *break* in (18a) involves the interpretation illustrated in (18b) and the decomposition of *break* yields the representation in (18c).

- (18) a. John broke the window.
- b. John was the cause of breaking the window.
- c. [x CAUSE [y BE/BECOME *BREAK*]

The other approach claims that CAUSE is a relation that holds between two events (e.g. Dowty 1979, Parsons 1990; Levin and Rappaport-Hovav 1996; Pylkkänen

2002). Thus, the sentence in (19a) has the interpretation in (19b) and the predicate *break* has the representation in (19c)

(19) a. John broke the window.

b. John was the agent in an event which caused the breaking of the window.

c. [x DO [CAUSE [y BE/BECOME *BREAK*]]]

In the following sections I will first demonstrate that in Turkish a group of verbal expressions are composed of a CAUSE head which should be analyzed as a relation between a causer argument and a resultant eventuality. Then I will discuss the differences between the predicate CAUSE and the predicate DO.

4.3.2.1 The Predicate CAUSE and the RESULT Component

It has been widely agreed that accomplishment predicates such as *break*, *open*, *close* contain a complex event structure with a 'result' subcomponent which refers to a particular state attained (Parsons 1990; Pustejovsky 1991; Levin and Rappaport 1998; Higginbotham 2001; Ramchand 2008, among others). A modification test involving the adverb *again* has been argued to provide evidence for the complex event structure associated with these predicates (von Stechow 1995). It has been pointed out that the following sentence with the adverb *again* allows two readings:

(20) Mary opened the door again.

a. Mary opened the door before and she did that again. [repetitive]

b. The door was open before and now it is open again. [restitutive]

The meaning of *again* involves a presupposition that there was a previous event of the same kind. On the repetitive reading in (20a), the event that is repeated is the event of Mary's opening the door. On the restitutive reading in (20b), the eventuality that is repeated is the state in which the door was open at a prior time without any agent involved. In other words, the door was open at some time prior to Mary's opening it, it closed, and then it regained its open status. The scope ambiguity of *again* can be easily accounted for by decomposing the verb *open* as in (21) and identifying two different positions where *again* can be adjoined to as illustrated in (21a) and (21b):

(21) [Mary CAUSE [BECOME [the door open]]]

a. [again [Mary CAUSE [BECOME [the door open]]]]

b. [Mary CAUSE [BECOME again [the door open]]]

If *again* has scope over CAUSE as in (21a), it yields the repetitive reading, as paraphrased in (21a). If it takes scope over the resultant state, as in (20b), it yields the restitutive reading, as paraphrased in (21b).⁶

In Turkish a test involving the adverb *tekrar* which has similar semantics to *again* yields the same type of interpretations. The following example shows that when the adverb *tekrar* 'again' is used with the verb *aç* 'open' both a repetitive and restitutive reading is available:

(22) Ali kapı-yı tekrar aç-tı.

Ali door-acc again open-past

'Ali opened the door again.'

a. Ali had opened the door before and he did it again. [repetitive]

b. The door was open before and it is open again. [restitutive]

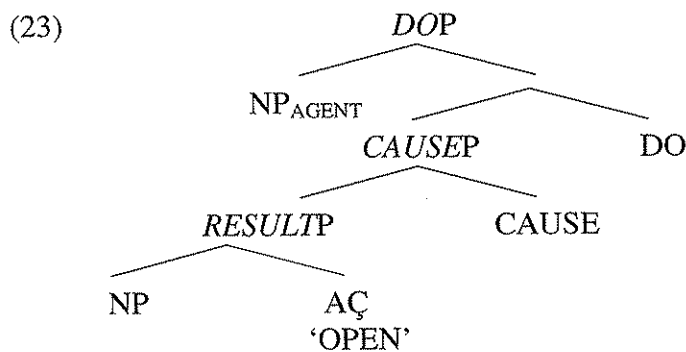
The interpretation in (22a) arises if Ali opened the door more than once. On the other hand, the interpretation in (22b) is a possible in such a situation: The door was in an open state before Ali's action, it closed because of something. Then, Ali opened it and so it is in an open state again.⁷

⁶ The possibility of an interpretation where *again* takes the predicate BECOME under its scope will be discussed in section 4.3.3.

⁷ In (22) the presence of the accusative marker on the object NP, which in Turkish yields a definite interpretation for the NP, seems to be necessary for the restitutive reading. Thus, the following example does not allow the restitutive reading:

(i) Ali tekrar kapı aç-tı.
Ali again door open-past
'Ali opened door(s) again.'

The above ambiguity indicates that a verb like *aç* ‘open’ can be decomposed into two components: an event of causing and a resultant state. Thus, the adverb *tekrar* ‘again’ can take either the event of causing or the resultant state under its scope. As it has been mentioned in section (4.3.2) there seem to be two alternatives for the representation of the CAUSE predicate. If we assume that CAUSE is a head that relates two eventualities, we have the following structure:



The above structure yields an interpretation where an agent does something and as a result something is in a state of being open. However, one problem with this representation is that expressions like *aç* ‘open’, *kapa* ‘close’ are not restricted to subjects which are agentive. The following illustrates inanimate subjects with different semantic properties:

In the above sentence *kapı* ‘door’ does not refer to a specific door. In fact, such bare NPs are argued to form a complex predicate with the verb as it was mentioned in section 3.4.1.3.2 (see also footnote 14 in Chapter 3). The sentence above implies only the repetition of Ali’s action of opening doors. Thus, there is no implication of a previous state where some door(s) were open before. In fact, the above sentence with the bare nominal denotes an activity and as I will argue in the following sections activities do not involve resultant states.

- (24) a. Rüzgar kapı-yı aç-tı. NATURAL FORCE

wind door-acc open-past

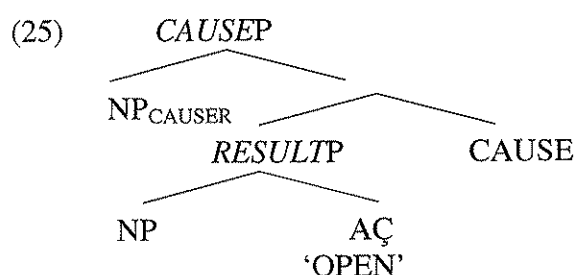
'The wind opened the door.'

- b. Bu anahtar kapı-yı aç-ar. INSTRUMENT

this key door-acc open-aor

'This key opens the door.'

In (24a) 'the wind' and in (24b) 'the key' are causers rather than agents and thus they could not have been introduced by the predicate DO. Therefore, rather than the structure in (24) the following representation where CAUSE introduces a causer argument rather and relates it to the caused resultant state seems to be the representation for expressions like *aç* 'open'.⁸



⁸ In the previous chapter, I claimed that what licenses an N projection or, more specifically, what 'nounizes' a constituent is case assignment. Thus, a question may arise concerning how the NPs in these representations (and in the ones I will propose in the following sections) are assigned case. I propose that weak case (see section 3.5.3.1) is the default case which is assigned to a constituent through thematic role assignment. NPs in all these representations bear a thematic relation to the predicates DO, CAUSE or to the root expressions (e.g. AÇ 'OPEN' in 25). This is in fact supported by Öztürk's (2005) recent analysis of Turkish as a language where case is assigned within the theta domain by the theta role introducing functional heads.

Note that with the above representation there are still two different possibilities for the scope of adverb *tekrar* ‘again’. The adverb can take either *CAUSEP* or *RESULTP* under its scope yielding the repetitive or restitutive interpretations respectively.⁹

4.3.2.2 Distinguishing CAUSE from DO

In the above section I argued that accomplishment predicates involve the predicate CAUSE. On the other hand, in section 4.3.1, I proposed that activity denoting expressions such as *koş* ‘run’, can be associated with a transitive structure which involves the predicate DO. Then the question is whether there are any observed syntactic and semantic differences between predicates which involve DO and predicates which involve CAUSE that motivate the existence of two different predicates.

Firstly, the adverb *tekrar* ‘again’ yields different interpretations with the expression *koş* ‘run’ for which we have argued to involve the predicate DO and with expressions such as *aç* ‘open’ which we have argued to involve CAUSE. As the following sentence illustrates, *koş* ‘run’ only allows the repetitive interpretation:

- (26) Ali *tekrar* *koş*-tu.
Ali again run-past
‘Ali ran again.’

⁹ Ramchand (2008), following Higginbotham (2001) (also, Parsons 1990; Levin and Rappaport 1998) argues for the presence of a result projection in the decomposition of accomplishment verbs (in the sense of Vendler 1967). In Ramchand’s analysis the result projection is embedded under a process projection which can itself be embedded under a initiation projection. According to my analysis the Result Phrase is embedded either under the CAUSE projection or, as I will argue in section 4.3.3, under the BECOME projection. The reason for my elimination of an intermediary projection (e.g. Ramchand’s process projection) will be clearer in section 4.3.3.1. In the meantime, in the following section I will argue for the presence of a Process Phrase which is the complement of the predicate DO.

a. Ali had run before and he ran again. [repetitive]

b. (No resultant state hence no restitutive reading)¹⁰.

The absence of the restitutive reading in (26) is due to the fact that the verbal expression *koş* has DO in its decomposition which lacks the resultant state component that CAUSE has. In other words, DO involves a simple eventive structure whereas CAUSE involves a complex eventive structure which includes a resultant state.

The presence of a resultant state component with verbs involving CAUSE implies the presence of an argument which can be interpreted as the entity which undergoes a change of state and ends up being in a resultant state. From this it naturally follows that predicates which are composed of the CAUSE predicate end up being two place predicates. Now the question is whether all transitive predicates are composed of the CAUSE predicate.

4.3.2.3 Transitive Predicates which Lack a RESULT Component

In approaches which do not distinguish DO from CAUSE, verbs like *read*, *watch*, *find* which clearly do not imply a change in the state of the object argument are nevertheless considered to involve the CAUSE predicate. Thus, according to this view a sentence like 'John read the book' involves a representation which can be

¹⁰ It is even difficult to imagine the type of restitutive reading that might possibly arise with verbs of activity. Remember that we want a reading which just includes a resultant state and excludes the Agent. Thus, a hypothetical restitutive interpretation with "Ali ran again" would be something like "There was a state of running which existed and it existed again", which does not seem to be available at all.

roughly paraphrased as 'John caused the book to be read.' However, the absence of a resultant state that can be directly predicated of the object argument is evident from the possible interpretations that these predicates yield with the adverb *again*. The following example with the expression *oku* 'read' illustrates this fact.

(27) Ali kitab-ı tekrar oku-du.

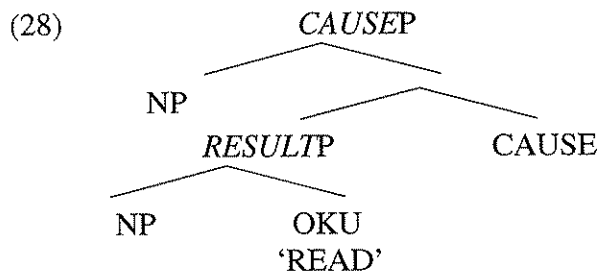
Ali book-acc again read-past

'Ali read the book again.'

a. ✓ Ali had read the book before and he read it again. [repetitive]

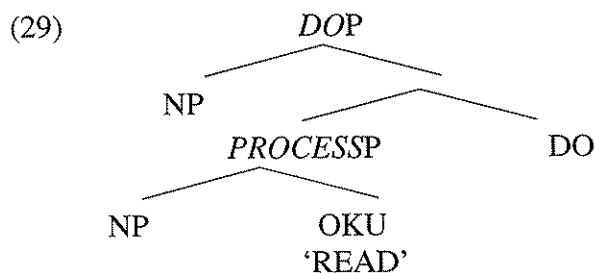
b. ✗ The book had been in a state of being read before and it is in that state again. [restitutive]

It does not seem to be possible to have a situation where a book is at a state of being read without an implied agent. In other words, *oku* 'read' does not imply a resultant state in its decomposition. Therefore, it seems that verbs like *oku* cannot have the following structure:



For such a structure we would expect *tekrar* 'again' to create a similar type of ambiguity as the one I have argued above to be available with predicates like *aç*

'open'. However, the verb *oku* 'read' does not allow the restitutive interpretation, which indicates that there is no resultant state component. For those verbs which do not involve a CAUSE predicate and which do not involve a resultant state, I suggest that they involve DO rather than CAUSE in their decomposition and a base component which denotes a process rather than a resultant state.



In the above representation the NP in the specifier position of DO is interpreted as an agent and the *PROCESSP* indicates the process of reading carried out by the agent. Thus, the sentence below in (30a) can be paraphrased as in (30b):

(30) a. Ali kitab-ı oku-du.

Ali book-acc read-past

'Ali read the book.'

b. Ali did [reading the book].

In the following section, I will provide further evidence supporting the distinction between DO and CAUSE.

4.3.2.4 The Properties of the Object NP

Folli and Harley (2005, 2007) argue that the functional head which introduces external arguments can be of two different types: v_{DO} and v_{CAUSE} . The external argument introducing v_{DO} requires its subject to be an agent while with respect to v_{CAUSE} there are no agency restrictions on the external argument. Folli and Harley's proposal is based on their observation of the relationship between the animacy of the subject and the argument structure of certain verbs in English and in Italian. The following examples illustrate a verb of consumption *eat* with an animate and inanimate subject:

(31) a. John ate the apple (up).

b. The sea ate the beach *(away).

(32) a. Gianni ha/si=é mangiato una mela.

Gianni has/refl= is eaten an apple

'Gianni has eaten/eaten up an apple.'

b. Il mare *ha/si=é mangiato la spiaggia.

the sea has/refl= is eaten the beach

'The sea *ate/ate up the beach.'

(Folli and Harley 2007: 210, example 17)

Folli and Harley indicate that with verb *eat* when the subject is inanimate and hence not agentive, a secondary predicate in the form of a particle is required in English as in (27b). Similar effects are observed in Italian as well. When the subject is inanimate as in (28b) the sentence is infelicitious without the reflexive marker *si* which they propose to be the marker of telicity. Upon this observation Folli and Harley propose that agent selecting v_{DO} takes a nominal complement whereas v_{CAUSE} with a causer external argument requires a small clause complement.

In Turkish there are neither particles of the type found in English which function as secondary predicates nor is there an apparent alternation similar to the *ha/si* alternation in Spanish. Yet a difference between animate and inanimate subjects can be observed through other means. With predicates like *eat*, when the subject is an inanimate entity the object cannot be a bare NP:

- (33) a. Çocuk kek-i ye-di.
 boy cake-acc eat-past
 'The boy ate the cake.'

- b. Çocuk kek ye-di.
 boy cake eat-past
 'The boy ate cake.'

- (34) a. Asit mermer-i ye-di.
 acid marble-acc eat-past
 'The acid ate the marble.'

b. *Asit mermer ye-di.

acid marble eat-past

'The acid ate marble.'

In the examples with the accusative marked NP objects which have a definite interpretation both animate (33a) and inanimate (34a) subjects are allowed. On the other hand, when there is a bare NP object, although the sentence in (33b) with the animate subject is grammatical, the one in (34b) with inanimate subject is ungrammatical. The effects observed in the Turkish data above are similar to the effects observed by Folli and Harley in English and in Italian. In the Turkish examples, the accusative marked NP induces telicity and gives rise to an accomplishment interpretation. On the other hand, the bare NP has an indefinite-nonspecific interpretation and it is unspecified for number, thus, it gives rise to an atelic, activity interpretation.¹¹ Therefore, the above constructions with bare NPs involve the predicate DO which introduces agents rather than CAUSE which introduces causers. This is why the example in (34b) with a nonagentive, inanimate subject is unacceptable.

