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A LINGUISTIC ANALYSIS OF *NECESSITY* AS A PART OF THE MODAL SYSTEM IN TURKISH

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YÜKSEK LİSANS TEZİ

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ÖZET

Bu çalışmada temel amaç kiplik değerlerinden biri olan gerekliliğin Türkçe'de hangi belirtilerle anlatıldığını betimlemek ve tümce içi diğer öğelere de bağlı olarak bu belirtiler arasındaki seçimin nasıl gerçekleştiğini saptamaktır. Çalışmamızın veri tabanı yazılı ve sözlü ortamlardan derlenen, doğal dil kullanımında ortaya çıkan anlık veriler toplanarak oluşturulmuştur.

Çalışmanın ilk bölümünde eylem ulamları olarak adlandırılan ve birbirleriyle yakın ilişkisi olan *zaman, görünüş* ve *kipliğin* tanımları verilmiş, kipliğin bu eylem ulamlarıyla olan yakın ilişkisi incelenmiştir. Ayrıca kipliğin bu ulamlar arasındaki yeri ve değeri tanımlanmıştır. Buna göre kiplik tümceye ait, hatta tümce ötesi gönderimleri olan, bu nedenle de tanımlanması zaman ve görünüşe göre daha zor olan bir kavramdır. Kiplik için tanımlanan derecelendirme de yine kipliğe ait önemli bir noktadır.

Kipliğin kendi içinde farklı ayrımları taşıyor olması, tümce içi ve ötesi değişkenlerden etkilenebilir olması ve bu sayede bir çok düzlemde (anlambilim, edimbilim, biçimbilim, sözdizimi) incelenebilir olması sonucu kiplik çeşitleri farklı dilbilimciler tarafından farklı biçimlerde sınıflandırılmış ve farklı adlandırmalarla kullanılmıştır.

İkinci bölümde bu faklı sınıflandırmalar ve adlandırmalar özetlenmiştir. Çalışmada temel olarak *kök kiplik-bilgisellik kipliği* ayrımı kullanılmış, Coates (1983) ün kullandığı derecelenme modeli anlam sınıflamasında kullanılmış, gereklilik ise kiplik türü olarak Bybee ve diğerlerinin (1994) tanımladığı *kılıcı-odaklı kiplik* değerleri arasında ele alınmıştır.

Üçüncü bölümde Türkçe'nin kiplik anlatımında kullandığı belirtiler tanımlanmış ve Bybee ve diğerlerinin (1994) tanımına göre Türkçe'de aktarılan kiplik değerleri sınıflandırılarak hangi belirtilerle anlatıldığı incelenmiştir.

Dördüncü bölümde Türkçe'nin gereklilik anlatımında kullandığı araçlar, -mElİ biçimbirimi, *gerek, zorunlu, zorunda, şart, mecbur, lazım* benzeri sözcüksel öğeler belirlenmiş ve bu araçların farklı zaman, görünüş, kiplik, çatı değerleri ve koşaçla birlikte kullanımı incelenmiştir. Çalışmamızda gereklilik belirtilerinin dil dizgesindeki yerleri yapısal özellikleri ve anlam içerikleriyle belirli oldukları gösterilmiştir.

Son bölümde, bu farklı kullanım değerleri ve '–mElİ, *gerek, zorunlu, zorunda, şart* ve *mecbur*'un anlattığı gereklilik dereceleri betimlenmektedir. Buna göre –mElİ, *gerek, lazım* zayıf gereklilik anlatırken *zorunda, zorunlu, mecbur, şart,* her biri için tanımlanan farklı kipsel alan ve gereklilik kaynaklarıyla, güçlü gereklilik anlatımında kullanılmaktadır.

SUMMARY

The main aim of the present study is to define the markers of *necessity* in Turkish and to define how the choice between the different markers of necessity are made in different occasions, including the effects of the other sentence components on the meaning and use of necessity expressions. The data of our study is composed of naturally occurring written and spoken language uses as they appear in variety of communicative contexts.

In the first chapter, we have defined the verbal categories *tense, aspect* and *modality* and analyzed the close relationship between modality and other categories and defined the significance of modality in the linguistic system. According to this, modality is in relation not only to the sentential components, but also to the discourse variables. Thus, a definition of modality is more difficult than that of tense and aspect. The gradience defined for modality is also another important point discussed in this study.

The fact that modality displays complexity and can be analyzed at different levels of language leads different linguists to propose different categorizations. The second chapter summarizes these various classifications. In our study the gradience model offered by Coates (1983) for the semantic analysis of the modal verbs is applied to Turkish modal expressions, and necessity is taken as a subtype of the agent-oriented modality as defined by Bybee et al. (1994).

In the third chapter, the markers that Turkish uses for expression of modality are introduced and the modality types that are marked in Turkish are discussed in terms of the classification of Bybee et al. (1994).

In the forth chapter, the morphological and lexical markers of modality in Turkish, namely –*mElİ*, *gerek*, *zorunda*, *zorunlu*, *lazım*, *şart* and *mecbur*, are analyzed in terms of their structural and semantic features, and their relation to the other sentence components such as tense, aspect, other modals, voice, and copula. We argued in our study that the place of the markers of necessity in the linguistic system is determined by their structural features and their semantic content.

The last chapter defines the different uses and the different necessity degrees that –*mElİ*, *gerek*, *zorunlu*, *zorunda*, *şart* and *mecbur* express. We concluded that while –*mElİ*, *gerek*, *lazım* express weak necessity, *zorunda*, *zorunlu*, *mecbur*, *şart* express strong necessity with their different modal domains and sources of obligation..

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INTRODUCTION

Modality is one of the three verbal categories, the other two of which are tense and aspect. In general modality is defined as the speaker's attitude towards or assessment on the proposition expressed by the sentence. Although it is a verbal category, modality is closely related to the whole proposition (p), i.e. the sentence, in this respect. This is the reason why modality is considered as different from and is more difficult to be defined than tense and aspect (Palmer, 1986). Another factor that makes the studies on modality difficult is the use of a single modal expression with more than one modal meaning. A modal may be used to express various speech-act values. Dilaçar (1971) states that it is a very difficult task to define and to make a list of all the speech act values performed by modal expressions.

Due to the semantic complexity of the modal expressions, different researchers use different categorizations and terms in the study of modality. Although these categorizations have common points and use the different terms for the very same content, there are important distinctions between them in terms of the criteria for categorization. In fact, the categories are based on the logical studies on modality, which goes back to Aristotle. Logic distinguishes two types of modality: *necessity* (nec), and *possibility*. Within these categories, we have critical distinction between *epistemic* and *deontic modality*. Lyons (1977) further makes the distinction between epistemic and deontic necessity and possibility. He relates modality to the features of *subjectivity* (the speaker reflects his/her own point of view rather than stating the generally accepted/known facts), *futurity* (denotes that the act will be accomplished at a time sooner than the reference time) and *non-factuality* (there is no indication that the act has been accomplished, or *counter-*

factuality which notes that the proposition reflects the contrary situation to the preser situation). Of these features, *non-factuality* is the common one for both epistemic an deontic modality and is used as basis to many linguistic researches. These two types ar also named as *root* and *epistemic* modality (Bybee et al. 1994; Papafragou, 1998, 200(Coates, 1983), since the deontic meaning is thought to be earlier in the evolution of th modal system in languages. In addition to these, different distinctions are defined withi the studies of modality. For example, Palmer (1986) defines *dynamic modality*, und€ deontic modals, while Bybee et al. (1994) define four types of modals: *agent-oriente(* *speaker-oriented* (the two being under the root modals), *epistemic*, and *subordinatin*, modalities. In our study, we are going to use the terminology defined by Bybee et al. sinc it enables us to distinguish between the speech-act values of the modal utterances from th main modal meanings. In addition to these, this distinction emphasizes agentivity as a: important factor involved in modality.

To clarify these terms, root modality is defined as the attitude towards th proposition expressed by the sentence, while epistemic modality is the assessment of th speaker on the truth value of the propositions.

Agent-oriented modality denotes "the existence of external and interna conditions on an agent with respect to the completion of the main predicate" (Bybee et al. 1994: 179). The main notions defined under the agent-oriented modals are *obligation* (1) *necessity* (2), *ability* (3) and *desire* (4) and *root possibility* (5). In our study we will defin(obligation as the strong necessity.

(1) All students **must** have obtained the consent of the Dean of the faculty

concerned before entering examination.   (Coates, 1983: 35)

(2) I **need** to hear a good loud alarm in the mornings to wake up.

(Coates, 1983: 177)

(3) I *can* only type very slowly as I am a beginner.

(Coates, 1983: 392)

(4) Jan Ortiz called them loudly in the Indian tongue, bidding them to come

forth if they **would** (=*wanted to*) to save their lives.

(Coates, 1983: 212)

(5) Actually I **couldn't** finish reading it because the chap whose shoulder I

was reading the book over got out at Leicester Square.

(Coates, 1983: 180)

The speaker-oriented modality senses on the other hand, "do not report the existence of conditions on the agent, but rather allow the speaker to impose such conditions on the addressee" (Bybee et al., 1994:180). The definition shows the close relation of speaker-oriented types of modals with the status of the utterances. Bybee et al. (1994) includes *imperative, prohibitive, optative, admonitive,* and *permissive* under the category of speaker oriented modals.

Epistemic modality, as mentioned before, is "the commitment of the speaker to the truth of the proposition". *Possibility* (6), *probability* (7) (with the sub headings of *inferred certainty* and *counterfactual*) are the main types of epistemic modality.

(6) I **may** have put them down on the table: they are not in the door.

(Coates, 1983: 133)

(7) The storm **should** clear by tomorrow.

(Bybee et al., 1994: 180)

Bybee et al. (1994) also label subordinated modality in the language such as *concessive* where modal markers are used.

As a verbal category, modality may be expressed by the help of modal suffixes. Modal verbs, modal adverbs, particles (lexical expressions), and intonation are other ways of expressing modality in different languages (Palmer, 1986, 2000).

Among these expressions of modality, Turkish uses modal inflectional suffixes, lexical expressions, and intonation. The main modal meanings and the common expressions of these meanings in Turkish as defined by Kornfilt are: *conditional* (and wish) *–(y)sA, imperative –Ø (-(Y)In), optative –(y)A, debitive –mElİ, potential –(y)Ebil, certainty – mElİ, - (y)Ebil, -DIr, assertive –DI, -mIş, -Ir.*

Necessity is a noteworthy subject matter of study since it is a semantically complex concept with different degrees including obligation. It is also one of the modal meanings which is expressed by various kinds of modality expressions and allows one item to be used in place of the other. The choice of the item to express necessity is a study to be completed in Turkish.