According to my current analysis then, there are two external-argument-introducing heads, which place different restrictions on their subjects: DO requires an (animate) agent argument while CAUSE does not restrict the argument to be an agent but only requires that the argument be a possible cause (e.g., an agent, an

¹¹ It is a well-known fact that the nature of the object DP/NP has an effect on whether the event implied by the predicate is interpreted as an 'accomplishment' or an 'activity' or whether there is a telic or an atelic interpretation (see Dowty 1991; Tenny 1994; Verkuyl 1993; De Hoop 1996; Van Hout 1996; Borer 2005, among many others)

instrument, natural force).¹² Moreover, CAUSE gives rise to a resultant state whereas DO does not.

4.3.3 BECOME

In lexical decomposition approaches, change of state predicates, that is, inchoatives, are argued to involve the predicate BECOME (or INCH) which conveys the sense of coming into a certain state (e.g. Dowty 1979; Levin and Rapoport 1988; Van Valin 1990, Levin and Rappaport 1996; Kural 1996). In Turkish the verbal expressions *bat* 'sink', *kop* 'break/come off', *eri* 'freeze', *soğu* 'to become cold(er)' are examples of intransitive predicates which indicate a change of state and thus which can be argued to be composed of the predicate BECOME:

- (35) a. Gemi bat-tı.
ship sink-past
'The ship sank.'

¹² Although DO requires an animate agent in general, an agent can be an inanimate entity in some restricted circumstances. The notion of agent here depends on the inherent capacity of an entity to bring about the activity denoted by the predicate. Folli and Harley (2005) point out that in the general case agents are animate and intentional, however, there are also cases where inanimate nonintentional entities may be agents in a rather technical sense, by virtue of the entity's inherent properties or what Higginbotham (1977) refers to as its 'teleological' capabilities. Therefore, the expression *oku* 'read' which is composed of the predicate DO can have both an animate and an inanimate agent:

- (i) Ali dosya-lar-ı oku-du.
Ali file-pl-acc read-past
'Ali read the files.'
- (ii) Bu program bütün dosya-lar-ı oku-yor.
this program all file-pl-acc read-prog
'This program reads all the files.'

b. İp kop-tu.

rope break-past

‘The rope broke.’

c. Buz eri-di.

ice melt-past

‘The ice melted.’

d. Hava soğu-du.

weather become.cold-past

‘The weather became cold.’

These change of state predicates not only involve a BECOME component but also have a resultant state component in their decomposition. Evidence for the presence of a resultant state component comes from the scope ambiguity associated with the adverb *tekrar* ‘again’. Repetitive and restitutive interpretations are both possible as exemplified in the following example with *kop* ‘break’:

(36) İp tekrar kop-tu.

rope again break-past

‘The rope broke again.’

a. The rope had broken before, (it was fixed) it broke again.

[repetitive]

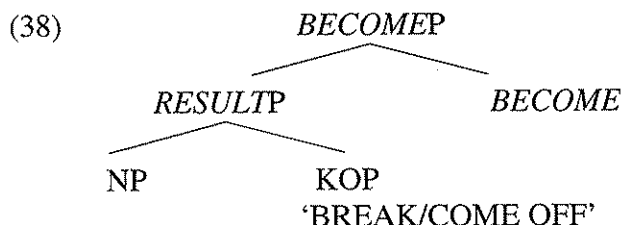
- b. The rope was in a broken state before, and it went back to that state again.
[restitutive]

The decomposition of the verbal expressions in (35) into a BECOME component and a resultant state is further supported by the semantic and syntactic similarities between these expressions and complex predicates which are formed of a nominal base and the predicate *ol* 'become'. Note that in the following example the complex predicate which involves the nominal expression *sıcak* 'hot/warm' and *ol* 'become' indicates a change of state:

- (37) Oda sıcak ol-du.
room hot become-past
'The room became hot.'
→ *resultant state*: Oda sıcak.
room hot
'The room is hot.'

The expression *ol* semantically corresponds to BECOME and indicates the inception of the state described by the nominal base. More specifically, the nominal base (e.g. *sıcak* 'hot') refers to the resultant state of the entity that the subject NP designates (e.g. *oda* 'room'). Similarly, the examples in (35) with verbal expressions indicate a change in the state of the entities denoted by the subject NPs. While BECOME has an overt phonological realization in (38) it is phonologically null in (35).

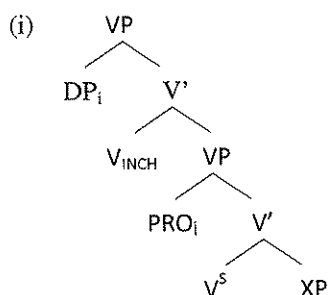
Then, being composed of the predicate BECOME and a resultant state, verbal expressions such as *kop* 'break/come off', *eri* 'freeze', *soğu* 'to become cold' which indicate a change of state have the following representation:



According to the above representation, the predicate BECOME is similar to the predicate CAUSE in that it takes a RESULTP as its complement (see example 25). However, unlike CAUSE it does not project a specifier position and yields intransitive predicates as illustrated in (35).¹³

In the following sections I will provide further evidence for this analysis of the predicate BECOME. Firstly, I will argue against those analyses where the predicate BECOME is claimed to occur in the structure of causative verbs and

¹³ Kural (1996) gives an analysis of INCH where the predicate INCH is a control predicate whose specifier controls the specifier of the lower VP projected from V^S. The diacritic in V^S indicates that the verb must combine with INCH. Kural proposes the following structure for predicates like *sink*, *burn*, *melt*:



Kural's proposal of this structure stems from his claim that the structure of lexical causatives embeds the structure of inchoatives. I will argue in section (4.3.3.2 and 4.3.3.3) that lexical causatives do not embed the structure of inchoatives. Moreover, in section (4.3.3.4) I will argue for the presence of a resultant phrase in inchoative structures as in lexical causatives.

projects a specifier position. Secondly, I will present more evidence for the presence of a resultant state component.

4.3.3.1 Predicate BECOME in the Decomposition of Causatives

Since the predicate BECOME is agreed to occur in the decomposition of change of state verbs it is usually proposed that the structure of causatives which imply a change of state embeds the structure of the inchoatives (e.g. Hale and Keyser 1993; Lin 2001; Embick 2004), giving rise to the meaning ‘x CAUSE y to BECOME state’:

- (39) John opened the door
x CAUSE [y BECOME OPEN]

However, the claim that lexical causatives embed the structure of inchoatives seems to be problematic in several respects as I will discuss in the following sections.

4.3.3.2 Scope Ambiguity with Adverb ‘Again’

The assumption that causatives embed an inchoative layer predicts a three-way ambiguity with the adverb ‘again’, since a causative structure which involves BECOME would have three layers of projections:

(40) Mary opened the door again.

[(*again*) CAUSE... [(*again*) BECOME [(*again*) the door open]]]

However, von Stechow (1995) points out that the ambiguity of *again* is only a two-way ambiguity and it does not include the intermediate reading with the BECOME component. In other words, a reading which excludes the agent and implies the door's opening by itself again is not possible. This makes the decomposition of verbs such as *open* into the CAUSE-BECOME component problematic and indicates that such verbs of causation only involve CAUSE and a resultant state. An example from Turkish with the verb *aç* 'open' also illustrates this fact:

(41) Ali tekrar kapı-yı aç-tı.

Ali again door-acc open-past

'Ali opened the door again.'

a. ✓ Ali opened the door before and he opened it again

b. ✗ The door had opened by itself before and it opened again.

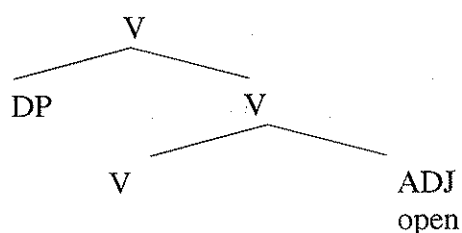
The sentence in (41) does not yield the interpretation in (41b). In other words, it is not possible to have a reading which implies the repetition of the door's opening excluding the agent.

In the following section I will provide further evidence from the causative-inchoative alternation in Turkish that causative verbs do not involve an inchoative layer.

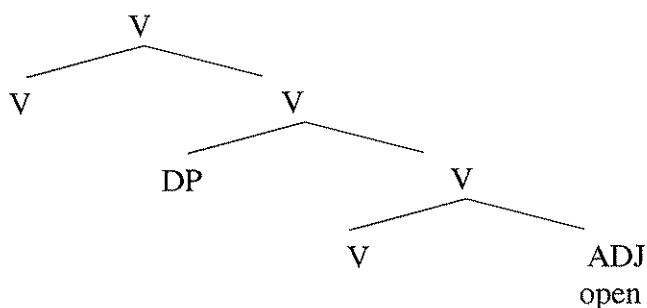
4.3.3.3 The Causative-Inchoative Alternation

In Hale and Keyser's (2002) analysis of verbs such as *open*, *close*, *sink* which exhibit argument structure alternations as in 'The door opened vs. Somebody opened the door', the transitive causative form of the verbs are derived by adding an additional *v* layer to the inchoative structure:¹⁴

- (41) The door opened.



- (42) Somebody opened the door.



On the other hand, Levin and Rappaport Hovav (1995) proposes an analysis of causative-inchoative alternating verbs where the causative form is taken to be basic

¹⁴ In addition to Hale and Keyser (2002), Dowty (1979) and Pesetsky (1995) also propose an analysis of the causative-inchoative alternation in English where the causative form is derived from the inchoative.

and the inchoative is derived by an anti-causativization process which suppresses the causer argument.

Both of these approaches basically assume that the causative forms involve an inchoative layer with the predicate BECOME. Thus, they cannot explain why an intermediate reading taking BECOME under its scope is not possible with the adverb ‘again’ as it is discussed in the above section.

Deriving the causative forms from the inchoative or vice versa leaves unexplained some other facts concerning the Turkish data as I will demonstrate below.

4.3.3.3.1 Problems with Deriving the Causative from the Inchoative

Contrary to Hale and Keyser’s analysis which claims the inchoative forms to be basic, the verbal expressions *aç* ‘open’, *kapa* ‘close’, *kır* ‘break’ are causatives and cannot be used as inchoative predicates:

- (43) a. Ali kapı-yı açtı.

Ali door-acc open-past

‘Ali opened the door.’

- b. *Kapı aç-tı.

door open-past

Int. ‘The door opened.’

- (44) a. Ali cam-ı kır-dı.

Ali window-acc break-past

'Ali broke the window.'

- b. *Cam kır-dı.

window break-past

Int. 'The window broke.'

Note that the inchoative forms of these verbs involve the suffix *-Il*:¹⁵

- (45) a. Kapı aç-ıl-dı.

door open-inch-past

'The door opened.'

¹⁵ The examples in (45) are in fact ambiguous between an inchoative reading and a passive reading with an implied agent:

- (i) Kapı aç-ıl-dı.
door open-*ıl*-past

- a. The door opened by itself.
b. The door was opened by someone.

This is due to the ambiguity involved with the suffix *-Il* which in Turkish seems to mark both inchoative predicates and passives. In the literature there are analyses of this suffix which presents a unified treatment of its function in passive and in inchoative structures. See, Göksel (1993), Taneri (1993) and Haig (2000).

I suggest that the two functions related to this suffix is an indication of its general role as an eventuality predicate BECOME/BE which may be attached at different levels of the structure. Thus, this suffix may occur outside a morphological causative:

- (ii) Kapı aç-tır-ıl-dı.
door open-caus-*ıl*-past
'The door was made to open (by someone).'

In this example the suffix seems to represent an eventuality predicate attached higher in the structure compared to its occurrence in (i). I leave the investigation of this issue for future research.

b. Cam kır-*ıl*-dı.

window break-inch-past

'The window broke.'

Following Levin and Rappaport Hovav (1995) it can be proposed that the above verbs have a causative layer and the derivation of the inchoative forms involve an anticausativization process which is represented by the suffix *-ıl*. In fact, this suffix has been proposed to be an anticausative marker which makes reference to an implicit causer in the inchoative variants (e.g. Taneri 1993; Zeyrek 2006).¹⁶

However, this type of an analysis does not explain the pattern I will discuss below.

4.3.3.3.2 Problems with Deriving the Inchoative from the Causative

In Turkish there are also verbal expressions which indicate a change of state and which are basically inchoatives. These are the verbs which were presented in section 4.3.3 and which were argued to involve the predicate BECOME in their decomposition. An example is presented below.

(46) a. İp kop-tu.

rope break-past

'The rope broke.'

¹⁶ Zeyrek (2006) argues the same suffix also appears on deadjectival predicates:

- (i) a. dar-al
narrow-suffix
'to become narrower'
b. az-al
few-suffix
'to decrease'

Zeyrek argues that although the suffix *-ıl* that occurs on the verbs in (45) may be associated with an implicit causer, its occurrence on deadjectival predicates cannot be associated with an implicit causer and simply expresses an internally caused change of state. I propose that the suffix above is a spell-out of either the predicate GET or BECOME which indicate a change of state as it is suggested by Zeyrek's analysis as well.

b. *Ali ip-i kop-tu.

Ali rope-acc break-past

Int. 'Ali broke the rope.'

c. Ali ip-i kop-ar-dı.

enemy ship-acc sink-caus-past

'The enemy sank the ship.'

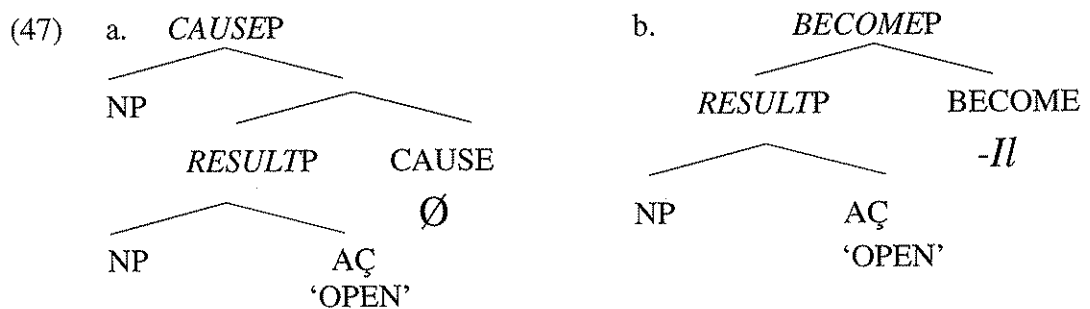
The examples in (46a) vs. (46b) demonstrate that the expression *kop* 'break' can be used as an inchoative but not as a causative. (46c) shows that its causative use involves the suffix *-Ar* which is the causative suffix. Now, if the change of state verb *kop* indeed involved a causative layer as Levin and Rappaport Hovav suggests, it is not clear why the anticausative suffix does not show up in (46a) and why there is a suffix *-Ar* in (46c).

What I will suggest is that neither the causative forms are derived from the inchoative BECOME by adding a CAUSE layer nor the inchoative interpretation is derived by the suppression of the causer argument. Rather both forms are derived from the same base.

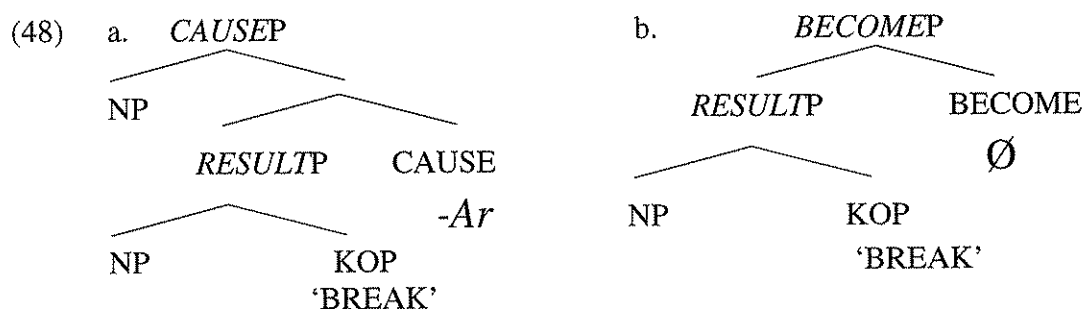
4.3.3.3.3 Deriving the Causative and the Inchoative from the Same Base

As the above discussion shows, the accounts of causative-inchoative alternation which take one of the forms to be basic and derives the other from that runs into problems. I propose that in the above examples the suffix *-Il* which appears on

inchoative forms in (45) is, in fact, the spell-out of the predicate BECOME. On the other hand, for the causative forms in (43a) and (44a) CAUSE head is phonologically unrealized. Specifically, both the inchoative forms (e.g. *aç-ıl* and *kır-ıl*) and the causative forms (e.g. *aç* and *kır*) are derived directly from the same roots (e.g. AÇ and KIR) by combining with BECOME for the inchoative formation and by combining with CAUSE for the causative formation.



On the other hand, for the group of verbs exemplified by *kop* in (46) (also *don* 'freeze', *bat* 'sink', *eri* 'melt', *kayna* 'boil' etc.), they have the same representations as in (47a) for the inchoative forms and the one in (47b) for the causative forms. This captures the fact that both groups of verbs are the same semantically and thus have the same inchoative and causative representations. However, the difference is that for the *kop* group of verbs BECOME is null while CAUSE is phonologically realized:



Thus, the following examples illustrate these facts more clearly:

- (49) a. *İp kop-Ø-tu.* vs. *Cam kır-ıl-dı.*
 rope break-BECOME-past window break-BECOME-past
 ‘The rope broke.’ ‘The window broke.’
- b. *Ali ip-i kop-ar-dı.* vs. *Ali cam-ı kır-Ø-dı.*
 Ali rope-acc break-CAUS-past Ali window-acc break-CAUS-past
 ‘Ali broke the rope.’ ‘Ali broke the window.’

This non-directional derivation of causative-inchoative pairs can also explain another pattern concerning the causative-inchoative alternation which is exemplified below:

- (50) a. *Kağıt yan-dı.*
 paper burn-past
 ‘The paper burned.’
- b. *Ali kağıdı yak-tı.*
 Ali paper-acc burn-past
 ‘Ali burned the papers.’

In the above example, both the inchoative form *yan* in (50a) and the causative form *yak* in (50b) are morphologically complex forms and contain the bound root *ya-*. Thus, neither the causative nor the inchoative can be argued to be derivationally

related to the other one. On the other hand, a non-directional account of causative and inchoative formation provides a plausible explanation for these facts. In fact, what happens is that the root *YA* either combines with BECOME and is phonologically realized as *yan* or combines with CAUSE and is phonologically realized as *yak*.

4.3.3.4 BECOME Predicate *Ol* and CAUSE Predicate *Et*.

Restrictions on the co-occurrence of the predicate *ol*, the overt phonological form of BECOME (see section 4.3.3), with the predicate *et*, the overt phonological form of CAUSE (see footnote 3), indicate that the inchoative predicate BECOME and the causative predicate CAUSE compete for the same position.

(51) a. Ali iyi ol-du.

Ali well become-past

‘Ali became well.’

b. Bu ilaç Ali-yi iyi et-ti.

this medicine Ali-acc well make / cause-past

‘This medicine made Ali well / caused Ali to become well.’

c. *Bu ilaç Ali-yi iyi ol et-ti.

this medicine-pl Ali-acc become make-past

Int. ‘This medicine made Ali well / caused Ali to become well.’

d. *Bu ilaç Ali-yi iyi ol-muş et-ti.¹⁷

this medicine-plu Ali-acc become-pf make-past

Int. 'This medicine made Ali well / caused Ali to have become well.'

The example in (51a) refers to a change of state which has the resulting effect of Ali's being well. Thus, *ol* represents the phonological spell-out of the predicate BECOME. The example in (51b) refers to a causative event where something (e.g. the medicine) causes a resultant state, Ali's being well. The expression *et* represents the phonological spell-out of the predicate CAUSE. The examples in (51c) and (51d) illustrate that a structure where *ol*, the predicate BECOME, is embedded under *et*, the CAUSE predicate, is ungrammatical.

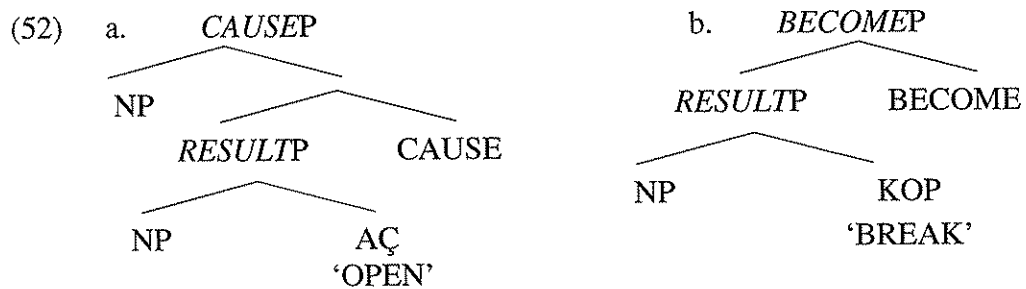
4.3.4 Further Evidence for a RESULT Component

In the above sections I have argued that both verbal expressions which are composed of the predicate CAUSE and those which are composed of the predicate BECOME have a result component in their representation:

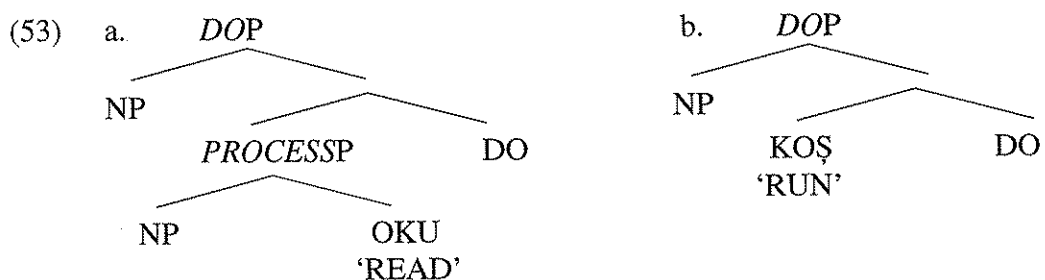
¹⁷ The example below shows that contrary to the examples in (51) co-occurrence of *et* and *ol* is allowed if *et* precedes *ol*:

- (i) Bu ilaçlar Ali'yi iyi et-miş ol-abil-ir.
this medicine Ali-acc well make-pf become/be-mod-aor
'It might be the case that this medicine have caused Ali to be well.'

This example implies a structure where *et*, the predicate CAUSE, is embedded under *ol*. Thus, in the example above, the expression *ol*, rather than being the phonological spell-out of the inchoative predicate BECOME, seems to be the phonological spell-out of a higher event head that can take CAUSE as its complement.



On the other hand, for verbs which have a DO component in their decomposition I argued that they lack the result component:



The presence of a *RESULT* component in the decomposition of a group of verbal expressions is evidenced by the existence of a morphological process which selectively targets verbal expressions with a *RESULT* component. The suffix *-İk* derives adjectives/nouns from verbal expressions and the expressions derived denote the end state of an event. This suffix seems to be compatible only with predicates for which I have argued to have a result component and not with those which lack it:

- (54) a. Ali kapı-yı aç-tı.
 Ali door-acc open-past
 'Ali opened the door.'

b. Kapı aç-ık.

door open-*Ik*

'The door is open.'

(55) a. İp kop-tu.

rope break-past

'The rope broke.'

b. İp kop-uk

rope break-*Ik*

'The rope is broken.'

(56) a. Ali kitab-ı oku-du.

Ali book-acc read-past

'Ali read the book.'

b. *Kitap oku-(y)uk.

book read-*Ik*

Int. 'The book is in a read state'

(57) a. Çocuk koş-tu.

child run-past

'The boy ran.'

b. *Çocuk koş-uk.

child run-*Ik*

Int. 'The child is in a run state'

For the verbal expressions in (54a) and (55a) I have proposed the structure (52a) and (52b) respectively. Both of them have resultant states in their representations and allow *-Ik* suffixation as can be seen in (54b) and (55b). On the other hand, the verbal expressions in (56a) and (57a) do not have a result component in their representations as shown in (53a) and (53b) and thus do not allow *-Ik* suffixation as demonstrated in (56b) and (57b).

Nakipoğlu (1998) indicates that the suffix *-Ik* can only be attached to unaccusative verbs which are inherently delimited because only delimited events imply an end state. She argues that unergative verbs are nondelimited and their incompatibility with the suffix *-Ik* naturally follows from that. Nakipoğlu further points out that certain unaccusative verbs which are morphologically complex are incompatible with the suffix *-Ik* in spite of the fact that their morphologically simple counterparts also imply an end state:

(58) a. Kapı aç-ıl-dı.

door open-BECOME-past

'The door was opened.'

b. *Kapı aç-ıl-ık.

door open-BECOME-*Ik*

Int. 'The door is in an open state.'

- (59) a. Cam kır-ıl-dı.

window break-BECOME-past

'The window was broken.'

- b. *Cam kır-ıl-ık.

window break-BECOME-*Ik*

Int. 'The window is in a broken state.'

According to Nakipoğlu, the incompatibility of morphologically marked unaccusatives with *-Ik* is due to a grammatical constraint which prevents this suffix from being attached to a verb that has undergone some morphological derivation. However, this does not explain how the suffix *-Ik* is compatible with the transitive causative counterparts of the verbs as demonstrated in (60) and (61):

- (60) a. Ali kapı-yı aç-Ø-tı.

Ali door-acc open-CAUSE-past

'Ali opened the door.'

- b. Kapı aç-ık.

door open-*Ik*

'The door is open.'

(61) a. Ali cam-ı kır-Ø-dı.
 Ali window-acc break-CAUSE-past
 ‘Ali broke the window.’

b. Cam kır-ık.
 window break-*Ik*
 ‘The window is broken.’

In (60b) and (61b) the suffix *-Ik* in fact targets the result component rather than the whole causative verb construction. Thus, the proposal that *-Ik* affixation targets the *RESULT* component not only explains the grammaticality patterns in (54-57) but it also explains why (58b) and (59b) are not possible.

4.3.5 BE

In Hale and Keyser’s (2002) approach to argument structure, stative psychological verbs involve the predicate HAVE in their decomposition. The predicate HAVE involves semantics similar to the verb *have* in English and its stative nature accounts for the stative property of psychological verbs.

In Baker (2003) stative verbs are derived by the conflation of the predicate head BE and an adjectival root. BE is an operator which licenses non-dynamic, stative situations and it takes two arguments: an entity denoting argument and a property denoting argument. It maps these arguments onto the state of the entity

having that property at a particular time. According to this approach stative verbs such as *hunger*, *like*, *fear* decompose into an adjectival expression and BE.¹⁸

In Turkish there is no overt stative predicate like the verb *have* in English. However, the predicate *ol* has generally been argued to allow both dynamic ‘become’ and stative ‘be’ interpretations (Kornfilt 1997, van Schaaijk 2001, Göksel and Kerslake 2005). Thus, it may be argued that stative predicates involve BE in their decomposition. However, it seems that psychological state denoting predicates in Turkish are significantly different from their English counterparts in several ways.

Firstly, expressions which correspond to the English verbs *hunger*, *like* or *fear* seem to be change of state verbs rather than purely stative ones. Thus, positing the presence of a stative predicate like BE in the decomposition of these verbs cannot account for the dynamic interpretation associated with these verbs.

- (62) a. Ali hungered.

Ali was in a state of hunger.

- b. Ali feared.

Ali was in a state of fear.

- (63) a. Ali acık-tı.

Ali hunger-past

‘Ali became hungry.’

¹⁸ In Baker’s (2003) approach eventive unaccusative verbs, in addition to the BE operator, involve a BECOME operator and eventive transitive verbs, in addition to BE and BECOME, involve the CAUSE operator.

b. Ali kork-tu.

Ali fear-past

‘Ali became fearful.’

Secondly, in Turkish verbal expressions denoting psychological states can occur with the progressive marker unlike their English counterparts.

(64) a. *John is fearing.

b. Ali kork-uyor.

Ali fear-prog

‘Ali fears/ Ali feels fear’

The suffix *-(I)yor* has usually been argued to be associated with progressive aspect in Turkish (Yavaş 1980; Kornfilt 1997; Göksel and Kerslake 2005). As shown in the above example, the stative verb *fear* is not compatible with the progressive marker whereas the predicate *kork* in Turkish is.

Göksel and Kerslake (2005) draw attention to the close interaction between aspectual marking and the dynamic vs. stative interpretation of psychological verbs. They argue that psychological state verbs (verbs of perception, emotion and cognition) have a dynamic interpretation when they occur with a perfective marker such as *-DI* in (65a) and a stative interpretation with the progressive marker (65b). The effect of aspect marking on the interpretation of these verbs is illustrated below:

(65) a. [Mehmet-in gel-eceğ-in]-e *sevin-di-m*.

Mehmet-gen come-vn-3sg.poss-dat *be.glad-pf-1sg*

'I became glad to hear that Mehmet is coming.'

b. [Mehmet'in gel-eceğ-in]-e *sevin-iyor-um*.

Mehmet-gen come-vn-3sg.poss-dat *be.glad-impf-1sg*

'I am glad to hear that Mehmet is coming.'

(Göksel and Kerslake 2005: 334)

Göksel and Kerslake argue that the example in (65a) where the psychological predicate occurs with the perfective marker yields a dynamic nonstative interpretation as opposed to the stative meaning involved in (65b) where the same predicate occurs with *-(I)yor*.¹⁹

The role of *-(I)yor* in inducing a stative interpretation can be correlated to its general function as an imperfective marker rather than a pure progressive marker. In fact, its function as an imperfective marker has been noted by several researchers (Erguvanli-Taylan 2001; Göksel and Kerslake 2005). Then, the suffix *-(I)yor*, as the imperfective marker, would not be ruled out for stative predicates since stative predicates are imperfective by nature. However, this does not explain how the same predicate can involve both a dynamic or stative interpretation depending on the

¹⁹ Göksel and Kerslake (2005) mainly draw attention to the opposition between the perfective/past marker *-DI* and the progressive/imperfective marker *-(I)yor* in the interpretation of psychological predicates. Another suffix, the future marker *-(y)AcAK*, also seems to allow the dynamic "entry into state", "change of state" interpretation similar to *-DI*:

- (i) Bun-a sevin-ecek-sin.
this-DAT be.glad-fut-2sg.
'You will become glad for this.'

aspectual markers it occurs with. This is because, I claim, there are in fact no ‘verbal’ predicates that are statives. In other words root expressions do not merge with a stative predicate such as BE or HAVE and derive stative predicates in Turkish. The stative interpretation is derived through the aspectual marker *-(I)yor*.^{20, 21}

²⁰ In addition to the aspectual markers, the type of objects that a predicate occurs with seems also to determine whether there is a stative or dynamic interpretation.