The studies on necessity in Turkish do not provide detailed discussion on the uses and usages of the different ways of expressions of the necessity meaning. Nor is the semantic analysis, and the different degrees are studied in detail in Turkish.

Problems of the Study

Necessity, as the other modal meanings, is of importance in the study of the modality system in Turkish. Necessity markers, their syntactic and semantic analysis, and their relation to the other categories/operators in Turkish are significant matters to be studied in Turkish. We will try to answer the following questions in the study of necessity:

i. What are the main expressions indicating necessity in Turkish?

ii. To what extent are these different expressions used interchangeably?

iii. What changes and interactions exist when the necessity expressions in Turkish co-occur with other operators such as negation, question, modal adverbs, other modal suffixes or other sentence elements?

iv. If there occurs an interaction or gradience within necessity/obligation, how is this treated in language?

Hypotheses

Depending on the problems defined above, the main hypotheses we will test are as follows:

i. Turkish uses more than one different type of markers for the expression of modality.

ii. The interchangeability of the different expressions of modality is possible in Turkish, and is related to certain syntactic and semantic conditions.

iii. The use of question, negation forms, and modal adverbs, other modality types, and other sentence operators are affective on the necessitive modal and the necessity values differ depending on the context of utterance.

iv. The different necessity expressions may be expressed by different markers of necessity.

Purpose of the Study

Necessity is one of the basic meanings in the modality studies, where modality itself is also an important issue in language, which has not been focused on in the studies on Turkish linguistics up to now. However, with the semantic complexity and the incompatibility of the expressions in other languages, necessity is one of the main problems faced in language teaching.

This study mainly aims at making a whole description of the necessity markers in Turkish in relation to the other categories in language such as tense, aspect, other modal meanings, negation, passives, causatives copulas, modal adverbs etc. By the help of the findings achieved in this study, we may have a better understanding of Turkish modal system.

Data Collection

During our study, we will make our generalizations depending on the data which is gathered from internet, other written texts such as newspapers, books, plays, or the naturally occurring data (spontaneous native speaker speech). We have also formed a part of the data to test the grammatical and ungrammatical patterns in which necessity expressions are used.

Limitations

Among the various modality types, we are going to focus on the necessity as defined under the agent-oriented modality by Bybee et al. (1994). We have mentioned that the verbal categories, tense, aspect, and modality are in close relation to each other; however, the semantic analysis of these three categories in relation to each other in all

aspects, requires a detailed study which is beyond the scope of this study.

Among the various categorizations within the study of language, we are going to use that of Bybee et al. (1994), i.e. the agent-oriented vs. speaker-oriented modality. We will use the distinction between the agent-oriented and speaker-oriented modals. Thus, we are going to analyze the agent-oriented meanings and make claims about the speaker-oriented functions in a limited fashion where necessary.

Organization of the Study

In the introduction part, we present the problems of the study, our hypotheses, purpose of study, data collection method and the limitations of the study.

The first chapter is a general introduction to the verbal categories of modality, tense, and aspect and the relation between them in languages of the world.

In second chapter, we analyze the notion of modality and review the literature on modality to define the notion itself, the major types defined under modality, and the main approaches to modality.

Chapter III is concerned with modality in Turkish, syntactic, semantic features, expected types of modality and markers of those different types of modal meanings.

Chapter IV focuses on necessity and aims at defining what the main expressions of modality are, what the relationship between these expressions and other components of sentence such as tense, aspect, and other modals, modal adverbials, verb phrase etc. are.

The last chapter provides an overall analysis of the necessity in Turkish with the expressed degrees of necessity, interchangeability conditions and semantic analysis of necessity system in Turkish.

I. THE VERBAL CATEGORIES TENSE, ASPECT AND MODALITY

Within the grammar of a language we should include many subsystems both syntactic and morphological. Here we are going to try to define and characterize tense, aspect, and modality, which belong mainly to the morphological subsystems of many languages of the world. Although it is not obligatory that they be expressed grammatically in all languages, they are used in most languages and perform very important functions, hence, are an important part of the grammatical system. We can consider tense, aspect and modality as a part of the morphological system due to the fact that they are, although not necessarily, most likely to grammaticalize morphologically and appear on the verb, which is as well the reason why they are also referred to as verbal categories. These three notions are mostly defined in relation to each other since they closely interact, such that in some languages they can be expressed by the same grammatical markers in different grammatical contexts or one grammatical marker may function as both tense and aspect marker at the same time, e.g. Turkish *–Ir, -(I)yor, -DI* etc.

I.1. Tense

Tense can be defined in different ways. In most general terms, tense is the relation between the *reference time* and the *event time* (Givon, 2001). The term tense is used in the linguistic literature for morphological markers of the verb whose function is to characterize the temporal relations between the situation and the utterance time (Lyons 1977; Hatav, 1997; 2). In other words, tense is a "category used in the description of verbs which refers to the location of an action in time (Finch, 2000)." Tense in this respect can be said to "place the event spoken of in relation to the temporal perspective of the speaker" (Bussmann, 1996; 478).

The main distinction made within the category of tense is the one between *absolute tense* and the *relative tense*. The main difference between these two types is that absolute tense is concerned with the relation between the *event* (E) and the *utterance* (S=Speech act) whereas in the case of relative tense the temporal reference point (R), except from E and S, is in consideration as well (Bussmann, 1996: 478). Hatav (1997: 5) defines the speech time as "the time point of the act of speech, i.e., of the token uttered".

Finch (2000) uses form-function distinction to explain the difference between the two different categories time and tense. In this respect, it is not only temporal reference that tense expresses, but *hypothetical meaning*, *historic present*, etc. as well. Different languages have different ways for marking different tenses, i.e. they are "language specific" (Bussmann, 1996: 478). The systems that different languages use to code tense vary, e.g. English makes a two way distinction between *past* vs. *non-past*, or a New Guinea language Hua between *future* vs. *non-future*, or Romance & Latin languages make a three way distinction between *past*, *present* and *future tenses*.

Givon (2001: 286) considers tense as a pragmatic phenomena, rather than a propositional semantic one, which relates "the proposition to a temporal point outside itself". He also states "in the case of absolute tense, the clause, as it is uttered, is anchored to the *current speech-act*, performed by a particular speaker at the very time the clause is uttered" and shows the 'temporal anchoring' as in the following diagram:
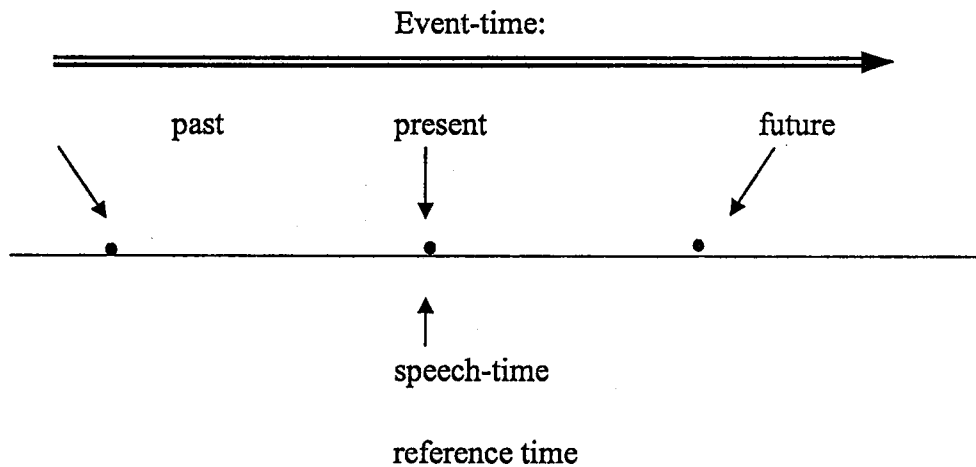
Figure 1: Tense and temporal anchoring. (Givon, 2001: 286)

The major tense divisions with reference to the table above may be listed as:

a. **Past:** An event (or state) whose event time *proceeded* the time of speech.

b. **Future:** an event (or state) whose event time *follows* the time of speech

c. **Present:** An event (or state) whose event time is *right* at the time of speech

d. **Habitual:** An event (or state) that either occurs or *always* or *repeatedly*, or whose even-time is left *unspecified*. (Givon, 2001: 286)

We should mention here that habitual is more frequently seen as a part of the aspectual systems in the languages, which Givon also discusses.

In addition to these absolute tense divisions, it is also possible that a language may have *relative tenses* where the absolute tense is related to another "temporal reference-point" before or after the speech time. (Givon, 2001; Busmann, 1996; Trask, 1993).

The last distinctions that language can make on the part of its tense system are the ones within the degrees of the absolute tenses such as the one between *remote past* and

recent past, or *immediate future* and *distant future* etc. (Givon, 2001: 287).

As for Turkish, we should say that it is one of the languages where tense is obligatory category on the predicate of the sentence and which makes a three v distinction on the part of the tenses that are grammatically expressed: past, present future. Turkish uses suffixes on the predicate to express tense and often encode of source of information, such as aspect and mood, which is a common phenomena in m other languages as well (Bussmann, 1996: 478). Turkish can be said to have a comp system of tense, aspect, and modality in the sense that the tense markers are used express the aspect or modal values of the utterance as well, which is a characteristic feat of, especially agglutinating languages. The grammatical markers of this sort are refer collectively to as TAM markers.

1.2. Aspect

The second and one of the most complex parts of the grammatical system is category of aspect. Generally aspect is defined as the "internal temporal structure of verb or sentence meaning or, different ways of viewing the internal temporal constituer of a situation" (Comrie, 1976). It is important to mention here that although most genera marked on the verb, it is not the only case, since aspect is closely related to the in structure of the verb and can be inherently expressed by the conceptual structure of verb. Except from these, the type of argument noun phrases (singular vs. plural, mass count etc.), adverbials, auxiliaries, tenses etc. mutually interact with the aspectual value the sentence, which makes it a hard task to characterize the aspect of the verb in sentence without examining all these factors. In this manner, aspect can also be defined 'a category used in the description of the VERBS which refer to the duration of the activ

indicated by the verb' (Finch, 2000: 85).

Among the aspectual categories often expressed in languages are *perfective, imperfective, perfect, progressive, habitual, durative, punctual*, and *iterative* (Trask 1993: 21).

The distinctions that can be applied to the category aspect are as follows:

a) Stative vs. active:

State verbs do not involve a change in time, e.g. *own, known, be.*

Active verbs involve processes, activities, or actions, e.g. *blossom, hit.*

b) **Perfective vs. imperfective; durative vs. non-durative; progressive vs. non-progressive:**

Imperfect, durative, or progressive aspects involve situations that are not delimited temporarily.