- (i) a. Ali cevap-lar-ı bil-di.
Ali answer-pl-acc know-past
‘Ali knew the answers.’

b. Ali cevap-lar-ı bil-iyor.
Ali answer-pl-acc know-impf
‘Ali knows the answers.’
- (ii) a. *Ali Fransızca bildi.
Ali French know-past
‘Ali knew French.’

b. Ali Fransızca bil-iyor.
Ali French know-impf
‘Ali knows French.’

In (ia) and (ib) the object argument is of the predicate *bil* ‘know’ refers to some specific answers whereas in (iia) and (iib) the object argument refers to a language. (ia) and (ib) show that when the object is ‘the answers’ the predicate is compatible with both perfective and imperfective aspects. On the other hand, when the object is French, the predicate is compatible with only the imperfective aspect. This is due to the fact that knowing a language implies an event with duration and no temporal endpoint which makes it incompatible with the perfective aspect.

²¹ Although there is no BE that attaches to expressions at the root level in Turkish, it seems that it can attach to larger constituents and thus represent a higher functional head in Turkish. Keleşir (2001) argues that some copular forms in Turkish are derived from the same element BE. She claims that the copular *ol-* in embedded clauses with adjectival and nominal predicates, the copular *var* which occurs in possessive and existential constructions, and the copula *i/-y* are all spell-outs of the same feature BE which have different phonological realizations depending on the context they occur in.

- (i) Ali’nin öğretmen/hasta ol-duğ-unu bil-iyor-um.
Ali-gen teacher / ill become-nom-3sg-acc know-prog-1sg
‘I know Ali is a teacher / is ill.’
- (ii) Ali’nin kalem-i var.
Ali-gen pencil-3sg be/exist
‘Ali has a pencil.’
- (iii) Ali öğretmen i-di.
Ali teacher be-past
‘Ali was a teacher.’
- (iv) Ali iyi-y-di.
Ali good/well-be-past

As verbal expressions are not stative predicates in Turkish, it is the nominal expressions through which stative predication is realized.

(66) a. Ali hasta-Ø / hasta-ydı.

Ali ill-cop / ill-cop-PAST

'Ali is ill' / 'Ali was ill.'

b. Ali doktor-Ø / doktor-Ø- du.

Ali doctor-cop / doctor-cop-PAST

'Ali is (a) doctor' / 'Ali was (a) doctor.'

Thus, the expressions traditionally classified as nominals and verbs are distinguished from each other along the dimension of stativity: while nominal expressions are expressions which are inherently stative, verbal expressions are not.²²

So far I have argued against a lexical category 'verb' in the lexicon and provided evidence for the decomposition of the expressions traditionally classified as verbs into the dynamic predicates CAUSE, BECOME, DO. The next thing I will discuss is the formation of verbal expressions from nouns and adjectives. I will

'Ali was good/well.'

It could be the case that expressions which have been argued to be copulas are in fact reflexes of higher event heads such as HAPPEN/BECOME, EXIST and BE. Moreover, there are probably different levels of attachment available for predicates like BE and BECOME determined by language specific properties. This proposal is similar to the one made by Pylkkänen (2002) for the predicate CAUSE. Pylkkänen argues that CAUSE can be root selecting, verb selecting and phase selecting depending on the language specific constructions indicating causation.

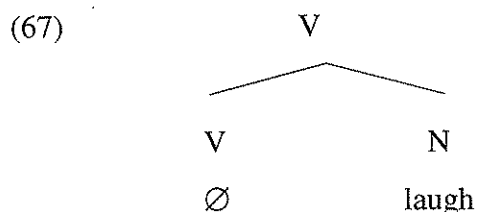
²² Of course, it is possible to construct dynamic events from nominal/adjectival predicates but in that case we need a dynamic event head such as BECOME represented by *ol*:

(i) Ali iyi ol-du.
 Ali well become-past
 'Ali became well'

mainly focus on one aspect of verb derivation. In the previous chapter I argued for the lack of a category distinction between nouns and adjectives in Turkish. In the following section I will mainly focus on the implications of this claim for verb formation in Turkish.

4.4 Denominal and Deadjectival Verbs

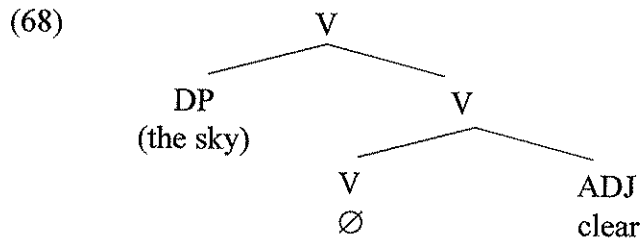
In Hale and Keyser's (2002) approach, the argument structure properties of verbs is to a large extent built upon the categorial properties of the basic elements that form verbs. These basic elements are the members of the lexical categories, V, N, A, and P whose specifier projecting and complement taking capacities determine the number of arguments that a verb can take and the thematic roles associated with these arguments. According to Hale and Keyser (2002), when there is a noun in structural representation as a primitive, the predicate which is derived through the conflation of that noun with a verbal head yields an intransitive agentive verb (e.g. The man laughed).



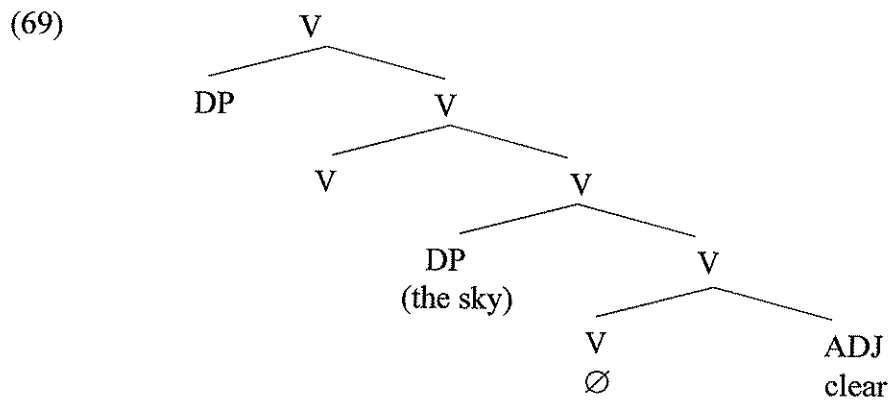
In (67) the noun in the decomposition is interpreted as an entity which is created, produced as a result of the action indicated by the V head.

A verb which is derived through the conflation of an adjective head with a verbal head yields an intransitive change of state verb as illustrated in (68) which can

alternatively be used as a causative change of state verb by an additional V projection as shown in (69).



(e.g. The sky cleared)



(e.g. Something cleared the sky)

In the structure illustrated by (68) the adjective in the decomposition is interpreted as a state and thus, its conflation with the V head yields a change of state interpretation. When the structure in (68) is embedded under another V projection as shown in (69), the higher V head indicates an event which causes another event, that is, the change of state represented by the lower V projection.

In chapter 3, it was demonstrated that there is no adjective-noun distinction among lexical expressions in Turkish. This implies that the type of argument

structure predictability proposed by Hale and Keyser would not be possible in Turkish. In the following sections I will argue that this is indeed what the data concerning the so called denominal deadjectival ‘verb’ formation in Turkish suggests.

4.4.1 Change of State Predicates with *-lAş* and *-lAn*

Since there is no ‘adjective’ ‘noun’ distinction in Turkish, we would expect change of state predicates derived from both ‘adjectives’ and ‘nouns’ contrary to Hale and Keyser’s claims. This is indeed the case as illustrated by the following examples:

- (70) a. Ayşe güzel-leş-ti.
 Ayşe beautiful-*lAş*-past
 ‘Ayşe became beautiful.’
- b. Ali çocuk-laş-tı.
 Ali child-*lAş*-past
 ‘Ali became childish.’
- c. Bu bölge çöl-leş-ti.
 this area desert-*lAş*-past
 ‘This area become desertlike.’

The examples above illustrate ‘verb’ formation from ‘nonverbal’ expressions with the suffix *-lAş*. In (70a) the suffix is attached to the stem *güzel* which corresponds to the adjectival expression ‘beautiful’ in English. The predicate formed from the stem is a change of state predicate which can be interpreted as ‘to become beautiful’ as predicted by Hale and Keyser’s analysis. However, in (70b) the suffix is attached to the expression *çocuk* ‘child’ and in (70c) *çöl* ‘desert’ both of which correspond to expressions which are considered to be nouns in English (e.g. *the child, children, the desert, deserts*). The predicates derived from these stems also are change of state predicates contrary to Hale and Keyser’s analysis would predict.

There is another group of change of state predicates which are formed by the suffix *-lAn* in Turkish:

- (71) a. bit-len
 flea-*lAn*
 ‘get fleas’
- b. akıl-lan
 wisdom-*lAn*
 ‘become wise / get wisdom’
- c. keder-len
 sorrow-*lAn*
 ‘come to have sorrow / feel sorrow’

d. buz-lan

ice-*lan*

‘become covered with ice’

As the glosses indicate the stems in these predicates do not refer to a state attained as in the case of *-laş* predicates. With *-laş* the stem denotes a state that is attained, whereas with *-lan* the stem denotes an abstract or concrete entity that is attained. What is more interesting is that *-laş* and *-lan* can be attached to the same stem yielding different interpretations:

(72) a. buhar-lan

steam-*lan*

‘become covered with steam’

b. buhar-laş

steam-*laş*

‘become steam’

(73) a. buz-lan

ice-*lan*

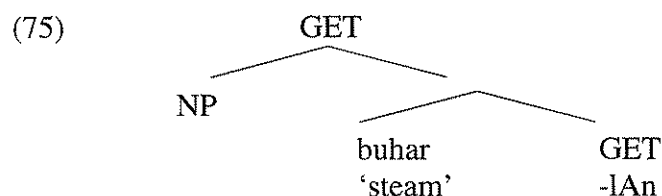
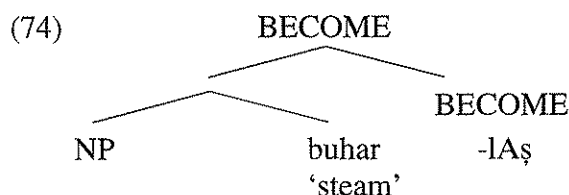
‘become covered with ice, come to have ice’

b. buz-laş

ice-*laş*

‘become (like) ice’

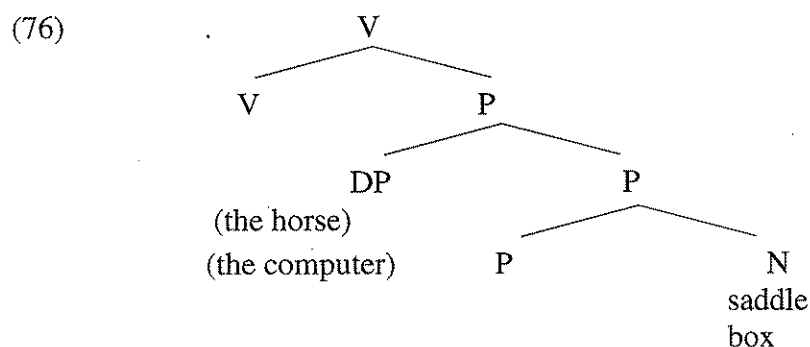
The examples above indicate that it cannot be the pre-specified categorial properties of the stems *buhar*, *buz* that determine the interpretation of the derived predicates. Rather it is the suffixes themselves which are responsible for the associated interpretations. In other words, *buhar*, *buz* are neither specified as ‘noun’ or ‘adjective’, their state denoting or entity denoting interpretation is determined by *-lAn* and *-lAş*. I suggest that *-lAn* represents the predicate GET which is similar to HAVE in indicating possession but which is distinguished from the stative predicate HAVE in involving a dynamic interpretation. Thus, *-lAn* can be interpreted as ‘come to possess/have’. On the other hand, *-lAş* represents the predicate BECOME. The suggested representation for *-lAş* and *-lAn* predicates are given below²³:



²³ See Uygun (2005) and Uygun (2006) for a more detailed analysis of *-lAş* and *-lAn* where these suffixes are decomposed into an adpositional element, represented by *lA*, and a verbal element which is represented by *-ş* in *lAş* and by *-n* in *-lAn*.

4.4.2 Deriving Transitive Verbs from Nouns

In Hale and Keyser's analysis, formation of transitive verbs from nouns is possible in the presence of a prepositional element in the structure. The preposition indicates a change in location and the noun stem either denotes the entity whose location changes or the location itself. Location verbs such as *to box* or locatum verbs such as *to saddle* in English are claimed to have the following representation:



According to HK the presence of the prepositional phrase indicates a change in location and the N stem is interpreted to be the object which changes its location or the location itself. The structure yields a transitive location or locatum predicate.

Corresponding expressions in Turkish such as *kutula-* 'box', *eyerle-* 'saddle' involve nominal stems and the suffix *-lA*.

(77) a. Ali at-1 eyer-le-di.

Ali horse-acc saddle-*lA*-past

'Ali saddled the horse.'

b. Ali ayakkabı-lar-ı kutu-la-dı.

Ali shoe-pl-acc box-*lA*-past

‘Ali boxed the shoes.’

In (77a) the stem indicates the entity that ends up being in a location (e.g. the horse). The predicate derived is a locatum predicate and transitive as predicted by Hale and Keyser’s analysis. In (77b) the stem refers to the location and the derived predicate is a location predicate which is again transitive as expected.

However, (78a) and (78b) show that it is also possible to derive transitive predicates from stems which are not necessarily interpreted as entities or locations.

The following examples also involve the suffix *-lA*:

(78) a. Ayşe çiçek-ler-i demet-le-di.

Ayşe flower-pl-acc bunch-*lA*-past

Lit. ‘Ayşe made the flowers into a bunch.’

b. Ali kitap-lar-ı grup-la-dı.

Ali book-pl-acc group-*lA*-past

‘Ali grouped the books.’

Note that in the examples above the stems refer to ‘states’ rather than locations or entities which change their locations. The predicates derived from these stems are transitive. This is unexpected in Hale and Keyser’s analysis. If *demet* and *grup* belonged to the category ‘adjective’, their interpretation as ‘states’ would be expected but then the derived predicate would be an ‘intransitive’ change of state

predicate contrary to what is indicated above. If on the other hand, *demet* and *grup* belonged to the category of 'noun', although the transitive properties of the output predicate can be accounted for by positing a preposition, the interpretation of the stems as 'states' would be inexplicable.

The unpredictability of Hale and Keyser's analysis for Turkish lies in the fact that the adjective-noun distinction is not a categorial distinction that holds for nominal expressions in Turkish. Therefore, it is not possible to derive the properties of the output predicates directly from the category of the stem.

The possibility of deriving verbs with the same argument and event structure properties from both 'adjectives' and 'nouns' in Turkish indicates that these expressions also cannot be distinguished in terms of their argument structure properties. For the categorization approach suggested by Vinokurova (2005) (see section 1.2.3.4) where non-predicative concepts are categorized as nouns and predicative concepts with one argument are categorized as adjectives, this would mean that there is in fact no difference between the thematic properties associated with the concepts encoded by 'adjectives' and those associated with the concepts encoded by 'nouns' in Turkish.