Perfective, non-durative and non-progressive or punctual aspects, on the contrary, involve a delimitation on the part of the situation expressed by the verb or the sentence.

c) **Habituals and iteratives:** Habituals and iteratives express repetition or frequency.

d) **Reference to causality:** Causality involves the distinction between a state or process and an action caused by an agent.

Aspect and tense seem to be the closest to each other within the three verbal categories, since they are related both to the temporal duration of the situations and actions expressed in the verbal complex in the sentence. This can also be the reason why these two categories may "intertwine (e.g. English), or they even coalesce into one form (e.g.

French)" (Hatav, 1997: 1), especially if they are morphologically inflected on the verb.

I.3. Modality

The third and the last of the verbal categories that we will be defining i modality, which is accepted as the most complex one (Palmer, 1986; Bybee et. al., 1994 The most common linguistic definition of modality takes it as the speaker's attitud towards the proposition. Although it is not necessarily expressed in all languages of th world by explicit grammatical markers, we should consider modality as a grammatic category mostly related to verb (Palmer, 1986).

Although modality is generally related to the verb, it is not only marked on th verb or one clause in the sentence, rather the modal value of a sentence can be determine by analyzing the whole sentence and even the discourse that it is uttered in. In these term modality can be taken as a semantic category in a wider sense (Bussmann, 1996), whic makes it more difficult to analyze or explain the borders of modality and to study thi subject matter, which as well makes it a stimulating theme of research.

I.4. TAM Markers

As we have mentioned earlier, tense, aspect, and mood are three verba grammaticalized categories. Although we cannot say that any of these are universall grammaticaized in the languages of the world we should admit that they are expressed i languages of the world and are in close relation to each other. It is a frequent case tha languages, especially the languages where tense, aspect and modality are expresse morphologically, use of the same markers for expression of these three categorie although they have different functions and are pragmatically distinct from each other.] this is the case, then the marker is the TAM (tense, aspect, mood) marker: "TAM as

morphological system is most likely to grammaticalized on the verbal word, where it interacts, often intensively, with several other verb inflectional systems:

- negation markers
- pronominal agreement
- speech-acts markers
- cross-clausal connectives." (Givon, 2001: 285)

II. MODALITY

As defined in the previous chapter, modality refers to a concept, which belongs to both philosophical and linguistic discussions. Naturally, philosophical discussions are earlier and they mainly depend on the basic queries in the modal logic dealing primarily with the notions of *necessity* and *possibility*. The discussions and terminology in philosophy forms a basis for the linguistic discussion of modality in language (Coates, 1983; Palmer, 1986, 2001; Bybee & Fleishman, 1995; Papafragou, 2000 etc.). Although there are ongoing discussions on modal logic, we are going to focus rather on the linguistic understanding and notions of linguistic modality, which covers the subject matter of our research. We are going to use these philosophical discussions on modality only when they are directly in relation to modality in language (as it is basis for our discussion). Therefore, we will use 'modality' to refer to the linguistic term throughout the study, and note when it does not.

Modality in language, as defined before, is the assessment or attitude of the speaker towards the proposition uttered in the sentence. Modality is seen as a semantic category in this sense which is connected to the necessity and possibility. Lyons (1977: 797) defines the modal and non-modal utterances. According to this, the "straightforward statements of fact (i.e. categorical assertions) may be described as epistemically non-modal". On the other hand "any utterance in which the speaker explicitly quantifies his commitment to the truth of the proposition expressed by the sentence .... is an epistemically modal, or modalized, utterance" (Lyons, 1977: 797).

The category of modality is not as easily defined as tense and aspect (Palmer, 1986, 2001; Lakoff, 1972; Lyons, 1977; Bybee et al., 1994). The most common definition

of modality is made as *the speaker's attitude or assessment of the proposition expressed by the utterance*. more specific and detailed definitions are also possible. For example Bybee et al. (1994) state that, although the understanding of modality is based on the modal logic and notions of deontic and epistemic modality, it includes more than what is expressed in the traditional definition of "the grammaticalization of speaker's (subjective) attitudes or opinions". Rather, modality is seen as a semantic category including "a broad range of semantic nuances – jussive, desiderative, intentive, hypothetical, potential, obligative, dubitative, hortatory, exclamative etc. – whose common denominator is the addition of a supplement or overlay meaning to the most neutral semantic value of the proposition of an utterance, namely factual and declarative" (Bybee & Fleishman, 1995: 2). Lakoff (1972) also mentions the difficulty of defining modality and states in order to determine the modal value of the modal value of the sentence, different levels of language should be considered and evaluated during the interpretation process.

Modality has been a frequently studied subject matter in different languages, since it provides promising and challenging ground for the different linguistic theories. The differences between these theories result in differences not only in the aim, method, analysis, and conclusions of the research, but in the classification, terminology, and understanding of the notion of modality as well. Therefore we are now going to try to review the different studies made on modality in linguistics in order to have a broad understanding of this concept with reference to different perspectives.

II.1.Mood/Modality Distinction

The term mood may be used as synonym of modality by scholars, but refer to a different concept. Therefore, we should define mood and draw the line between modality and mood at the beginning.

The main distinction between mood and modality is that modality is seen as an overall semantic category which can be expressed by different kinds of grammatical markers or lexical items, whereas mood is most commonly taken as one of the grammatical markers of this semantic category. Mood can be taken in different ways by different scholars. Some of the scholars take mood as a grammatical marker on the verb, while others take it as part of the syntactic organization of the components of the sentence which results in different speech acts or sentence types such as *interrogative*, *declarative* etc. (Levinson, 1983; Halliday, 1970). On the other hand, mood can be taken as a part of the grammatical system, which marks modality in language. According to this, mood is defined as a morphological inflection on the verb expressing modal meaning, with the main distinctions of *subjunctive, indicative, realis, irrealis* (Palmer, 1981; 1986; 2001; Bybee et al., 1994; Quer, 1998; Kiefer, 1987: 81). Mood may exist in a language as "either cross-language gram types (e.g. conditional or subjunctive) or language specific categories", indicative, subjunctive, optative, imperative, and conditional are some of the main moods in languages (Bybee & Fleischman, 1995: 2).

Mood is analyzed in the modality studies especially in the typological studies of modality as a part of the grammatical system in relation to modal verbs, or 'modal system' (Palmer, 2001), which is the other grammatical marker of modality. The typological studies make it clear that these two grammatical markers may occur within the

same language, one of them being dominant over the other to become the only one in time while the other vanishes (Palmer, 2001).

II.2. Basic Terms and Classifications in The Discussion of Modality

Modality being studied in different branches in linguistics such as morphology, syntax, semantics brings the variety of terminology or classifications to the modality discussion. Now we will see how these classifications and the terms are defined in contrast to each other by different scholars in view of different approaches and try to draw a general understanding of the discussions on the notion of modality. For a complete analysis, we are going to consider the discussions and definitions both in modal logic and in linguistics.

II.2.1. Modal Logic: Epistemic and Deontic Modality

Here we should first introduce the notions of necessity and possibility, and to follow up, how they are dealt with in terms of epistemic and deontic modality.

The main notions of modal logic, necessity and possibility, are closely related to each other in terms of negation. According to this, they can be formalized in terms of each other as:

(8)   nec= ~pos ~p

(9)   pos= ~nec ~p (Lyons, 1977, Kratzer, 1991; Kiefer, 1987)

Here, the discussion is mainly on the *truth* of the expressed propositions depending on our knowledge and belief (Lyons; 1977: 788). The necessarily true propositions are *analytic* propositions, and exemplify *alethic modality*, which is rare in daily language use and is explained with respect to the necessity and possibility in modal logic. In alethically necessary expressions the proposition is necessarily or contingently

true. On the other hand if the proposition is not "necessarily false" it is said to be alethically possible (Lyons, 1977: 791, Kiefer, 1987).

Other modalities defined in modal logic are *epistemic* and *deontic modalities*. Epistemic modality is defined as being closer to alethic modality in that it is concerned with the truth value of a proposition depending on the assessment of the speaker in terms of the known and/or believed facts in one or all of the possible worlds. Here the main notions are *factivity* –where speaker commits to the truth of the proposition-, *non-factivity* –speaker is committed neither truth nor the falsity of the proposition- and *contra-factivity* – committing the speaker to the falsity of the proposition (Lyons, 1977:795). The distinction between epistemic necessity and possibility is made in modal logic with respect to the factuality status of the proposition, i.e. if the proposition is factive, it is considered as epistemically necessary whereas if it is non-factual, it is epistemically possible and if contra-factual, it is epistemically impossible (Lyons, 1977: 796-7).

Deontic modality in contrast to *alethic* and *epistemic modalities* is concerned with the necessity and possibility of the actions of "morally responsible agents" and is closely related with the futurity when the truth value of an expression is to be determined (Lyons, 1977: 824-25). The main terms of necessity and possibility of the propositions of epistemic and alethic modality is replaced by the notions of *obligation* and *permission* in the deontic modality. Therefore the *commands, prohibitions* that express the obligation to perform or not to perform a specific act by some kind of an authority are a part of the deontic systems. On the other hand, the relation between obligation and permission is similar to that of between necessity and possibility with respect to negation, i.e. permission refers to the cases where a specific prohibition (negative obligation), is not in consideration.

II.2.2. Modality in Language

Modality in language has a different scope from that of modal logic and is mainly concerned with how modality is grammaticalized and expressed in natural languages. As is mentioned before, different studies in different areas of linguistics have been made on modality in language, using their own terminology and classification. The main classifications of modality in linguistics include pairs as: *root* modality vs. *epistemic modality*; *deontic, dynamic modalities* vs. *epistemic modality*; *agent-oriented, speaker-oriented modality* vs. *epistemic modality*; *event modality* vs. *propositional modality*. There are also other types of modality, which are not central to our discussions and therefore be mentioned in a separate section (§ II.2.2.5).

It can easily be seen that the referent of epistemic modality is the same in different classifications, i.e. speaker's judgment on the truth value of proposition. On the other hand, the referent of its counterpart, the so-called deontic modality, varies in different linguistic studies, e.g. the terms "root, deontic, dynamic, event modality" all have similar references with this term. The speech-act status of the deontically modal utterances (Lyons, 1977, Kiefer, 1987; Papafragou, 1998) and the variety of the meanings expressed by the deontic modals can be taken to be the reason for this alteration in the terminology referring to the deontic modal meaning.

II.2.2.1.   Root vs. Epistemic Modality

One of the main distinctions in modality, which seems to be popular with the semantics and pragmatics oriented researches, is made between root modality and epistemic modality (Coates, 1983; Sweetser, 1990; Papafragou, 2000).

Epistemic modality refers to the truth value of the propositions expressed by

the utterance of the speaker. In an epistemically modal utterance, speaker makes judgement on the truth value or the possibility of the proposition expressed by the utterance depending on her/his belief and knowledge.

Root modality, on the other hand, refers to the attitude of the speaker towards the utterance and can be considered as the counterpart of the 'deontic modality' in the modal logic. Root modality covers a range of three types of modal meanings that can also be thought of as being distinct from each other (Palmer, 1986, 2001; Bybee et al. 1994; Bybee and Fleishman, 1995), namely *obligation, permission* and *ability*. The root sense of an utterance is more related to the illocutionary act of the agent and what the factors direct the agent to perform the acts. That is the discourse is of much more important to the root modality. Other important issues to be mentioned concerning root modality are *future reference* and *non-factuality*, which are also closely related to each other. Coates (1983) clearly states that root modals indicate the expressed action has not taken place at the time of utterance since it is not possible to lay an obligation, or give permission about an accomplished event and the future events are non-factual since it is never certain that the action will be accomplished or not, even if it is an obligation. However, one should note that the ability meanings of a root modal can also be factual and refer to present or have factual status (Coates, 1983).

II.2.2.2.   Deontic and Dynamic vs. Epistemic Modality

What is referred to by 'root modals', i.e. the non-epistemic modals, can as well be thought as two modal types: i.e. deontic, expressing obligation and permission, and dynamic, expressing ability (Palmer, 1986). Palmer states that the deontic and dynamic modality distinction was first suggested counting on a footnote in von Wright (qtd. in

Palmer, 1986). The main reason for this distinction is, according to Palmer, the lack of *subjectivity* in some of the so-called deontic modal utterances, which may also be named as *circumstantial* vs. *boulomaic* modality (Kratzer, 1991: 646)

(10) John can speak Italian.

(11) You must go now if you want to catch the bus. (Palmer, 1986: 102)

To Palmer (1986:102), this difference cannot be explained in terms of root–epistemic distinction and therefore he uses the term 'dynamic' for the modal meanings in 'neutral' and 'circumstantial' modality where the speaker does not involve his/her opinion or attitude in the utterance (the distinction belongs to Kratzer 1991: 640), i.e. neither epistemic nor deontic, but 'subject-oriented'. In dynamic modality, the speaker only states the facts about the ability or willingness of the actor, but does not involve in the action indicated by the predicate.

Palmer (2001) in the second edition of 'Mood and Modality' seems to re-categorize these types of modalities and put dynamic modality under the heading of 'event modality'. Since we are going to discuss this categorization later we are not going to explain it here.

The deontic modality relates to obligation or permission, emanating from an external source, whereas dynamic modality relates to ability or willingness which comes from the individual concerned.

II.2.2.3. Agent Oriented vs. Speaker Oriented Modality, Subordinating Modality

Another distinction between the types of modality, which seems to differ from the others in being a four way distinction rather than two, and taking the speech-act values in consideration is that between *agent-oriented, speaker-oriented, epistemic, subordinating modality* (Bybee et. al., 1994; Bybee & Fleishman, 1995). Epistemic modality remains the same as defined and explained in root vs. epistemic modality. What should be explained here therefore seems to be *agent* and *speaker oriented* modalities.

It can be said that agent-oriented and speaker-oriented modality are the two different points of view for the deontic modal statements. Bybee et al. (1994: 177) defines agent-oriented modality, as reporting "the existence of internal and external conditions on an agent with respect to the completion of the action expressed in the main predicate". In the agent-oriented modality the main modal meanings listed are "obligation, desire, ability, permission and root possibility" (Bybee & Fleishman, 1995: 5). It is clear from the definition above that agent-oriented modality includes the modal meanings of deontic and dynamic modalities defined by Palmer (1986; 2001), root possibility indicating the modal meaning defined for the dynamic modality. In this sense agent-oriented modality seems closer to what is referred to by root modality, but the term 'agent-oriented' is preferred to emphasize the involvement of "external conditions" on the addressee and its contrastive features with the so-called speaker-oriented modality.

Speaker-oriented modality on the other hand, is concerned with the speech-act values of the modal utterances, and "do not report the existence of conditions in the agent, but rather allows the speaker to impose such conditions on the addressee" (Bybee et. al.,

1994: 179). The grammatical constructions of this kind are listed as

> Imperative: the form used to issue a direct command to a second person;
> Prohibitive: a negative command;
> Optative: the wish or hope of the speaker expressed in a main clause;
> Hortative: the speaker is encouraging or inciting someone to action;
> Admonitive: the speaker is issuing a warning; and
> Permissive: the speaker is granting permission. (Bybee et al., 1994: 179).

In short, we can say that it is the speech act value of the non-epistemic modals that is emphasized by the distinction of speaker and agent oriented modalities. In addition, according to this, speaker oriented modality seems to be more associated with mood.

Bybee et al. (1994:180) analyzes the modal markers that are used in the concessive and purpose clauses as a separate category in the discussion of modality as exemplified in the following:

(12)   I suggested that he should call you immediately.

(13)   Although he may be a wise man, he has made some mistakes in the past.

(14)   We are working now so that we can take the summer off.

II.2.2.4.   Event modality vs. Propositional Modality

Event modality and *propositional modality* refer to the same component of the root and epistemic modal in Coates (1983), Papafragou (2000) etc. The terminology is used by Palmer (2001). Palmer takes event modality as a label for the deontic and dynamic modals, whereas propositional modality refers to epistemic and evidential modalities. Here the new term is *evidential modality*, which refers to the cases where the speakers communicate their grounds for the truth value of the proposition (Palmer, 2001: 9). The classification of Palmer (2001) can be shown as follows:

Modality			
Propositional Modality		Event modality	
Epistemic	Evidential	Deontic	Dynamic
- speculative	- reported	- permissive	- abilitive
- deductive	- sensory	- obligative	- volitive
- assumptive		- commissive	
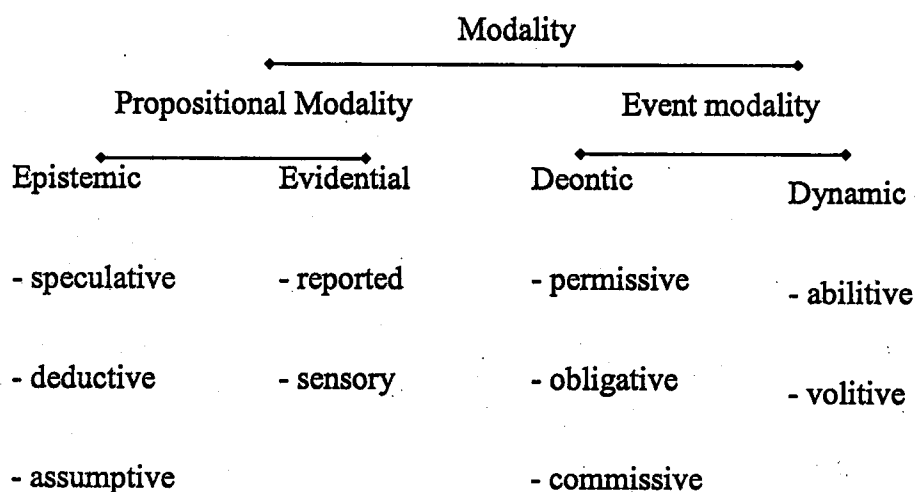
Table 1: The modality types as defined by Palmer (2001)

The subheadings mentioned here are also mentioned in other studies; however Palmer (2001) focuses on these labels and observes different languages may communicate these modal types with different kinds of markers, especially the most grammaticalized markers, modal verbs and mood. Although we are not going to deal with the grammatical marking systems of these modal meanings here, for it involves detailed analysis, we will identify and briefly define their referents.

The types defined for epistemic modalities are *speculative* (8), *deductive* (9) and *assumptive* (10) whose indications are ... "uncertainty", "an inference from observable evidence" and "inference from what is generally known", respectively (Palmer, 2001: 24-25).

(15) John may be in his office.

(16) John must be in his office.

(17) John'll be in his office.

The two main labels under the evidential modality, on the other hand, are *reported* indicating "what has been told, 'second hand', 'linguistic evidence' and sensory

with reference to "evidence attained from the senses". Some languages may distinguish between visual and auditory subheadings under the sensory evidentials, which may occur as more graded in other languages (Palmer, 2001: 35-36).

As for the *event modal* types, directive is the case "where we try to get others do things". Commissives are "where we commit ourselves to do things". Permissive is the case where we permit others do things.

Except from these modal meanings Palmer (2001: 22) states that there should be other categories under this schema, which are not easily categorized as the ones here and which usually co-occur with *realis/irrealis* mood, e.g. future, negative, imperative, "presupposed, conditional, purposive and resultative, wishes (desiderative) and fears (timitive) and ....habitual-past".

II.2.2.5. Other Types of Modalities

Although not distinguished or mentioned in most of the works, there are other types of modals defined by some scholars, such as *boulomaic* (Kratzer, 1991), *circumstantial* (Kratzer, 1991), *dispositional, existential* (Coates, 1983) and *discourse* (Palmer qtd. in Coates, 1983: 21, 32, 183) *modalities*.

"Boulomaic modalities are glossed: 'It is hoped/feared/regretted/desired ....
that p'" Rescher (qtd. in Palmer 1986: 12). On the other hand Palmer (1986, 2001) does not use the term *boulomaic* and uses the Latin based term *volitive* in his study. Kiefer (1992: 2517) also names the modal utterances where the necessity and the possibility of the act has to do with someone's wishes as *boulomaic* modality, as in sentence (18a) which can be interpreted as (18b).

(18) a. Charles may be our leader

     b. In view of their [the speaker's] wishes it is not excluded that

     Charles be our leader.

von Wright (qtd. in Palmer 1986: 11) also mentions "dynamic modality which is concerned with ability and disposition" as in

(19) John can speak German

"In pioneering work on modal logic von Wright (qtd. in Palmer 1986: 12) distinguishes four 'modes' the alethic modes or modes of truth, the epistemic modes or modes of knowing, the deontic modes or modes of obligation, the existential modes or modes of existence" (qtd. in Palmer 1986). He sets out the possibilities in a table:

alethic	epistemic	deontic	existential
necessary	verified	obligatory	universal
possible	-	permitted	existing
contingent	undecided	indiferent	-
impossible	falsified	forbidden	empty

Table 2: Modes defined by von Wright (qtd. in Palmer 1986).