4.5 Conclusion

This chapter primarily has dealt with the category 'verb'. I argued that in the lexicon there is no category label 'verb' and the notion 'verb' is in fact derivative in nature. I showed that lexical expressions traditionally categorized as verbs are formed of root expressions and functional predicate heads such as DO, BECOME, CAUSE and

GET which derive the argument and event structures associated with different types of expressions. I argued that there is no stative predicate such as BE or HAVE which merge with root expressions and derive stative predicates. I claimed that the truly stative predicates are nominal expressions in Turkish. In the final section I discussed the implications of Hale and Keyser's (2002) analysis of verb formation for Turkish and claimed that due to lack of a categorial distinction between 'adjectives' and 'nouns' in Turkish, verb formation from nominal stems do not yield the same type of predictable results that Hale and Keyser argue to be available for denominal and deadjectival verb formation in English.

In the following chapter I will discuss the implications of the claims and proposals I have made so far for the nature of expressions listed in the lexicon and the type of information encoded with them.

CHAPTER 5

MODELING THE LEXICON

In contemporary theories of grammar, the lexicon represents the component responsible for providing the expressions which are used in syntactic composition. While it is commonly agreed that language includes a component which comprises a list of elements for syntactic composition, different claims have been made concerning the nature of the listed expressions, the type of grammatical information encoded with these expressions, and the computational mechanisms available in the lexicon. In the previous chapters I have made some specific claims concerning the encoding of one type of information, that is, lexical category specification. This chapter aims to discuss the implications of these claims for the nature of the lexicon, the type of information encoded with lexical expressions and the relationship between lexicon and syntax.

In section 1 it is proposed that a single feature with binary values is adequate to represent the categorial distinctions among lexical expressions in Turkish. I argue that neither Chomsky's (1970, 1981) nor Jackendoff's (1977) two feature systems (e.g. V, N) with binary values (e.g. $\pm$) which derive four distinct lexical categories nor Baker's (2003) two-featured system that derives three categories can adequately account for the lexical category distinctions in Turkish. Instead, I demonstrate that $\pm N$ feature specification, in addition to accounting for the lack of a lexically specified adjective-noun distinction in Turkish, allows expressions with no category specification and accounts for the lack of distinct lexical classes as 'postposition' and

‘adverb’. Section 2 discusses the categorial specification of the bound expressions, that is, bound stems and affixes. Section 3, discusses the nature of the representations I proposed in the previous chapter to illustrate the compositional nature of the expressions traditionally classified as verbs. Following the earlier proposals of Hale and Keyser (1993), Lin (2001) and more recently Ramchand (2008), I discuss whether it is necessary to posit a distinct level of syntactic representation, *l-syntax*, in the lexicon for the formation of verbs or whether verb formation can be accounted for in syntax. Section 4 proposes a model of grammar and lexicon where the lexicon does not have any computational powers but encodes grammatical information in the form of category labels and selectional features. Section 5 comments on the possible sources of the observed cross-linguistic variation in languages.

5.1 The Nature of the Feature Specification

In the previous chapter I proposed that the major distinction between nominal expressions and the expressions called verbs is that nominal expressions are basically stative expressions while verbal expressions are composed of dynamic predicates such as CAUSE, DO, BECOME and GET. Thus, nominals and verbs differ from each other on a single dimension which is stativity. Here I will propose that this distinction can be directly represented by a single feature *N* with binary values: +*N* for the expressions traditionally classified as nominals and –*N* for those traditionally classified as verbs. In the following sections I will argue that this feature specification is adequate to account for the lexical category distinctions in Turkish.

5.1.1 Two Features, Four Categories

The earlier generative approaches in general have represented the category distinctions in terms of two features with binary values. In section 1.2.3.1 two examples of such feature systems were mentioned. The feature system used by Chomsky (1970, 1981) makes use of the features $\pm N$ and $\pm V$ and the one proposed by Jackendoff (1977) uses the features $\pm \text{Subject}$ and $\pm \text{Object}$:

	Chomsky (1970, 1981)	Jackendoff (1977)
(1) a. Noun	+N -V	+subj -object
b. Verb	-N +V	+subj +object
c. Adjective	+N +V	-subj -object
d. Pre/Postposition	-N -V	-subj +object

As it is clear from the above representations, a two-featured system with binary values allows the identification of four distinct classes: verbs, nouns, adjectives and prepositions. However, the identification of four distinct lexical classes seems to be unnecessary for Turkish since there is no lexically specified distinction between nouns and adjectives as it has been claimed in this study. This leaves us with the postpositions, the categorial status of which is to be clarified in the following sections. Before discussing postpositions let us have a look at Baker's (2003) feature system which distinguishes three lexical categories with two features.

5.1.2 Two Features, Three Categories: Baker (2003)

Baker's analysis of lexical categories involves a feature system which derives three categories from two features. Verbs are identified with feature of having a specifier, nouns are identified with the feature of having a referential index and adjectives are identified as having none of these features. For Baker, prepositions are members of the functional categories and thus, the following feature specification does not identify prepositions as a distinct category.

(2)	Noun	+N (= has a referential index)
	Verb	+V (= has a specifier)
	Adjective	-N -V

In chapter 3, I have argued against positing referential indices as inherent lexical features of expressions based on the lack of noun-adjective distinction. Thus, +N does not correspond to having a referential index in my feature system.

Moreover, Baker's feature system is a privative feature system where not having a feature does not correspond to being underspecified for that feature but it simply indicates the lack of that feature. In fact, unspecification or underspecification for the above features is not allowed in Baker's approach. However, as I will argue below, there are expressions which do not bear any category specification and a single feature with binary values in fact identifies three distinct groups of expressions: those that are specified as +N, those that are specified as -N and those which are unspecified for the value of N.

5.1.3. One Feature Three Classes of Lexical Expressions

In chapter 3 I argued that there is no lexically specified distinction between nouns and adjectives and that they are members of a single category traditionally identified as nominals. In section 5.1.1 I proposed that the group of expressions which are traditionally classified as nominals are specified for the positive value of N, that is, they are +N expressions while the expressions traditionally classified as verbs are specified for the negative value of N, that is, they bear the category specification –N. In this section I will show that postpositions do not form a distinct lexical category and they are either lexical expressions specified as +N or members of functional categories. Similarly, I will demonstrate that adverbs also bear a categorial specification as +N.

5.1.3.1 The Category Specification of Postpositions

In Turkish the classification of expressions as postpositions has been a controversial issue and it is in fact difficult to find a common view on which expressions should be classified as postpositions. Some expressions which have been classified as postpositions are in fact nominal expressions as it has been indicated by several researchers (Banguoğlu 1974; Kornfilt 1997; Kutluk 2003; Göksel and Kerslake 2005, among others). These expressions are location, direction denoting relational expressions which express notions similar to those expressed by prepositions in English. However, their morphosyntactic behavior corresponds to nominal expressions. Some examples are given below:

- (3) a. masa-nın alt-ın-da
 table-gen under-3sg-loc
 Lit. 'at the table's under'
 'under the table'
- b. dolab-ın iç-in-de
 closet-gen inside-3sg-loc
 Lit. 'at the closet's inside'
 'in the closet/inside the closet'
- c. perde-nin arka-sın-a
 curtain-gen back-3sg-dat
 Lit. 'at the back of the curtain'
 'behind the curtain'

As the above examples indicate, the expressions *alt*, *iç*, *arka* are no different than nominal expressions: they occur in possessive constructions, take genitive marked objects and the phrases they head are NPs which take case markers. In addition to that, these expressions can occur alone and serve as an argument expression or as a modifier just like nominals.

- (4) a. Arka-yı gör-e-m-iyor-um.
 back-acc see-mod-neg-prog-1sg
 'I can't see the back.'

b. arka masa

back table

‘(a) table located at the back’

Moreover, they can be inputs to derivational affixation processes just like regular nominals do:

(5) a. arka-daş

back-der

‘friend’

b. iç-lik

inside-der

‘something worn inside’

Thus, there is no reason for treating these expressions as anything other than nominals, that is, +N expressions. The expressions which are in fact the possible members of a ‘postposition’ category behave differently than the above group of expressions. The phrases they head are not possessive phrases:

(6) a. Ali gibi

Ali as / like

‘as / like Ali’

b. Ali-ye göre

Ali-dat according to / for

‘according to / for Ali’

c. Ali kadar

Ali as much as

‘as much as Ali’

There are several reasons to consider these expressions as functional expressions.

Firstly, the meaning of these expressions is difficult to define unlike the members of lexical classes which have specific content. Secondly, these expressions are limited in number and form a closed class of expressions in Turkish, as the members of functional categories do in languages. Thirdly, unlike the first group of expressions it is not possible for these expressions to occur without their objects:

(7) a. Ali gibi bir adam.

Ali like a man

‘a man like Ali’

b. *gibi adam

Fourthly, these expressions cannot be inputs to word derivation as illustrated by the following examples:

- (8) a. güzel-lik
beautiful-der
'beauty'
- b. *gibi-lik / *kadar-lık / *göre-lik

- (9) a. tuz-lu
salt-der
'salty'
- b. *gibi-li / *kadar-lı / *göre-li

- (10) a. güzel-leş
beautiful-der
'become beautiful'
- b. *kadar-laş / *gibi-leş / *göre-leş

The closed-class membership of these expressions, their inability to occur by themselves and their inability to participate in word formation processes indicate that they are members of a functional category rather than a lexical one.

5.1.3.2 The Category Specification of Adverbs

Cross-linguistic studies clearly indicate that a language which does not have adjectives as a distinct lexical category also does not have adverbs as a distinct lexical class (Hengeveld 1992). Therefore, the claim that adjectives in Turkish do not form a distinct lexical category implies that expressions which may be classified as adverbs also belong to the class of +N expressions with nouns and adjectives in Turkish. This is in fact the approach taken by the traditional and descriptive grammars of Turkish and adverbs, along with adjectives, are considered to belong to the class of nominals (e.g. Grönbech 1936; Deny 1941; Ergin 1972; Korkmaz 2003; Göksel and Kerslake 2005).¹

The following examples show that +N expressions *iyi* 'beautiful' and *dün* 'yesterday' can be 'adjectivized', 'nounized' or 'adverbialized' according to the syntactic configuration they appear in:

- (11) a. Ali iyi bir adam.

Ali good a man

'Ali is a good man.'

- b. İyi-ler kazan-dı.

good-pl win-past

'The good (ones) won.'

¹ Tremblay and Yüксеk (2000) point out that the category adverb does not exist as a distinct category in Turkish but it is not reducible to another category either. They claim that the adverbial use of categories follow from general principles. However, they do not clarify the exact nature of these principles.

c. Ali iyi konuş-uyor.

Ali good talk-prog

'Ali speaks well'

(12) a. Dün akşam uyu-ma-dı-m.

yesterday night sleep-neg-past-1sg

'I didn't sleep yesterday night.'

b. Ben dün-ü unut-ma-dı-m.

I yesterday-acc forget-neg-past-1sg

'I didn't forget yesterday.'

c. Dün ne ol-du?

yesterday what happen-past

'What happened yesterday?'

Examples in (11) and (12) show that +N expressions which can be 'adjectivized' or 'nounized' can also be 'adverbialized' when embedded as predicate or clausal modifiers. This type of flexibility indicates that, rather than a distinct lexical category 'adverb', what we have are +N expressions which can be 'adverbialized' in syntax.²

² The expressions which have been classified as adverbs in the literature include a variety of expressions ranging from adjective and adverb modifiers to verb and clause modifiers. An identification of all these syntactic configurations and a detailed classification of the expressions that are allowed in these contexts is beyond the scope of this study.

So far, I have demonstrated that neither postpositions nor adverbs form a distinct lexical class in Turkish. Thus, we have two groups of lexical expressions to be distinguished: +N expressions which correspond to the traditional nominals and –N expressions which correspond to the traditional verbs. In the following I will argue that there is yet another group of expressions: expressions which are neither specified as –N nor specified as +N.

5.1.3.3 Expressions Unspecified for a Value of N

As it was previously mentioned in sections 1.3.4.1 and 2.2.1.2, a group of expressions in Turkish demonstrate morphosyntactic behavior both similar to +N expressions (e.g. traditionally ‘nominals’) and –N expressions (e.g. traditionally ‘verbs’). That is, they are not only compatible with inflectional and derivational affixes which are distinctive for +N expressions but also can occur with those which are distinctive for –N expressions.

- (13) a. Ben *ekşi* elma sev-er-im.

I sour apple like-aor

‘I like sour apples.’

- b. Ben *ekşi* ye-me-m.

I sour eat-neg-1sg

‘I don’t eat sour (things).’

c. Süt *ekşi*-(y)ecek.

milk sour-fut

'The milk will get sour.'

(14) a. Kol-um-da *ağrı* var.

arm-1sg.poss-loc pain cop

'There is a pain on my arm.'

b. Baş-ım *ağrı*-yor.

head-1sg ache-prog

'My head aches.'

In traditional terms the expression *ekşi* occurs as an adjective in (13a), as a noun in (13b) and as a verb (13c). Similarly, the expression *ağrı* is a noun in (14a) and a verb in (14b).

Keeping in mind that the categorial specification available is either +N or –N, one possibility to account for such cases is to assume that there are two entries for expressions such as *ekşi* and *ağrı*: one specified as +N and the other as –N (e.g. *ekşi*_{+N}, *ekşi*_{–N}). Such an account yields an unsatisfactory result because it would fail to capture the meaning correspondence between the two forms and would give rise to a redundant increase in the number of lexical items.

The traditional lexicalist approaches have generally dealt with such cases either in terms of a zero-affixation process or by conversion (e.g. Marchand 1969; Williams 1981; Lieber 1981, 2005; Kiparsky 1982; Don 2004). Both processes

require one of the categorially specified forms to be the basic one as the input for the zero-affixation process as in (15) or for the conversion process in (16):

$$(15) \quad a. [\text{ek}\dot{\text{s}}\text{i}_{+N}] + \emptyset\text{-affix} \rightarrow \text{ek}\dot{\text{s}}\text{i}_{-N}$$

or

$$b. [\text{ek}\dot{\text{s}}\text{i}_{-N}] + \emptyset\text{-affix} \rightarrow \text{ek}\dot{\text{s}}\text{i}_{+N}$$

$$(16) \quad a. \text{ek}\dot{\text{s}}\text{i}_{+N} \rightarrow \text{ek}\dot{\text{s}}\text{i}_{-N}$$

or

$$b. \text{ek}\dot{\text{s}}\text{i}_{-N} \rightarrow \text{ek}\dot{\text{s}}\text{i}_{+N}$$

The problem with zero-affixation and conversion is that there is no motivation for selecting the derivational route in (a) instead of the one in (b) or vice versa. In other words, there is no way of determining the direction of the derivation for these forms.³

I suggest that there is no reason to postulate a zero-affixation rule or to posit a rule of conversion mapping one form to the other. All such category alternations as in (13) and (14) can be syntactically determined by inserting the category-neutral expression into a syntactically or morphologically deterministic structure. In other words, an expression like *ekşi* in example (13) is ‘adjectivized’ in an attributive

³ Don (2004) indicates that in Dutch, for those cases which is argued to involve zero affixation, it is possible to determine the direction of derivation from whether the conjugation class involved is regular or irregular, from the type of nominal gender and from phonological constraints on syllabification and consonant clusters. However, Turkish does not seem to provide these types of tools to determine the direction of such a derivational process although from a historical point of view the nominal forms of some of these expressions have been argued to be derived from the verb forms by the suffix *-İg* in Old Turkic which disappeared in time ($\text{ek}\dot{\text{s}}\text{i}_V \rightarrow \text{ek}\dot{\text{s}}\text{i}_{gN} \rightarrow \text{ek}\dot{\text{s}}\text{i}_{\emptyset N}$) (Korkmaz 2003). Since at the present state of the language there is no way to determine the direction of the derivation, such forms should be considered to be categorially ambiguous forms.

modification structure, ‘nounized’ when it is assigned case and ‘verbalized’ when it combines with an aspect/tense marker.