Two other types of modality within the deontic modals, *circumstantial* and *dispositional* modality, are very close to ability or capability (Kiefer 1992; Kratzer, 1991), similar to the dynamic modality distinction of Palmer (1986). To Kiefer (1987) in the circumstantial modal utterance the circumstances are the source of the possibility or necessity of the state of affairs, whereas in dispositional modality they are determined with reference to dispositions of the agent. The following are the examples of Kiefer (1991) for

the circumstantial and dispositional modalities with the interpretations.

(20) Bill can only relax in his summer house (The circumstances are such that Bill can only relax in his summer house)

(21) In the mountains pitched roofs must be built (In the mountains the circumstances are such that pitched roofs must be built)

(22) Jane cannot sing today (Jane's dispositions are such today that she cannot sing today.)

(23) John must sneeze (John's dispositions are such that he must sneeze).

Kratzer defines the distinction between the epistemic and circumstantial modal bases (§_II.3.3.2).

II.3. Approaches to Modality

We have mentioned that modality is one of the most complex systems in language such that there are discussions on even the definition of it. This can be explained due to the variety of the ways that are used to express modality. Modality is not expressed by a specific and only one of the different grammatical markers -which are

i. mood (*morphologic level*)

ii. modal verbs (*syntactic level*)

iii. clitics and particles (*lexical level*)

iv. intonation (*prosodic level*)

in a single language, and more than one of these markers can be used in the same language, one of them being dominant (Palmer, 2001). Since modality is not only marked on the verb but is as well concerned with the interpretation of the whole sentence, as apposed to tense and aspect (Bybee, 1994, 1995; Palmer, 1986, 2001), it supplies good evidence for various

approaches or grammar models. This is what enables scholars to analyze modality in language through different approaches, as mentioned before.

Since these different approaches focus on different levels of language that is inherent in the interpretation process of modality and the variation in the classifications and terminology outlined above is due to the main distinctions of the approaches, we take it necessary to mention these approaches and draw general background information for our study.

II.3.1. Philosophy Based Approaches: Lyons (1977); Kiefer (1987)

Lyons (1977) is one of the earliest linguists who discuss the notion of modality from two different perspectives, one being the logical and the other the semantic point of view. However, he does not completely distinguish between these two perspectives in his argumentation of the semantic analysis of modality; rather he asserts that the logical and linguistic understanding of modality should be in relation to each other since the concept of linguistic modality refers to the representation of logical modality in human language. He clearly states that logical necessity is a notion that can easily be applied and utilized in "descriptive semantics" and adds that "our everyday use of language , which includes ability to draw inferences and to paraphrase one sentence by means of another, clearly depends upon our intuitive understanding of the operation of logical necessity" (1977: 789).

Lyons (1977) defines three main types of modality, alethic (necessary truth of propositions) (1977: 791), epistemic and deontic as defined before in section II.2.1., "necessity or possibility of acts performed by morally responsible agents" (1977: 823). He involves two main discussions in the epistemic modality, definitions of the notions of

factivity, *non-factivity* and *contra-factivity* of a proposition and subjective vs. objective epistemic modality.

An important feature of deontic modal statements that Lyons (1977: 835) explains is the close relationship between the directives and the deontic modality. According to this, Lyons distinguishes between the directives and the other utterance types such as '*You must open the door*'. Lyons states that while directives can only be used for expression of deontic modality the modal utterances may be taken as the reported form of a directive as well as a statement of obligation. This brings Lyons to the conclusion that the deontic modal utterances with *must, mustn't, may, needn't, don't have to*, the speaker is not committed to the act of laying obligation as clearly as in the case of directives, i.e. the source of obligation remains implicit. He claims that the utterance '*You've got to come in and have your bath: Mummy says so*' and '*Mummy says you've got to come in and have your bath*' are much more equivalent to '*Come in and have your bath: Mummy says so*' (Lyons, 1977: 835).

Kiefer (1987) mainly tries to define the relationship between the modal logic and modality in language. He claims that there certainly is a connection between the notions of necessity and possibility in modal logic and their expressions as modal statements in language; however, contrary to Lyons (1977), he thinks that they should be accepted to be distinct from each other.

Kiefer (1987), in the same way as Kratzer (1991) does, defines logical modality in terms of accessible worlds. That is to say, modality is a propositional notion and is concerned with building up relations between these possible worlds in terms of necessity and possibility. On the other hand, modality in language does not involve

statements of neither necessity nor possibility, or even so, it is not propositional. Modality in language cannot be formulized as it can be in logic. It is directly related to attitude or background information.

Kiefer's (1987: 73) definition of descriptive and non-descriptive sentences is important for modality, since in this way the modal statements can be detracted from the modal statement. He uses some tests to decide whether a sentence is descriptive or not. According to this, a sentence is descriptive if everything representable in terms of propositions can be known, and be negated by "it is not true that...". The propositions of the descriptive sentences can be used in statements. They can be negated, and be embedded under *know, assert* etc. For example that the sentence *John is sick* is descriptive can be tested as in the following:

(24) Bill knows that John is sick.

(25) Bill asserts that John is sick.

(26) It is not true that John is sick. (Kiefer, 1987: 73).

On the other hand, the same tests when applied to the non-descriptive sentence "*John is probably sick*" this fact changes.

(27) John is probably sick.

(28) *Bill knows that John is probably sick.

(29) *Bill asserts that John is probably sick.

(30) *It is not true that John is probably sick. (Kiefer, 1987: 74).

What's more, non-descriptive sentences cannot occur in conditional clauses, carrying contrastive stress, be coordinated and be quantified e.g. (31-34):

(31) "*If John is probably sick, then we have to stay at home.

(32) *John is probably sick.

(33) *John is regrettably and probably sick.

(34) *John is often probably sick." Kiefer, (1987: 74-5)

Within all the attempts to define modality Kiefer makes the logical definition of modality as *"the modality of p [proposition] means that p is necessarily true or false, or possibly true or false in a certain set of possible worlds. This set is define by the accessibility relation considered"* (1987: 71). Linguistic modality, on the other hand, as Kiefer (1987: 77) defines, is *"the modality of a sentence is determined by its attitudinal operators"*. Later in his study, he tries to make a definition which will cover both interpretations and modifies his logical definition as *"the set of linguistically relevant accessibility relations"* (1987: 86). Although Kiefer states that modality may indicate speaker's "emotional reaction towards" or "evaluation of a certain states of affairs" and it would be useless to "try to find a common semantic denominator of all these meanings", which is what Sweetser (1990) and Papafragou (1998; 2000) does.

II.3.2. Typological Approaches

That modality is grammaticalized in majority of the languages makes the studies to define a typology of modality inevitable. Of the main studies made with such an aim, we can mention two most important ones, namely Palmer (2001) and Bybee et al. (1994). Although they differ in the terminology, and aim of study, these studies are of special importance to our study since we aim at defining where Turkish stands among the other languages in expressing modality.

Palmer (1986; 2001) is one of the most important linguists who studied modality with the aim of defining a typology of modality among different languages of the world. Palmer focuses on the formal representation of modality, and ignores the semantic or pragmatic factors in contrast to Coates (1983) or Papafragou (2000), and focuses mainly on the two grammatical marking ways of modality in languages (mood and modal verbs) by analyzing different language systems that grammaticalize different modal senses by these markers.

Palmer's (1981; 1986; 2001) definition of modality is close to the traditional linguistic understanding of modality, i.e. "concerned with the status of the proposition that describes the event" (2001: 1). He grounds his definition and understanding of modality on Lyons (1977). However, he uses his own terminology and classification for the modal meanings expressed. His study develops throughout time; he offered deontic dynamic distinction, (1986) and later put these two types of modality under the heading of event modality, which may be said to refer to the same modality type as 'root modality'. The distinction he makes has been analyzed in § II.2.2.4. The distinction that Palmer (1986, 2001) draws between deontic and dynamic modality is not accepted by many other scholars. Especially Bybee et al. (1994), another typological study, assess such a distinction as useless and prefer to employ their own labels, agent-oriented, speaker-oriented modalities which analyze the deontic and dynamic modals as agent-oriented. The main difference between Bybee et al. (1994) and Palmer (2001) stems from the criteria for distinction. Palmer takes *internal/external* conditions for deontic dynamic distinction, whereas Bybee uses the *existence/non-existence* of the illocutionary act value in agent/speaker-oriented modality.

Palmer (2001) is important for a modality study since it provides a wide range of meaning differences with its classification, and draws a general picture of what ways languages use to grammaticalize this range of meanings by the extensive exemplification of the grammaticalization patterns of mood and/or modal systems.

Bybee et al. (1994) do not on modality only but deal with the other verbal categories, tense and aspect as well. The study mainly aims at defining universal paths of change for these categories with a wide corpus study. The study clearly puts forward that metaphorical extension, inference, at the early stages, and generalization, harmony and absorption of contextual meaning occurring in the later stages of change are five mechanisms affective in the process of change in language from lexical level towards grams, which is a complicated process with "many small steps". These mechanisms may co-exist or progress orderly during the change. The study may be accepted as both a diachronic and a cognitive study with appealing universal facts defined on language and the process of language change.

We have mentioned that Bybee et al. (1994) takes modality as a semantic category with a wide range of meanings, which is rather difficult to define compared to tense and aspect, and we have analyzed the distinction defined between agent-oriented, speaker-oriented, epistemic and subordinating modalities suggested in Bybee et al. (1994) and Bybee & Fleishman (1995) in § II.2.2.3.

As for the semantic analysis of modality, Bybee et al. (1994) defines paths of change for agent-oriented sources from ability, obligation, desire and movement toward and a more general path for the major types of modality. These paths are shown as the following:
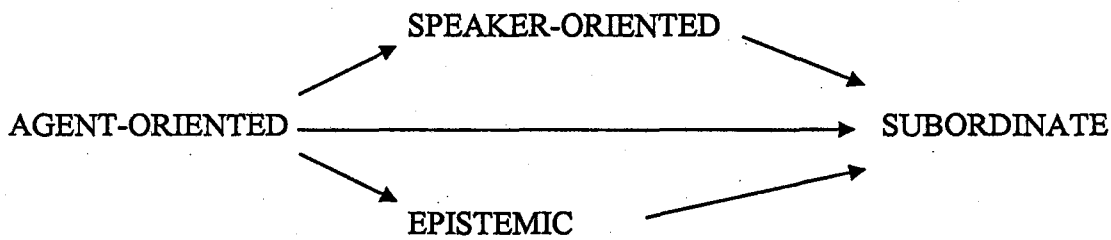
Figure. 2. Paths of development for modalities (Bybee et al., 1994: 241).

This figure clearly shows that "a single gram can develop multiple subordinate clause uses by separate paths" since all types may end in a subordinating modality at the end from different choices of change process.

The major findings of the modality analysis show that agent oriented modalities which usually exist at the earlier stages of change "tend to have non-bound, periphrastic expression" in contrast with the other types, speaker oriented, epistemic and subordinating modality. (Bybee et al., 1994: 241)

A general feature of modality, being not directly associated with the verb or verbal complex but with the whole proposition results in a "lesser tendency" for affixation on the verb for modality when compared to the other categories tense and aspect.

The analysis of future shows there is a close relationship between modality and future in that the grammaticalization paths of future begin with the agent-oriented desire and obligation, and epistemic root possibility.

II.3.3. Semantics and Pragmatics Based Approaches

The semantic and pragmatic approaches dealing with modality vary. Levinson (1983: 138) states that the "correct analysis" of modality is "of crucial to any semantic theory, especially to those based on logical principles, since it is one of the logical

expressions in language such as connectives and quantifiers".

The main studies made on pragmatics of modality is made by Lakoff (1972), which is followed by Kratzer (1991), Sweetser (1990), Nuyts (2001) and Papafragou (2000) who try to answer the same question. Coates (1983) has made an important study on the modal verb semantics of the modal verbs in English which at the same time outlines the main syntactic, contextual and semantic factors that are effective during the interpretation process of root and/or epistemic senses of the same modal forms, namely the modal verbs for English, which can be applied and used for the analysis of the modal senses in other languages expressed by other forms.

The main common discussion point in these studies is the semantic indeterminacy defined between the epistemic and root senses of modal markers, which is also mentioned in the typological studies. Modal verbs seem to be of major importance in such an analysis since they clearly show the overlapping marking tendency of root and epistemic modal senses. According to this, modal verbs are 'semantically indeterminate' and the main researches are based on how to find a solution to this indeterminacy such that it can be tested and decided what kind of modality is expressed in the utterance/sentence. We are going to try to review the different approaches to this semantic indeterminacy of modal verbs, *ambiguity, polysemy, monosemy,* in detail in section II.5.1. but now we will weigh up the semantics and pragmatics based studies in detail by drawing the general framework of each.

II.3.3.1.   Lakoff (1972)

Lakoff (1972) is one of the first studies which takes modality as a separate class in language components with their own formal characteristics. Lakoff notes that the "semantic behavior" of these modal verbs are problematic in that they are related to some lexical verbs. Therefore, to "define" modals, one should analyze different "levels of language": "the purely syntactic environment ....; the logical structure ...; and the context of utterance: the assumptions that are shared by the addressee, whether or not previously given linguistic expression in the discourse [in the same way as stated in Papafragou (2000)]; the social situation assumed by the participants in the discourse [which is supported by Coates (1983) also]; the impression the speaker wants to make on the addressee [as mentioned in Halliday (1970)]"; and so on. That is to say, the syntactic, logical (pragmatic), and the contextual factors are in progress within the comprehension process of the modals. To Lakoff (1972: 230) this complex structure of the modals is what "allows us for ambiguities of interpretation of modals due to scope differences involving quantifiers within modals".

Lakoff (1972) mainly focuses on the pragmatic factors, and tries to define appropriate contexts that are necessary for the explanation of semantic overlap of epistemic and root modals. He defines the problem as the "partial equivalence or incomplete synonymy between two modals, or between a modal and an apparent paraphrase".

(35) (a) Football players may be sex maniacs.

(b) Football players can be sex maniacs.

(c) It is possible for football players to be sex maniacs.

(Lakoff, 1972: 230)

Lakoff explains the incomplete synonymy between these forms with reference to the different pragmatic structure, i.e. the "quantification over possible worlds", of these modals.

Lakoff's (1972) view forms a base for Sweetser (1990), Nuyts (2001), and Papafragou (2000) who take the real-world situations and social and other contextual assumptions in consideration of the modals as well.

II.3.3.2.   Kratzer (1991)

Kratzer uses the distinction of root vs. epistemic modals, and circumstantial, deontic and boulomaic within root modals. A different terminology that Kratzer uses is the distinction between the *"neutral"* and *"non-neutral"* modals. Neutral modals are "not ambiguous" and involve phrases like *"in view of* ... or *given that* ...", i.e. "linguistically specified", whereas non-neutral modals do not involve any such phrases and their interpretation depends on the context, i.e. on the "non-linguistic context". According to this, non-neutral modals are not truly ambiguous and the semantic indeterminacy is due to the context of utterance. For the semantic analysis of modals Kratzer uses the *possible world semantics* and the acc*essibility relations,* in the same way as Kiefer (1987). She explains the semantic indeterminacy of modals with relativity. To Kratzer, the relativity should be analyzed in two parameters, *modal base* which "determines the set of accessible worlds" and *ordering source* which "imposes an ordering on this set" (1991:646). With this analysis of modality, the *ambiguity, gradience,* and the *inconsistencies* (e.g. the Samatarian Paradox of deontic logic) brought about by the modals are explained, which the standard analysis is unable to do. The distinction between the epistemic and circumstantial modals, in Kratzer's analysis, derives from the modal base and the ordering source.

According to this, the epistemic and circumstantial modals both have a "realistic modal base", but "different kinds of facts". However, epistemic modal involves "an epistemic modal base" and is interested in "what else may or must be the case in our world given all evidence". On the other hand, circumstantial modal includes a "circumstantial modal base and an empty ordering source" and concerns "necessities implied by or the possibilities opened up by certain sorts of facts" (Kratzer, 1991: 646).

An advantage of Kratzer's (1991) analysis is the difference between the so called "bouletic" modal which involves the *desires* rather than facts. In the case of *desires* (what I want) is the ordering source and this makes the difference.

She defines the gradience of the modals by the "double relative" modal notions which depend on two conversational backgrounds and she defines a gradient structure of necessity to possibility which include "a necessity", "a good possibility", "a possibility", "at least as good a possibility", "a better possibility", "a weak necessity" and "a slight possibility".

Kratzer (1991: 649) claims that the process of modal reference with three dimensions for all languages

Dimension 1 modal force: necessity, weak necessity, good possibility, slight possibility, at least as good a possibility, better possibility, maybe others

Dimension 2 modal base: circumstantial versus epistemic (possibly further differentiations within these groups, like knowledge coming from certain sources, facts of a special kind)

Dimension 3 ordering source: deontic, bouletic, stereotypical etc.

Finally, Kratzer (1991) mentions the argument structure of the circumstantial and the epistemic modals that are different from that of each other.

With these definitions and explanations Kratzer (1991) presents a basic point of view for the pragmatics of modal expressions, which is followed by Sweetser (1990) and Papafragou (2000).

II.3.3.3.   Sweetser (1990)

Sweetser (1990) follows the studies of Lakoff (1972) and Kratzer (1991) and supports the idea that the root and epistemic meanings of modal expressions are due to the pragmatic considerations, which are in process during communication. However, she applies an etymological approach and by relating the diachronic analysis of root modals she claims that root meaning of the modal expressions as basis and claims that epistemic meaning of the same modal forms are due to some diachronic change in the use of these forms, which was also suggested by Bybee et al. (1994). They accept the variety of meaning of these forms as a case of polysemy in the same way as conjunctions, or conditionals do. Therefore, they try to find a unitary meaning for the root and epistemic interpretations of modal expressions with the help of Talmy's (1988) theory of *force dynamics*. She analyses the root modals in terms of force dynamics, and later on applies these analyses to the epistemic modals and tries to show that the interpretation of epistemic modals mainly depends on that of root modals and are accepted as epistemic due to the pragmatic factors, i.e. the forces in progress during the interpretation of the utterances.

Sweetser (1990) takes modality as "intentional, directed forces and barriers" with the understanding of "generalized socio-physical concepts of forces and barriers". The forces she mentions are different kinds of obligation, volition, and responsibility.

Sweetser (1990: 64) applies the analyses of root modals in terms of *force dynamics* to the epistemic modals and argues that "our reason for applying the same modal

verbs to the real world and to the epistemic world is that we view the epistemic world as having a force dynamic structure parallel to that of the real world (allowing differences in the actual nature of the forces and barriers involved)" (Talmy, 1988). The force in the root sense which drives the agent to act in the expressed way is inflicted by the speaker. On the other hand, in the epistemic sense, the force is imposed by premises channeling the speaker towards the expressed conclusion, e.g. the sentence "*John must go to all department parties*" may be read as expressing an obligation for John to go to all parties, or a conclusion deriving from the facts known to the speaker (Sweetser, 1990: 64).

In short Sweetser analyses the modals in terms of the contextual factors affecting the pragmatic process of interpretation of the modals.

II.3.3.4. Papafragou (2000)

Another recent study made on the pragmatic analysis is that of Papafragou (2000) which takes modality as the main issue of her analysis. She, in the same way as Sweetser (1990), does, tries to explain the use of the same modal markers to express different modal values. She applies a new approach to the discussion of modality in this sense, namely the "relevance theory".

To Papafragou (2000) the different meanings of the modal verbs, i.e. root and epistemic, arises from "semantic content" of these verbs and it is the context that determines the meaning to be associated with the verb in terms of pragmatic considerations. Her aim is to form up "a conceptual map of modality within which it is possible to locate cross-linguistic similarity and difference" (2000: 9). According to the polysemy view, the root and epistemic senses are expressed by the same markers. In this sense Papafragou supports similar ideas with Kratzer (1991), Sweetser (1990), and

Groefsema (1985). She claims that there is a unitary meaning of modal verbs which later extends into root or epistemic interpretation during the communication process due to the pragmatic factors. Within this pragmatic explanation on the polysemy of modals, Papafragou claims that speaker has a "mental assumption" against the utterance as a result of the context upon which s/he forms a hypothesis. Later on, this hypothesis is tested against the hearer's "expectation of relevance" (2000: 18). This is the process how an utterance is interpreted as one of the various possible meanings. In this sense, we can say that discourse of utterance is of great importance in the interpretation of modals.

Papafragou(2000: 18) uses two semantic components for the modal utterances R and D as shown by the formula (36).

(36) R (D, p)

Operator (Restrictor, proposition)

Here R stands for the *'Operator'* which limits the meaning ranges of meaning that the proposition may take and relates it to the *'Restrictor'* represented by D which decides what modal meaning will be assigned to the modal verb in the utterance. The semantic content of the modal verb may function as D or if it does not the pragmatic process performs this function.