Thus, the single featured system with binary values identifies three classes of expressions: those which are specified as +N, those which are specified as –N and those which are not specified for these features. In the following section, I will demonstrate that in Turkish, bound roots and suffixes are also classified by the same type of category specifications.

5.2 Category Specification of Bound Expressions

5.2.1 Category Specification of Bound Roots

Bound roots in Turkish also fall into three groups with respect to their category specification: +N bound roots, –N bound roots, and bound roots with no category specification.

A group of bound roots occur with morphology that is only compatible with +N expressions. The examples in (17) illustrate some derivational suffixes which are compatible with +N roots which are free and the examples in (18) demonstrate the same suffixes with bound roots:

- (17) a. neşe_{+N} -li
joy-der
‘joyful’

b. neşe_{+N} -siz

joy-der

‘joyless’

c. kap_{+N} -la

cover-der

‘(to) cover’

d. kitap_{+N} -çı

book-der

‘book seller/book store’

(18) a. mut-lu

br-der

‘happy’

b. mut-suz

br-der

‘unhappy’

c. bek-le

br-der

‘wait for / watch for’

d. bek-çi

br-der

‘watch man’

In (17a, b), forms *neşeli* and *neşesiz* are derived with the +N compatible suffixes *-lı* and *-siz* respectively. The form *neşe* is a base capable of functioning as an independent word. Similarly, examples (17c) and (17d) illustrate the +N compatible suffixes *-lı* and *-ci* with bases which can function as independent words. In (18) the same suffixes are attached to the bases *mut* and *bek* which are bound forms. However, the compatibility of *mut* and *bek* with +N attaching suffixes indicate that they are +N expressions.

A group of bound roots occur with affixes that can attach only to –N expressions. The examples in (19) illustrate some derivational suffixes which are only compatible with –N expressions as attached to free roots and those in (20) show the same suffixes attached to bound roots:

(19) a. dön_N-üş

(to)turn-der

‘transform’

b. ört_N-ün

(to) cover-der

‘cover oneself’

(20) a. *değ-iş*

br-der

‘change’

b. *av-un*

br-der

‘have one’s mind taken off stg.’

In (19), the suffixes occur with -N expressions *dön* and *ört* which can be used as independent words. In (20) they are attached to the bound forms *değ* and *av* indicating that these are -N expressions as well.

There are also bound roots which occur not only with suffixes that are compatible with -N expressions but also with those that are compatible with +N expressions. The example below illustrates such a bound root which is compatible with both +N selecting and -N selecting suffixes.

(21) a. *sak-lı*

br-der

‘hidden’

b. *sak-la*

br-der

‘hide’

c. *sak-in*

br-der

'keep away / protect (someone / oneself)'

The base *sak-* is a form which cannot function as an independent word. In (21a) and (21b) it occurs with the suffixes *-II* and *-IA* which have been shown to be compatible only with +N expressions (e.g. 17a and 18c). On the other hand, in (21c) it occurs with the suffix *-In* which is compatible with –N expressions (e.g. 19b). Therefore, *sak-* represents a form which is devoid of any category specification as the forms discussed in section 5.1.3.3.

The restrictions that bound roots demonstrate regarding the morphological environment they occur in indicate that bound roots fall into distinct lexical classes which are associated with the same type of category specification as free roots. As free roots can be specified for +N, –N or bear no category specification, bound roots can also be specified for +N, –N or have no category specification at all.

In the following section, I will demonstrate that suffixes also bear the same categorial specification as root expressions.

5.2.2 Category Specification for Suffixes

That affixes represent heads which are associated with a category specification has been a common view shared both by several lexicalist approaches (e.g. Lieber 1980, Selkrik 1982, Di Sciullo and Williams 1987) and by syntactic approaches to categorization (e.g. Marantz 2001, Borer 2005) where affixes are treated as the spell-

out of functional heads which have their own category specification. Following these approaches, I will assume that derivational suffixes in Turkish are associated with a category specification and demonstrate that this category specification is also realized in terms of the $\pm N$ feature.

Derivational suffixes which bear a category specification as +N are those suffixes which derive expressions with +N category specification. For instance, the suffix in example (22) is a +N suffix which yields a +N expressions when it combines with a +N or a categoriless expression.

- (22) a. [[güzel]_{+N}]-lik_{+N} → güzellik_{+N}
 beautiful-der ‘beauty’
- b. [[ekşi]_Ø]-lik_{+N} → ekşilik_{+N}
 sour-der ‘sourness’

The following suffix in (23) is also a +N suffix which yields +N expressions but it can attach to both –N and categoriless expressions.⁴

- (23) a. [[aç]_{-N}]-ık_{+N} → açık_{+N}
 (to) open-der ‘open’
- b. [[don]_Ø]-uk_{+N} → donuk_{+N}
 (to) freeze / frost-der ‘frozen’

⁴ See section 4.3.4 for a discussion of the suffix –ık.

There are also affixes which belong to the category –N and, thus, derive –N expressions:

- (24) a. [[güzel_{+N}]_{leş}_{-N}] → güzelleş_{-N}
 beautiful-der ‘become beautiful’
- b. [[ekşi_Ø]_{leş}_{-N}] → ekşileş_{-N}
 sour-der ‘to become sour’

The example above shows that when –*leş* combines with a +N expression or a categoriless expression it yields an expression with a category specification as –N. In other words, –*leş* represents a head with a categorial specification as –N.

Suffixes not only bear a category specification but they also have selectional restrictions which are stated also in terms of category specification. In Turkish grammars derivational suffixes are divided into four major groups regarding the categorial properties of the stems they attach to and the forms they derive (e.g. Korkmaz 2003; Adalı 2004):

- (25) a. Affixes which select nominals and derive nominals
 b. Affixes which select nominals and derive verbs
 c. Affixes which select verbs and derive nominals
 d. Affixes which select verbs and derive verbs

Since the claim is that there are no expressions specified as ‘verb’ in the lexicon and that +N and –N are the only lexical category specifications for which affixes are specified as well the above classification can be restated as follows:

- (26)
- a. +N affixes which select +N expressions
 - b. –N affixes which select +N expressions
 - c. +N affixes which select –N expressions
 - d. –N affixes which select –N expressions

An apparent problem with defining the selectional restrictions associated with affixes as stated above is that it excludes those expressions, which, in section (5.1.3.3) have been argued to bear no category specification, from being possible inputs to affixation processes. More specifically, since these expressions do not bear a category specification at all, with the above stated selectional restrictions it seems that they can neither be inputs to +N selecting affixation nor –N selecting affixation. However, as the examples below indicate these forms are compatible with both +N selecting affixes and –N selecting affixes:

- (27)
- a. güzel_{+N} –lik
beautiful-der
‘beauty’
 - b. ekşi_Ø –lik
sour-der
‘sourness’

(28) a. aç-N -ık

(to) open-der

'open'

b. don_Ø -uk

(to) freeze / frost-der

'frozen'

An affix which is compatible with a +N expression as in (27a) is also compatible with an expression without category specification as in (27b). Similarly, an affix which selects -N expressions as in (28a) may be compatible with an expression with no category specification as in (28b).

The compatibility of categoriless expressions with suffixes that select for a specific category indicates that the selectional restrictions associated with suffixes should be defined in terms of 'incompatibility' conditions rather than 'compatibility' conditions. That is, a suffix which apparently selects for +N expressions is, in fact, a suffix that does *not* select (or is incompatible with) -N expressions. On the other hand, a suffix which apparently selects for -N expressions is a suffix which does *not* select (or is incompatible with) +N expressions. Thus, while a suffix which is specified as being incompatible with -N expressions would be able to combine with both +N expressions and with expressions which bear no category specification, a suffix which is specified as being incompatible with +N expressions would be able to combine with both -N expressions as well as with expressions which bear no

category specification. According to this, the revised form of the classification in (27) is as the following:

- (29)
- a. +N affixes which are incompatible with –N expressions
 - b. –N affixes which are incompatible with –N expressions
 - c. +N affixes which are incompatible with +N expressions
 - d. –N affixes which are incompatible with +N expressions

According to what I have discussed so far, the lexicon consists of the following items: +N or –N specified free roots, +N or –N bound roots, +N or –N suffixes, categoriless free roots and categoriless bound roots. The following chart illustrates examples from each group:

	+N	–N	UNSPECIFIED FOR N
FREE FORMS	<i>iyi</i> ‘good’ <i>çocuk</i> ‘child’ <i>arka</i> ‘back’	<i>bat</i> ‘sink’ <i>koş</i> ‘run’ <i>oku</i> ‘read’, <i>hit</i> ‘vur’	<i>ekşi</i> ‘sour’ <i>boya</i> ‘paint’ <i>acı</i> ‘pain’
BOUND FORMS			
A) STEMS	<i>mut-</i> (<i>mutlu</i> ‘happy’)	<i>değ-</i> (<i>değiş</i> ‘change’)	<i>sak-</i> (<i>saklı</i> ‘hidden’)
B) AFFIXES			
Incompatible with –N	<i>-lik</i> (<i>güzellik</i> ‘beauty’)	<i>-laş</i> (<i>güzelleş</i> ‘become beautiful’)	----- ⁵
Incompatible with +N	<i>-ik</i> (<i>açık</i> ‘open’)	<i>-AlA</i> (<i>durala</i> ‘stop’)	

⁵ The classification presented for suffixes in (29) accounts for the lack of suffixes in the this column.

After having discussed the nature of the expressions listed in the lexicon and the categorial information associated with them, I will address another issue in the following section. It concerns the nature of the representations I proposed for the composition of verbal expressions and the encoding of another type of grammatical information in the lexicon, that is, the argument structure and the event structure associated with these expressions.

5.3 L-syntax vs. S-syntax

In the previous chapter, I proposed a compositional account for the expressions traditionally classified as verbs. I claimed that they are composed of the predicate heads such as CAUSE, BECOME, DO and GET. Several questions arise as to whether this mode of composition is determined in syntax or whether it is determined prior to syntax and if it is indeed determined prior to syntax what exactly the nature of this pre-specification is.

A strictly lexicalist approach would consider these compositional representations to be determined by some lexical conceptual representations associated with items in the lexicon. This is, for instance, the approach that underlies the representations proposed by Levin and Rappaport (1995). The representation they propose for the verb *break* is given below:

(30) break [[x DO-SOMETHING] CAUSE [y BECOME *BROKEN*]]

(Levin and Rappaport 1995: 81)

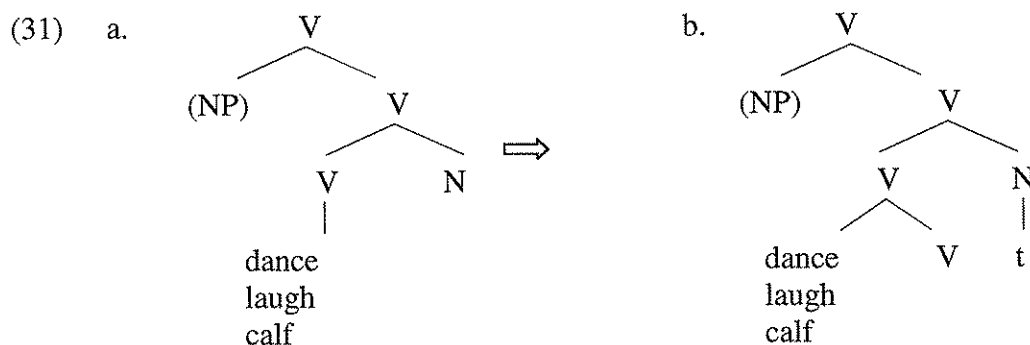
In such an approach any variation associated with the verb 'break' such as its inchoative use would be determined by some lexical operations on the representation in (30).

On the other hand, for an approach as that of DM or Borer (2005), where the lexicon is devoid of any computational power and where lexical items are not allowed to encode grammatical information, the compositional representations would be determined in syntax.

There is a midway between these two extremist approaches. The model of grammar proposed by Hale and Keyser (1993) and Lin (2001) posits an l-syntactic level of representation that is distinct from s-syntax but which operates on the same principles that govern syntactic modes of combination. In the following sections I will present an overview of the notion of 'l-syntax' as argued in Hale and Keyser (1993). Then within the framework of Lin's proposals (2001) I will discuss whether Turkish data provides evidence for this level of representation. Finally, I will discuss the notion of 'first phase syntax' in Ramchand (2008).

5.3.1 Hale and Keyser (1993)

In Hale and Keyser (1993) l-syntax is introduced as a level of representation in the lexicon to account for the formation of denominal and deadjectival verbs in English. The following illustrates the derivation of the denominal verbs such as *sneeze*, *laugh*, *dance*, *calf*:



In all relevant cases, some lower head, an N or A, undergoes head movement and incorporates to higher Vs by a process called conflation as illustrated in (31b). Note that the structure in (31a) is similar to the ones given below:

- (32) a. (NP) do a jig.
b. (NP) have puppies.

However, as shown in (31b) the incorporation of the nominal N head to the abstract V yields an individual verb (e.g. *laugh*). Since the derivation of the verb takes place in the lexicon, 'l-syntax' means 'syntax in the lexicon' (Hale and Keyser 1993:105). Although l-syntax is a level of representation which is distinct from s-syntax, it is subject to the same principles as s-syntax such as the Empty Category Principle (ECP). Hale and Keyser show that the derivation of denominals in English observes grammatical principles, such as the ECP. In English, for example, conflation doesn't derive verbs which would yield sentences like:

- (33) *It *cowed* a calf.
Int. 'A cow had a calf. / A cow calved.'

To derive (33) a syntactic movement which involves lowering of the NP in the specifier position of V in (31a) is required. Since such a movement is in violation of the ECP, there would be no verbs such as the one illustrated in (33).

Although Hale and Keyser's analysis involves a decompositional approach to verbs as in the Generative Semantics framework, the positing of the l-syntactic level makes this analysis free from criticisms such as Fodor's (1970), who argues that verbs such as *kill* cannot be derived from underlying expressions like *cause to die*:

(34) a. John caused the man to die on Sunday by shooting him on Saturday

b. *John killed the man on Sunday by shooting him on Saturday

(34a) allows an interpretation where the causing event and the dying event occurs in different times while (34b) does not. According to Fodor this is not expected if *kill* had the same underlying representation as *cause to die*. However, Hale and Keyser present the following explanation (1991: 12):

The arguments do not carry over to the proposal we are entertaining here, however, since the verbs derived by incorporation in the lexicon are themselves input to d-structure. Thus, for example, the verbs *shelve* and *saddle*, and the like, are lexical items in the true sense, and as such, each necessarily involves a single 'event position' (cf. Higginbotham, 1985) in its predicate argument structure.

Although Hale and Keyser, in their following work (2002), eliminate this distinct level of l-syntax in the lexicon and shift the application of conflation to s-syntax, Lin (2001) argues that the distinction between l-syntax and s-syntax is essential in accounting for the differences among languages concerning verb formation.

5.3.2 Lin (2001)

In Lin's analysis of verb formation verbs are decomposed into argument introducing light verbs such as CAUSE, DO, BECOME. The most crucial aspect of Lin's study is the proposal that languages may differ with respect to the level of structure (L-syntax vs. S-syntax) where these light verbs are introduced and where the whole verb construction is lexicalized.

Lin claims that the possibility of having a wide range of thematic role interpretations for the subject and object arguments is an indication of the absence of a lexicalization and thus an indication of these arguments' being introduced in s-syntax. On the other hand, the rigidity that is displayed in thematic role interpretations for the subject and object argument is an indication of a lexicalization and thus an indication of their being introduced in l-syntax. For instance, Lin provides the following examples and argues that the verb *fang* 'put' in Chinese and the verb *oku* 'put' in Japanese are both allowed to occur without the causer argument while this is not possible for the verb 'put' in English:

(35) Mandarin Chinese

a. Laozhang fang-le yi-ben shu zai zhuo-shang.

Laozhang put-pf one-cl at table-on

'Laozhang put a book on the table.'

b. Na-ben shu fang zai zhuo-shang.

that book put on table-on

'That book put on the table.'

(adapted from Lin 2001:105, example 104)

(36) Japanese

a. Haruki-wa tukue no ue-ni issatu no hon-o oi-ta.

Haruki-top table mod on-dat one-cl mod book-acc put-past

'Haruki put a book on the table.'

b. Sono hon-ga tukue no ue-ni oi-te aru.

that book-nom table mod on-dat put-ger have

'That book put on the table.'

(adapted from Lin 2001:105, example 103)

(37) English

a. John put a book on the table.

b. *The book put on the table.

(adapted from Lin 2001:105, example 102)

Lin claims that the causer argument is a 'selected' argument for the verb *put* in English and thus it is introduced by the light verb CAUSE in the l-syntax. On the other hand, in Chinese and Japanese the causer is an 'unselected' argument for the relevant verbs and may be optionally introduced in s-syntax by the light verb CAUSE.

With respect to the internal argument, Mandarin Chinese again illustrates flexibility with respect to the thematic roles associated with the internal argument. The verb *fang* 'put' can occur either with an internal argument that is interpreted as a theme or with one that is interpreted as an instrument.

(38) Mandarin Chinese

a. Laozhang fang-le yi-ben shu zai zhuo-shang.

Laozhang put-pf one-cl at table-on

'Laozhang put a book on the table.'

b. Naxie shu fang-le san-ge xiangzi.

those book put-pf three-cl box

'Those books put three boxes.'

(= 'it takes three boxes to locate / arrange those books.')

(adapted from Lin 2001:108, example 109)

According to Lin the examples in (38) illustrate that in Mandarin Chinese the internal argument of the verb 'put', just like the external argument is unselected and thus may be introduced by different light verbs in s-syntax, by BECOME in (38a) and by USE in (38b). On the other hand, the examples in (39) and (40) respectively illustrate that both in Japanese and English the internal argument of the verb 'put' is a selected, lexically specified argument which can only be a theme and not an instrument and therefore introduced in l-syntax.

(39) Japanese

a. Haruki-wa tukue no ue-ni issatu no hon-o oi-ta.

Haruki-top table mod on-dat one-cl mod book-acc put-past

‘Haruki put a book on the table.’

b. *Sorera hon-wa san-ko no hako-o oi-ta

those books-top three-cl mod box-acc put-past

‘Those books put three boxes.’

(adapted from Lin 2001:107, example 108)

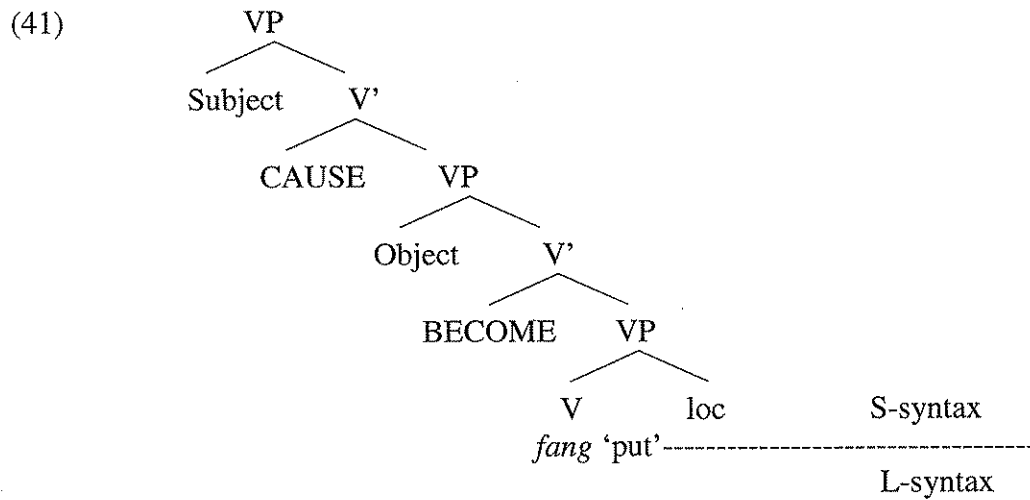
(40) English

a. John put a book on the table.

b. *These books put three boxes.

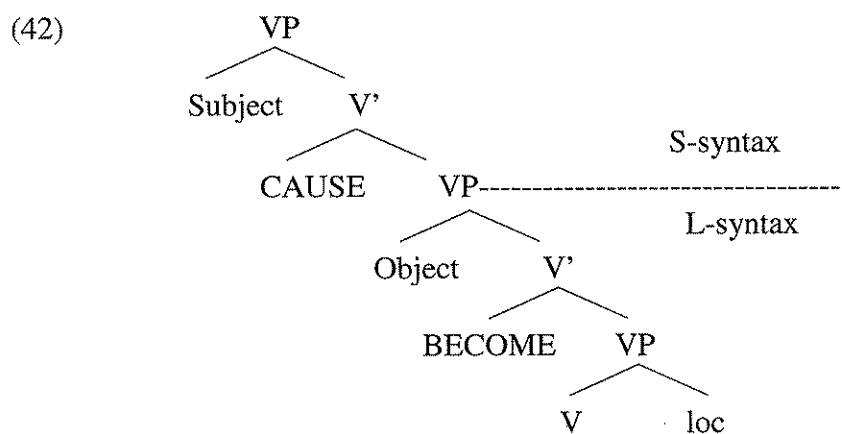
(adapted from Lin 2001:107, example 107)

Providing further examples illustrating the unselectiveness of subjects and objects in Mandarin Chinese, Lin concludes that the whole light verb structure is built in s-syntax and thus all the arguments are licensed in s-syntax. The following representation in (41) illustrates the light verb structure associated with the transitive usage of the verb *fang* ‘put’ in Mandarin Chinese:



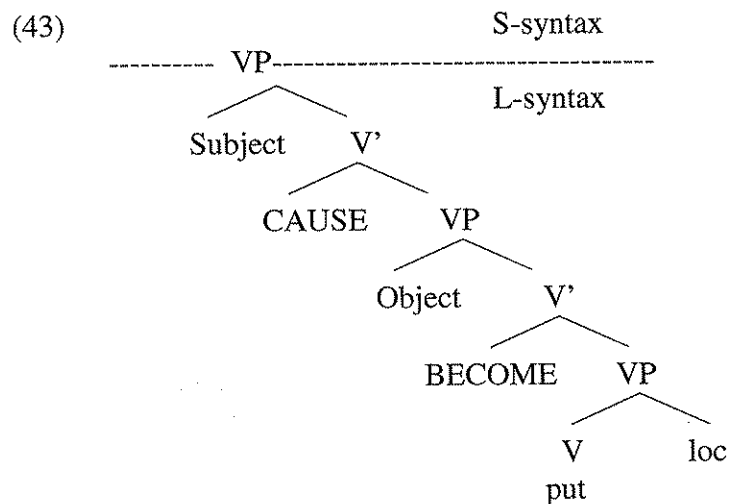
(adapted from Lin 2001:113, example 117)

On the other hand, Lin claims that in Japanese lexicalization applies at a lower point of the light verb structure, excluding only the subject selecting light verb. In other words, the subject argument is licensed in s-syntax while the other arguments are licensed in l-syntax. The following representation illustrates the light verb structure associated with the verb *oku* 'put' in Japanese:



(adapted from Lin 2001:112, example 116)

According to Lin, lexicalization applies at the highest point of the light verb structure in English; hence, all the arguments in a sentence are licensed in l-syntax as the following illustrates:



(adapted from Lin 2001:111, example 115)

Now let us see whether the data in Turkish supports a distinction between l-syntax and s-syntax in terms of the introduction of subject and object arguments.

5.3.2.1 (Un)selectiveness of Subjects in Turkish

A piece of evidence illustrating the unselectiveness of subjects in Turkish is illustrated by the behavior of verbs which seem to allow both an agentive interpretation and a theme interpretation for the subject:

(44) a. Ali kardeşini korkut-mak için düştü.

Ali brother/sister-3sg.poss-acc frighten-nom for fall-past

‘Ali fell (on purpose) to frighten his brother/sister.’

b. Ali birdenbire düş-tü.

Ali suddenly fall-past

‘Ali suddenly fell down.’

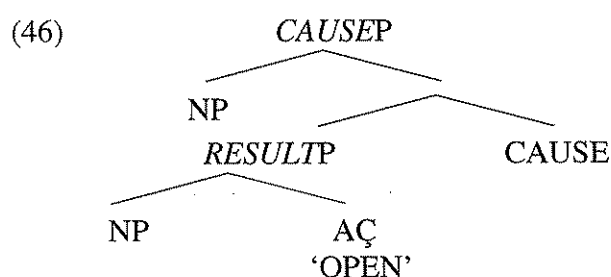
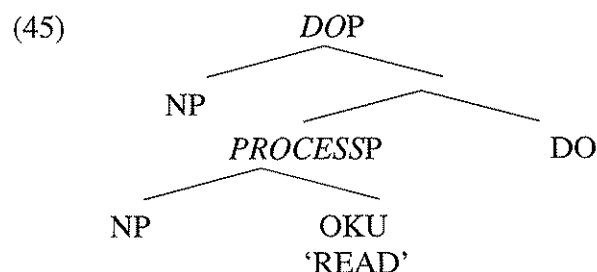
In example (44a) the subject is interpreted agentively while in (44b) it is interpreted as the affected argument. The possibility of having subjects with different thematic interpretations can be taken as evidence for the non-lexicalized status of the predicate introducing the subject argument for the expression *düş* ‘fall’.

Although the above example provides evidence for the unselectiveness of subjects, note that in the previous chapter I made a distinction between verbal expressions which decompose into the DO predicate (e.g. *koş* ‘run’, *oku* ‘read’) and those which decompose into the CAUSE predicate (e.g. *aç* ‘open’). This indicates that for some of these verbal expressions the predicate introducing the subject argument is the predicate DO and for some others it is the predicate CAUSE. In that sense some kind of a pre-syntactic specification seems to be necessary to distinguish these two groups of expressions. I will comment on the nature of this specification in section 5.3.3 after discussing the (un)selectiveness of objects in Turkish.

5.3.2.2 (Un)selectiveness of Objects in Turkish

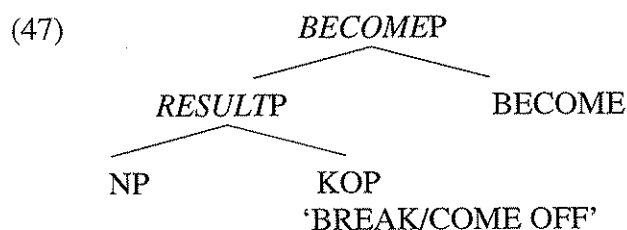
With respect to the introduction of theme objects, the representations I proposed in the previous chapter suggests that the theme objects are not arguments introduced by

a predicate but they are rather arguments associated with the root expressions themselves. The representations in (29) and (47) from the previous chapter are respectively repeated below:



In (45) the lower NP in the ProcessP and in (46) the lower NP in the ResultP are NPs which are interpreted as themes and which occur as surface objects. However, note that while predicates DO and CAUSE introduce the higher NPs in (45) and (46) respectively the introduction of the theme NPs does not involve such predicates.

Moreover, in the representations I proposed, the predicate BECOME, rather than a theme introducing predicate, represents an event head which indicates a change of state. The representation in (38) from the previous chapter is repeated below.



Since the predicate BECOME is replaced by the predicate CAUSE in the causative usage of the expression *kop* it cannot be argued to belong to a lexicalized level of representation in the lexicon, that is, I-syntax.

The introduction of theme NPs in the above representations also do not seem to occur in I-syntax because verbs may display a variable behavior in occurring with a theme object as illustrated by the following examples:

- (48) a. Ben zil-i duy-du-m.

I bell-acc hear-past-1sg

'I heard the bell.'

- b. Ali duy-uyor, sağır değil.

Ali hear-prog, deaf neg

'Ali hears, he is not deaf.'

- (49) a. Çocuk kitab-ı oku-du.

child book-acc read-past

'The child read the book.'

b. Çocuk oku-yor.

child read-prog

'The child can read.'

(50) a. Ali peynir-i ye-di.

Ali cheese-acc eat-past

'Ali ate the cheese.'

b. Ali çok hızlı yi-yor.

Ali very fast eat-prog

'Ali is eating very fast.'

(51) a. Ben o yol-u yürü-dü-m.

I that road-acc walk-past-1sg

'I walked that road.'

b. Ben yürü-dü-m.

I walk-past-1sg

'I walked.'

Through (48)-(51) examples in (a) illustrate the verbal expressions in intransitive constructions while those in (b) show their transitive counterparts with theme objects. Thus, the verbs in these constructions can optionally occur with or without

take an instrument (52b), a location (52c), or a reason expression (52d) as the surface object.

Turkish seems to differ from Mandarin Chinese in that respect because it does not seem to be possible to have instrument, locative or reason objects in the same way as Mandarin Chinese does:

- (53) a. *Ali sol el(i) yaz-dı.

Ali left hand-acc write-past

Int. 'Ali wrote with his left hand.'

- b. Ali sol eli-yle yaz-dı.

Ali left hand-instr write-past

'Ali wrote with his left hand.'

- (54) a. *Ali restoran-ı ye-di.

Ali restaurant eat-past

Int. 'Ali ate at the restaurant.'

- b. Ali restoran-da ye-di.

Ali restaurant-loc eat-past

'Ali ate at the restaurant.'

- (55) a. *Ali zevk-(i) yürü-dü.

Ali pleasure-(acc) walk-past

Int. 'Ali walked for pleasure.'

b. Ali zevk için yürü-dü.

Ali pleasure for walk-past

'Ali walked for pleasure.'

The example in (53a) illustrates an instrument object, (54a) a locative object and (55a) a reason object. All of the examples are ungrammatical. However, note that in (53b) an instrument oblique object is possible if it is marked with '-le' which represents a clitic form of the postposition *ile* 'with'. Similarly, an oblique object interpreted as location is allowed if it is marked with the locative case as in (54b) and a 'reason' object is allowed if it is the complement of the preposition *için* 'for' as shown in (55b).