The domains mentioned by Papafragou (2000: 19) are *factual domain* (propositions describing the actual world) *regulatory domains* (legal rulings, social regulations etc.) *domain of moral beliefs, domain of desirability* (states of worlds where proposition is desired), *interpretive use of propositions* (abstract representations or abstract representations of representations). The domains listed here are not "mutually exclusive". More than one can be elected for an utterance, or they may even overlap, e.g. "normative

and ideal centered-domains".

Papafragou (2000: 35) states two main purposes for the application of theory of domains of propositions to modality: "it offers the means for pragmatically restricting modal relations .... It provides a conceptual pool for grammaticalization process to draw on". She applies this domain of proposition explanation to some of the English modal verbs: *must, may, can, should* and *ought to* (primarily). She claims that the root vs. epistemic meanings of these modals are due to the restrictors, domains of propositions and makes the following interpretation on part of these modals.

(37) Can: p is compatible with $D_{factual}$

(38) May: p is compatible with $D_{unspecified}$

(39) Must: p is entailed by $D_{unspecified}$

(40) Should: p is entailed by $D_{normative}$

The two types of semantic indeterminacy in the modals are "free enrichment" and (e.g. in the case of *can, should*) where "domain restriction" occurs, and "pragmatic saturation" (e.g. *may* and *must*) where "domain selection" occurs (2000: 43-4).

Jokes and misunderstandings prove that modal domains exist and are necessary for the interpretation of the modal verbs. Therefore, Papafragou (2000) claims that the theory is the best way to deal with the semantics of modals since other theories cannot explain the indeterminacy of modal markers as exactly as her unitary explanation does.

II.3.3.5.   Coates (1983)

Coates (1983) is concerned with the semantic indeterminacy between root and epistemic meaning of modal verbs and tries to explain this phenomenon in terms of an approach originating from mathematics, namely the *fuzzy set theory*, by adapting it to a *gradience model.* The fuzzy set theory changes the understanding of the membership to a set and defines semi-members which have the properties required for being a member to the set under only some conditions, unlike the full members which are in the set under all conditions. According to this, the membership to a set shows gradience where full members are said to be in the core of the fuzzy set and the semi-members are in the periphery, and the ones in between the core and the periphery are in the skirt.
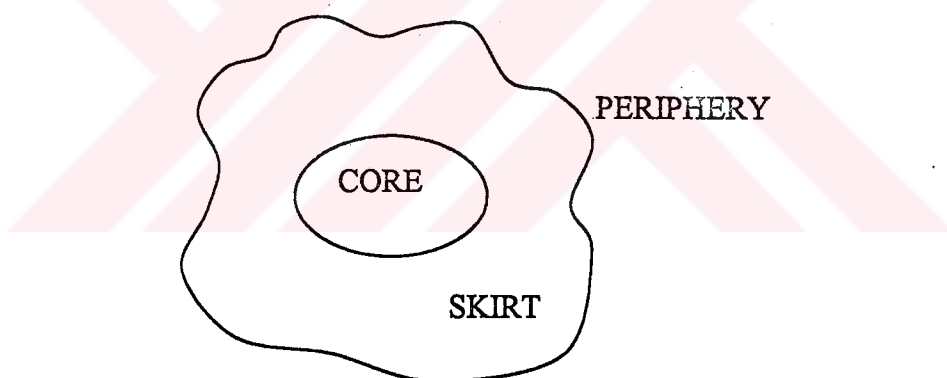
Figure 3: The fuzzy set model (Coates, 1983: 11)

As for the application of this theory to modality, Coates (1983) defines distinct sets for each of modal verbs in English with root modal and epistemic modal meanings and claims that since the modal verbs show indeterminacy in their meaning they can be analyzed in terms of the fuzzy set model. Coates (1983: 13) identifies the full members in the core, as expressing "strong" modal meanings and the ones in the periphery as expressing "weak" modal meanings.

In the gradience model, Coates (1983) defines the three categories of indeterminacy that a modal verb may apply as *gradience, ambiguity,* and *merger.*

In the case of gradience, we can say that member of a set are graded from "the closest to the core" to "the furthest to the core". Coates speaks of two types of gradience in the case of modals: *gradience of inherency,* and *gradience of restriction.* In the former the intrinsic characteristics of the modal causes the gradience, whereas in the latter, it is the external factors such as the inanimate subject, or verb of action, which determines the grade of the modal: closer to the core or to the periphery.

Ambiguity is the case where it is not possible to determine whether the modal is used in one meaning or the other. In the case of ambiguity it is possible to determine which meaning is indicated by the help of context, unlike in the case of merger.

Merger is much or less alike the ambiguity case. Merger is the case where the modal has two meanings, but on contrary to the case of ambiguity, both of the meanings make sense in the given context. The distinction is neutralized in the case of merger.

Coates (1983) claims that the meaning of modal verbs can be decided by the application of some specific formal criteria to the components of the utterance and analysis of some discourse components. To prove this hypothesis, she analyzes the corpus of English and concludes that some generalizations on how the indeterminacy should be treated and resolved can be made in the case of English modal verbs.

The findings on the epistemic modality are summarized by Coates (1983:244) as the following:

(a) Negation affects the main predication.
(b) Hypothetical meaning affects main predication.

(c) Past time marking affects the main predication.

These three characteristics constitute the Principle of the Inviolability of Epistemic Modality

(d) Epistemic modals are not found in the interrogative (apart from WILL, SHALL and WOULD which may be considered only marginally Epistemic)

(e) Epistemic modals usual receive stress of the one kind or another and are associated with fall-rise and fall-plus-rise intonation (not WILL, SHALL and WOULD)

(f) The syntactic co-occurrence patterns given for each modal show that Epistemic meaning is typically associated with the following syntactic features:[2]

HAVE + EN construction (= past time marker): MUST, MAY, WILL.

Progressive aspect: MUST, MAY, MIGHT, WILL, SHALL, WOULD

Existential subject: MUST, MAY, MIGHT, WILL, WOULD

Stative verb: MUST, MAY, MIGHT, WILL, SHALL, WOULD

Quasi-modal: MAY, MIGHT, WILL, SHALL, WOULD

Inanimate subject: WILL, WOULD

(g) Epistemic modal vary in terms of subjectivity: core examples are subjective, peripheral examples are objective. Epistemic modality is less fuzzy than Root and most examples cluster around the core.

In addition, the findings on the root modal meanings of English modal verbs are:

(a) Negation affects the modal predication.

(b) Hypothetical meaning affects modal predication.

(c) Past time marking affects the modal predication.

(d) Root modals are found in the interrogative.

(e) The core meanings of the Root modals are crucially associated with Agentivity, that is, the action referred to in the main predication is carried out by someone (or something) using their own energy.

(f) Root meaning is typically associated with the following syntactic features:[3]

Negation: MUST, OUGHT

Agentive verb: MUST, OUGHT

Passive voice: MUST, SHOULD, OUGHT, CAN (='Possibility'), COULD (='Possibility')

(g) Root modals vary in terms of both subjectivity and a strong-weak continuum. Root modality is typically fuzzy ... and most examples can be assigned not to the core or periphery, but to the skirt.

II.4. Markers of Modality

As previously noted, modality differs form the other verbal categories in that it is marked not only within the verbal complex but may also be expressed by the structure of the sentence. We have defined the main markers of modality in the typological terms as mood, modal verbs, particles, clitics and adverbials and intonation which may co-occur in a single language (§ II.3.2.). In this section, we are going to examine these markers.

II.4.1. Mood

Mood is the morphological category on the main predicate which expresses the obligatory, volitional, desirable status of the action especially in the subordinating clauses, e.g. in Latin, Greek, French etc. Although it is a way of expressing modality, mood is accepted as a different structure which has its own distinctions in itself. Thus, the main distinctions within mood are stated as *indicative* vs. *subjunctive*, and *realis* vs. *irrealis* (Palmer: 2001). Bybee & Fleischman (1995: 2) also take mood as referring to an inflectional verbal category expressing various modal meanings, such as "indicative, subjunctive, optative, imperative, conditional, etc.", whose number and/or semantic references differentiate among languages. The different modal meanings that different kinds of moods express may include *directives, purposive, wishes* and *fears, resultative, speculative, reported, assertion, presupposition, conditional, imperative* and *jussive* (Palmer: 2001: 121-136).

There are two main distinctions defined within mood: between subjunctive vs. indicative and between realis vs. irrealis. Subjunctive mood "describes the state of affairs as speakers wish or hope them to be" whereas indicative "conveys to the listener/reader that the listener/writer is making a statement, referring to the real world in an honest direct,

relevant way" (Kies, 2003). Realis, on the other hand, refers to "an event or a state of a perceived as actually occurring or having occurred contrasting with irrealis; …. a label …. having some kind of relation with unreality" (Trask, 1993: 228, 147), e.g. Papua New Guinea languages (Palmer, 2001: 145). Although the categories subjunctive/indicative and realis/irrealis refer to similar phenomena, there are differences in terms of their use. These differences between the realis/irrealis and subjunctive/indicative moods are illustrated by (Palmer, 2001: 5) as follows:

(i)   The subjunctive is found mainly in subordinate clauses.

(ii)   Irrealis and realis often co-occur with other grammatical markers.

(iii) Both are often notionally redundant, but in different ways – irrealis because of its co-occurrence with other markers, subjunctive because, in subordinate clauses, its co-occurrence is determined b the type of the complementizer.

(iv)   Unlike the indicative/subjunctive system, realis/irrealis systems do not usually occur together with tense systems. In general past and present are marked as realis, future as irrealis.

II.4.2.   Modal Verbs

Modal verbs are other and most commonly used markers of modality. Although some additional language specific features of modal verbs do occur, some basic features of these verbs, referred to as the NICE properties of the auxiliary verbs, include the co-occurrence of these verbs with negation, inversion, code and emphatic affirmation as suggested by Huddleston (qtd. in Palmer, 1986: 33). The additional common features of modal verbs defined by Palmer (1986: 33) are as follows:

(i)   They do not co-occur: there is no *will can come,*may shall be, etc. (though in a few dialects there are some very restricted possibilities of co-occurrence such as *might could.*)

(ii)   They have no –s forms for their 3rd person singular: e.g. *He oughts to come.* The form

wills exist, but as a form of the lexical verb, as does *cans*, in entirely different senses. (DARE has forms both with and without –*s*: *He dares to come, Dare he come?* This suggests that it functions as a lexical verb and a modal.)

(iii)   They have no non-finite forms: e.g. no **to can* or **canning*; there is no **I hope to can come tomorrow*.

(iv)   They have no imperatives: **Can be here! *Must come now!*

(v)   MUST has no morphologically past tense form, although others do (*could, should, might, etc.*); of those forms, only *could* is used to refer to past time (although all may occur in reported speech).