What these examples probably suggest is that predicates USE, AT, FOR, which Lin argues to introduce instrument, location and reason objects respectively are phonologically realized in the form of postpositions or case markers in Turkish. In other words, the postpositions and case markers may themselves be the functional heads which introduce arguments and thus correspond to the instrument, location and reason introducing heads in Mandarin Chinese. If this is the case, then the introduction of the oblique objects above can be argued to occur in syntax rather than in the lexicon.

The above discussion indicates that it is not possible to consider the compositional representations proposed for the derivation of verbs to belong to an I-syntactic level of representation. In fact, neither the introduction of subjects nor

objects in Turkish provides evidence for a clear cut division between l-syntax in the lexicon and s-syntax.

In the following section, I will further argue that the compositional representations accounting for verb formation do not reside in the lexicon but they rather belong to a syntactic level of representation where event structure is built.

5.3.3 Building Event Structure in Syntax

In the previous chapter, providing evidence from the categorial status of borrowed expressions I argued that there are no expressions that are classified as verbs in the lexicon. Moreover, in the previous section I demonstrated that Turkish data does not support a clear-cut division between an l-syntactic level of representation in the lexicon and s-syntax for the introduction of the predicates DO, BECOME and CAUSE. All of these indicate that the formation of the expressions classified as verbs take place in syntax rather than in the lexicon. However, an important point to keep in mind is that although the expressions traditionally classified as verbs are complex expressions which are built in syntax, there is in fact a categorial specification in the lexicon which distinguishes +N expressions which are stative and -N expressions which are not stative. What I propose is that +N expressions as being stative are inherently associated with eventualities which are states. On the other hand, -N expressions are nonstative expressions which require the presence of eventuality predicates such as CAUSE, BECOME, DO to be associated with a specific type of event structure. This view of deriving verbs is supported by

Ramchand's (2008) recent claims concerning the representation of verbs which also involve a decompositional approach to verb meaning.

According to Ramchand (2008) the event structure and argument relations associated with the expressions classified as verbs are built from some primitives at a level of syntax which she calls as 'first phase syntax'.⁶ This level of representation refers to the event building phase of syntax which is prior to case marking/checking, agreement, tense and modification in general.⁷ Although Ramchand argues against the lexicon internal representation of the argument structure relations and event structures associated with verbs, she indicates that category information on the root expression is necessary to motivate the projection of relevant event structures.

What I will suggest is that, in addition to the +N and -N category specification, further category specification is necessary to make distinctions among -N expressions and thus constrain the event structures they are compatible with. In the previous chapter I made a distinction between -N expressions which denote resultant states (e.g. AÇ 'OPEN') and those which do not (e.g. KOŞ 'RUN'). I argued that the former group combines with the predicates CAUSE and BECOME deriving causative and inchoative verbs respectively while the latter group combines with DO deriving agentive verbs. Therefore, a categorial specification seems to be necessary to constrain the insertion of expressions denoting resultant states in a syntactic environment with DO or to constrain the insertion of expressions which *do not* denote resultant states into a syntactic environment with BECOME. This indicates

⁶ Ramchand (2008: 16, footnote 4) notes that 'first phase syntax' may not actually be a 'phase' in the sense of Chomsky (2001).

⁷ Contrary to Ramchand's (2008) view that the event building phase of syntax represents a level of representation prior to case marking, I propose that weak case is the default case licensed through thematic relations at this level of representation. See footnote 8 in chapter 4 for further details on this issue.

that the encoding of category information in the lexicon is also necessary to constrain the insertion of expressions into the event frames which they are incompatible with.

5.4 The Lexicon

Under the view of lexicon I have been proposing, the observed constraints in the occurrence of lexical items in morphological or syntactic frames is determined by the category labels they bear in the lexicon. On the other hand, the observed flexibility or categorial ambiguity is a result of being unspecified for these category labels. Thus, there is no place for lexicon internal processes such as conversion or zero-affixation which have the effect of changing the category specification associated with a lexical expression. When a lexical expression has the capacity to occur both in a context typically associated with the category 'noun' and in a context typically associated with the category 'adjective' it is not due to some category changing processes in the lexicon which derives an 'adjective' from a 'noun' or vice versa. The observed category ambiguity arises because the lexical expression bears no category label in the lexicon as 'adjective' or 'noun'. Similarly, when a lexical expression can occur both in a context typically associated with 'verbs' and in a context typically associated with 'nouns' or 'adjectives', this is because that expression bears no category specification that would constrain it to become a 'noun', 'adjective' or 'verb' in syntax.

A model of grammar where constraints on the insertion of lexical expressions are explained by the presence of category specification and where non-constrained insertion possibilities are explained by the absence of category specification renders

lexicon internal manipulations unnecessary and implies a non-computational lexicon. Thus, the lexicon simply consists of a list of entries where each entry bears phonological information, syntactic information (in the form of category labels and selectional features), and lexical encyclopedic information. As such, the lexicon interacts with representations from different modules such as phonology, syntax and semantics. In the meantime, the lexicon is non-computational, that is, there are no lexicon internal processes that derive expressions or manipulate structures.

5.5 The Sources of Language Variation

It is clear that one source of variation among languages concerns the category specification available to items prior to their insertion into syntactic frames. Thus, in Turkish while a majority of the vocabulary expressions bears a category specification as +N or -N, these expressions do not bear a category specification distinguishing them as adjectives or nouns in the traditional sense. In fact, the noun-adjective distinction represents a distinction in syntactic configuration rather than in lexical category specification.

On the other hand, in English many lexical items do not seem to be specified as to whether they are nouns or verbs or whether they are adjectives or verbs. For instance, an expression like *box* is categorially ambiguous between a verb and a noun and it is nominalized or verbalized in syntax depending on the morphosyntactic environment it occurs in. Similarly, the expression *clean* is ambiguous between a verb and an adjective and thus it is again the morphosyntactic environment which determines whether it will be verbalized or adjectivized. However, the categorial

indeterminacy concerning the noun-adjective distinction is not as common as it is in Turkish. Expressions like *clear, short, long*, are unambiguously adjectives in English and would not be compatible with an N node in syntax. Therefore, the noun-adjective specification represents a category distinction determined prior to syntax for many expressions in English.

With respect to languages like Mundari which have been argued to lack the word class distinctions noun, adjective and verb all together, expressions bear no category specification when they are inserted at syntactic nodes. They become 'nouns', 'adjectives' and 'verbs' depending on their morpho-syntactic environment they occur in.

In languages like Korean where property denoting expressions behave similar to stative verbs, it is probably the case that property denoting concepts merge with a predicate like BE at the conceptual level.

Another source of variation among languages concerns the type of eventuality predicates they have and their morpho-phonological realization. In the previous chapter I have argued that there is no predicate HAVE in Turkish similar to the verb *have* in English. It is probably the case that some predicates are more likely to be found cross-linguistically because they are unmarked semantically while some other are less likely to be found due to their markedness.

Languages also differ with respect to the morpho-phonological realization of the primitives that the expressions called verbs decompose into. Thus, in English CAUSE in the decomposition of verbs such as *sink* in 'sink the ship' is phonologically unrealized. On the other hand, in Turkish for a group of expressions it

is phonologically realized in the form of the suffix *-Ar* as in (56a) and yet for some others it is phonologically null as in (56b).

- (56) a. Çocuk ip-i kop-ar-dı.
child rope-acc break-CAUSE-past
'The child broke the rope.'
- b. Çocuk cam-ı kır-Ø-dı.
child window-acc break-CAUSE-past
'The child broke the window.'

There may also be cross-linguistic variation concerning the level of structure that predicates like BE, BECOME, CAUSE are introduced. Pylkkänen (2002) in fact presents an analysis for CAUSE in this regard. She argues that languages may differ as to whether CAUSE is root selecting, verb-selecting or phase-selecting. Thus, the same type of cross-linguistic variation may also be available for the predicates BE and BECOME as well.

5.6. Conclusion

In this chapter I mainly discussed the implications of my previous proposals concerning category specification available for lexical expressions. Firstly, I demonstrated that in Turkish a single category feature N with binary values yields two major lexical categories in the lexicon. I also argued that there are expressions

which are not specified for the value of N. I claimed that bound forms also bear the same types of category specification as free forms. Secondly, I argued that the decompositional representations proposed in the previous chapter for the expressions traditionally classified as verbs are not representations in the lexicon but rather belong to a level of representation in syntax. I proposed a model for the lexicon where syntactic information is encoded in the form of category features on lexical items but where lexicon does not have computational powers manipulating the category features encoded with these items. Finally, I commented on some aspects of language variation.

CHAPTER 6

CONCLUSION

6.1 Summary of the Claims

In this study I proposed an approach to categorization whereby lexical expressions can be specified for category distinctions either in the lexicon or in syntax. Drawing upon the Turkish data, I demonstrated that the establishment of these distinction belongs neither absolutely to the domain of the lexicon as it is suggested by the lexicalist approaches nor absolutely to the domain of syntax as it is claimed by the syntactic approaches to categorization.

In Chapter 2, I discussed the traditional nominal-verb distinction in Turkish and argued that this distinction represents a categorial specification which distinguishes a majority of the lexical expressions prior to syntax. I presented the basic aspects of the data illustrating the morphological and syntactic restrictions in the distribution of lexical expressions and showed that lexical expressions are divided into two distinct groups. Then I discussed the notion of syntactic categorization and categoriless roots as it is argued by Distributed morphology (Marantz 1997, 2000, 2001) and Borer (2003, 2005). I demonstrated that neither of these syntactic approaches to categorization can account for the restrictions displayed by lexical items regarding the morphological and syntactic environments they are allowed to occur in and argued that a categorial specification distinguishing the expressions traditionally classified as nominals and verbs is inevitably required prior to syntax.

In Chapter 3, I focused on the noun-adjective distinction and provided evidence for the syntactic nature of this distinction arguing that there is no lexical specification distinguishing nominal expressions as 'nouns' and 'adjectives' prior to syntax and the distinction is purely syntactic in nature. Discussing data from other languages I argued that Turkish cannot be a language where all nonverbal expressions are specified as nouns in the lexicon nor can it be a language where all of them are specified as adjectives. Then I showed that adjectives and nouns indeed belong to a single lexical class which contains flexible expressions with a capacity to become 'nouns' and 'adjectives' depending on the syntactic environment they occur in. I argued that the occurrence of quality denoting expressions in argument positions neither involves a null head nor a relative clause and that these are expressions which become nouns in syntax. I also demonstrated that expressions which are classified as nouns can be attributive modifiers and thus they are expressions which can be adjectivized in syntax. Then I gave an account of how nominal expressions become adjectives and nouns in syntax. I presented the problems associated both with the categorizing functional *n* and *a* heads in Distributed Morphology and with Borer's analysis of DegP as 'adjective' forming and DP as 'noun' forming functional heads. I proposed that in Turkish expressions classified as nominals become adjectives by simply occurring in attributive modification structures and become nouns by case assignment. I showed that the weak-strong distinction concerning case marking holds not only for nominative and accusative cases but for the genitive case as well.

In Chapter 4, I discussed the nature of the category 'verb'. Providing evidence from the category specification of borrowed expressions, I argued that there are no expressions bearing a category specification as 'verb' in the lexicon. Within the framework of the recent decompositional approaches to the category verb, I

demonstrated that verbs in Turkish are composed of functional heads such as DO, CAUSE, BECOME and a root expression which provides the core meaning component. I proposed that there are no stative 'verb' expressions which decompose into the stative predicates BE or HAVE in Turkish and stative interpretation is determined by the aspectual markers. I claimed that nominals and verbs are distinguished from each other on a single dimension which is stativity. In the last part of the chapter I discussed the implications of noun-adjective neutralization in Turkish for Hale and Keyser's (2002) approach where the category specification of the primitives that verbs are composed of determine the argument and event structure associated with the verbs.

In Chapter 5, I discussed the nature of the categorial feature specification which distinguishes lexical expressions and suggested a model for the lexicon and grammar. I argued that neither Chomsky's (1970, 1981) nor Jackendoff's (1977) two feature systems with binary values which derive four distinct lexical categories nor Baker's (2003) two-featured system that derives three categories can adequately account for the lexical category distinctions in Turkish. I proposed that a single feature 'N' with binary values $\pm$ is adequate to account for the lexical category distinctions in Turkish. I argued that +N expressions are the traditional nouns, adjectives, adverbs and (some) adpositions and -N expressions are those traditionally classified as verbs. I showed that not only free forms but bound stems and suffixes also bear the same type of categorial specification. I also suggested that in addition to expressions which are specified for the $\pm$ values of the feature N, there are also expressions which are unspecified for this feature. Then, within the framework of the proposals made by Hale and Keyser (1993), Lin (2002), I discussed whether it is necessary to posit a level of composition l-syntax in the lexicon which is distinct

from s-syntax, to account for the internal complexity of verb expressions. Following Ramchand (2008) I proposed that the derivation of the expressions traditionally classified as verbs take place at a level of syntax where event structure is built. Finally, I proposed a model for the lexicon where lexical entries are encoded with categorial information that constrain their insertion into syntactic frames but where lexicon is non-computational. In this model the flexibility or variation observed in the syntactic insertion frames of lexical expressions is explained not in terms of some lexicon internal manipulations but in terms of unspecification for certain category distinctions.

6.2 Remaining Issues for Further Research

A point which is left open in this study and which requires further investigation is the syntactic structures associated with attributive modification. In section 3.4.2.2.2, following the previous proposals in the literature, I pointed out that there are ordering restrictions which governs the distribution of attributive modifiers according to their semantic properties. I discussed this issue by just making reference to the order of these modifiers with respect to the head constituent and with respect to each other and pointed out that attributive modifiers which denote absolute properties, which are individual level must occur closer to the head compared to those modifiers which denote relative properties and which are stage level. However, I did not mention where exactly in the NP or DP structure these attributive modifiers are generated. As I mentioned in footnote 20 in chapter 3, there are different proposals concerning the type of semantic categories that attributive modifiers belong to and where exactly they are generated in nominal projections (e.g. Sproat and Shih 1988; Crisma 1996;

Fassi Fehri 1997; Scott 2002). Therefore, the thing that remains to be investigated is what semantic categories of attributive modifiers exist and where these categories are generated.

Another point which I haven't discussed and thus, remains to be investigated, is the status of nouns and adjectives as predicates. Since I proposed that it is case assignment which 'nounizes' expressions and it is attributive modification structures which 'adjectivizes' expressions, a question arises as to how nominal expressions are 'adjectivized' or 'nounized' when they are predicates. Therefore, if it is case that licenses NPs one question to be answered is what assigns case to NP predicates. Moreover, if it is attributive modification structures which adjectivize expressions then the question is how they are 'adjectivized' when they are predicates.

Another area which requires further investigation concerns the type of predicates that verbs are decomposed into. I demonstrated that the expressions classified as verbs can be decompose into the dynamic predicates DO, CAUSE, BECOME and GET in Turkish and claimed that the stative predicates BE and HAVE are not available as primitives in the decomposition of verbs. However, my discussion was far from exhausting all the possible verb classes in Turkish. In decompositional approaches to verb meaning predicates such as COME, GO, HAPPEN, AT, FOR, TO and WITH are among some other primitives proposed in the literature (e.g. Jackendoff 1990; Lin 2001). Therefore, what needs to be further investigated is a detailed analysis of different verb classes in Turkish and the identification of other predicates which may be available in the decomposition.

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