(vi)   There are suppletive negative forms:
He may be there   ⟶   He can't be there
He must be there   ⟶   He needn't be there

(vii)   There are formal differences between the modal verbs, in their epistemic and deontic senses, in terms of negation and tense.

It is important to mention *semi-modal* verbs, e.g. *have to, need* and quasi-modal verbs, e.g. *bound to, dare*, defined in English with some of these features, and modal meaning (Quirk et. al, 1985). On the other hand, modal verbs of other languages may have additional properties or lack some of the ones listed above. One thing is certain that modal verbs occur with auxiliary like properties and are of great importance to linguists who try to explain of the modality systems of these languages especially in that they are the markers where the semantic indeterminacy is seen most clearly.

II.4.3.   Particles, Clitics, Adverbs

Except from mood (inflection on the verb) and modal verbs, it is also a common phenomena that modal sense is expressed with the use of certain *particles, clitics*, especially in the agglutinative languages (Palmer, 1986: 44), and *adverbials*, i.e. lexical items.

Clitics and particles are the components of the syntactic organization

independent of the verbal complex. They can be used to express modality in some languages, such as the particle "xu" in Luiseñõ (Uto-Aztecan, California) as exemplified in the following.

(41) noo xu   n   po   heyi

     I   modal   I+SG+CP+ FUT dig

     'I should dig'

(Palmer, 1986:44)

Adverbs are also used to express modality in language (Hoye, 1997) which is a common case with the languages, e.g. English *perhaps, certainly, probably, etc.* or Turkish equivalents of them *belki, kesinlikle, sanki* etc.

The fact that these are markers of modality shows us that it is not only on the verbal paradigm that languages express modality. The particles, clitics, and adverbs are the proof that modality is more associated with the whole of the sentence/utterance than tense and aspect (Palmer, 1986: 45). It can be claimed that the modal value of a sentence/utterance is determined with respect to a phrase in the sentences or to the whole of it.

II.4.4.   Intonation

Intonation is another marker of modality, which also shows the importance of the discourse within the interpretation of the modal meaning of an utterance (Palmer, 1986; Coates 1980, 1983; Bybee, 1994, 1995; Halliday, 1970). Even in English intonation plays an important role in deciding the distinction between the meanings expressed by modal verbs *should,* and *ought to.* That is to say, it is the prosodic features that decide which of the modal senses, i.e. epistemic or root, the modal verbs indicate (Coates, 1980:340, 1983:

134). Intonation is also an important marker of the modality in Turkish where the prosodic features are significant for other systems of the language.

Although Palmer (1986) accepts intonation as a modality maker, he does not focus on his typological study on it since intonation, in the same way as particles, clitics and adverbials, can not be analyzed as a universal grammatical pattern.

II.4.5.   Complex Systems

Palmer (2001) mentions some languages with a complex system of modality where modal verbs, clitics of different kinds and particles occur within a language with the function of modal expression, and shows Ngiyambaa, a language spoken at N. S. Wales, Australia, as an example language with a complex system.

II.4.6.   Modality in Subordinating Clauses

Although the modal value of an utterance is decided by the main clause, subordinating clauses are also important in the modality discussions. Palmer (1986: 126) states three main reasons for this: modal forms may also be used in the subordinating clauses, it is the modal judgement of the subjects in the main clauses that are reported in the subordinating clause and if that subject of main clause is the first person then, it is the attitude or assessment of the speaker him/herself. Bybee et al. (1994: 180) defines a distinct type of modality where the speaker and agent oriented modal markers are used in some specific kinds of subordinating clauses, i.e. complement clauses, concessive and purpose clauses in English (§ II.2.2.3).

II.5. Semantics of Modality

We have mentioned the different approaches that take modality as a semantic category which mainly grammaticalizes on the verbal complex. Since we have shown the grammatical marking of this semantic category with different ways of grammaticalization, i.e. mood, modality, particles, clitics, adverbials and lexical items, now we will analyze what is involved in the modality at the semantic level. Although we have mentioned most of the arguments on the semantics of modality in § II.3.3., where we referred to semantic and pragmatic approaches to modality, there are some notions that should be mentioned concerning the semantic aspect of modality and modal markers.

The first thing to be examined in the semantic structure of the modality is the semantic indeterminacy of the modal markers. Later will to describe main concepts involved in the semantic content of the modal expressions.

II.5.1.   Semantic Indeterminacy of the Modal Expressions

As we have discussed in § II.3.3., there is a universal tendency of languages to use the same forms for the expression of different kinds of modal meanings, i.e. epistemic and root (or deontic). The semantic indeterminacy of modal expressions is more common with the grammatical markers, modal verbs and the affixes, than it is with the lexical items, since the referents of the lexical items are more clearly understood with less dependence on the discourse conditions. Most of the semantic studies focus on the modal verbs (Papafragou, 2000; Sweetser, 1990; Lakoff, 1972; Kratzer, 1991; Coates, 1983 etc.) because of the fact that these researches are mainly made on English where modal verbs are the primary modality markers, which can be said to be the most appealing examples of semantic indeterminacy.

There are mainly three ways to cope with the indeterminate behaviors of the modal verbs: ambiguity, polysemy, and monosemy. In addition, Coates (1983) defines the gradience model (§ 2.4.3.5.) combining the ambiguity and the monosemy views.

As is known, ambiguity is the case where an item or a construction may lead to more than semantic interpretation. Palmer (1986, 2001) defines the indeterminacy between the epistemic and deontic meanings of the same forms as ambiguity and claims that the discourse components help the interpretation of one of the epistemic and non-epistemic meanings. Palmer (1986) talks of ambiguous modal verbs, e.g. MUST and MAY in English, and mood markers, e.g. in Latin expressing subjunctive or indicative.

Sweetser (1990), Bybee et al. (1994), Nuyts (2001), Lyons (1977), and Halliday (1970) see the semantic indeterminacy of modal verbs as a case of polysemy, i.e. the several different meanings of the modal verbs derive from a single basic meaning. Due to the evidences from historical development and language acquisition processes, it is generally accepted that the root (deontic) modal meaning is the basic form and the epistemic modal originates from that one meaning. The explanation of Bybee et al. (1994) and Sweetser (1990) for the polysemy of modal verbs may be defined as homonymy also since they claim that the root meaning of modals is historically basic to the epistemic meaning.

Similar to polysemy view, it is also said that there is a single meaning of the modal expressions (Perkins, 1983; Haegeman, 1983, Kratzer, 1991; Lakoff, 1972). Monosemy of the modal verbs denote a single basic meaning and claim that the other meanings are expressed due to the contextual variables, i.e. semantic and pragmatic considerations.

Except from these, Coates (1983) claims that the gradience model she suggests, depending on the fuzzy set theory, explains the semantic behavior of the modal verbs by combining the ambiguity and the polysemy views by defining a scale of root to epistemic meanings of the modal verbs.

It is clear that in order to determine the meaning/function of the modal expressions, the semantic and pragmatic considerations should be taken in account (Papafragou, 2000: 25)

II.5.2.   Basic Variables in the Semantics of Modality: Future Reference, Agentivity, Subjectivity, Factuality

The basic variables in modality are factuality, subjectivity, agentivity, and future reference of the modal expression, which are defined in Lyons (1977).

Factuality of the modal expression is defined in three labels depending on the commitment of the speaker to the truth of the proposition expressed in the uttered sentence in the discussion of epistemic modality (Lyons, 1977). These are *factuality*, *non-factuality* and *contra-factuality*. Factivity, as defined by Lyons, is the case where speaker commits himself to the truth of the proposition, e.g. "X knows that *p*". However, non-factivity is the case, more generally with the predicates of *believe* or *think*, which do not commit the speaker to truth or falsity of the proposition. On the other hand, contra-factivity refers to cases where speaker commits himself to that the proposition is false. This is the frequent case with 'wishes' and 'the unreal conditionals' (1977: 795). These features are also vital for the discussion of deontic modality.

Palmer (1986: 17) also uses factuality as "a criteria" on "the definition of modality". According to Palmer, although non-factuality is seen as a basic feature of the

modal expressions, it does not mean to say that the factual statements can not involve subjective opinions or judgments of the speakers.

Palmer also mentions the "assertive" vs. "factual" distinctions of Hooper (qtd. in Palmer, 1986: 142) which explains the reason why some factive statements are modals as well. Except from this, the distinction between assertion and presupposition is a factor in the modal value of the utterance.

Subjectivity is seen as another important criterion for the modal utterances. Even the definition of modality involves the subjective attitude of modality, i.e. "grammaticalization of speakers' (subjective) attitudes and opinions (Palmer, 1986: 16), such that "only grammatical systems in which a great deal of subjectivity is involved can therefore be considered modal" (Palmer, 1986: 17).

Subjectivity is also important in Lyons (1977) which makes the distinction between subjective vs. objective epistemic modality. An objectively modalized utterance commits speaker to the factuality of the information he is giving, the act completed is 'telling', which can be "hypothesized in a real conditional statement and ... be referred to by the complement of a factive predicator" (1977: 799). Subjective epistemic utterance, on the other hand, does not "tell" the information. The main difference between the two notions may be stated as in an objective epistemic modal utterance speaker is the authority over the utterance and is more confident about the truth of the information, whereas in a subjective epistemic modal he is less confident. Lyons (1977: 797) exemplifies the objective epistemic modality with the sentence (42) and subjective epistemic modality with (43).

(42) Alfred may be unmarried.
(43) Alfred must be unmarried.

Palmer (1986: 102) states that non-epistemic uses of modals may exclude the subjectivity. In order to explain this phenomenon, Palmer distinguishes between the deontic and dynamic modalities, the former being subjective while the later is not, and exemplifies the deontic modal as (44).

(44)   John can speak Italian.

Agentivity is considered as a concept related to the deontic modality rather than epistemic. Deontic modality denotes that there are responsible agents to fulfill the necessary or possible acts (Lyons, 1977: 681-2). Lyons bases the agentivity of the deontic modals on the speech act theory of Searle (1969). Bybee et al. (1994) also take the speech act value of the deontic modals as a criteria and a distinguishing feature; however, they mention a distinct type of modality as speaker-oriented modality contrary to agent-oriented modality which is referred to as the root modals. To Bybee et al. (1994) the speech act status of the modals should be analyzed in a different kind of modality which mainly depends on the illocutionary force of the modal expressions.

We have mentioned the close relationship between modality and other verbal categories, tense and aspect. Among these, future tense has the closest relation between modality, since the deontic modal meaning inherently implies futurity (Lyons, 1977; Kiefer, 1991; Palmer, 1986). This relationship can be accounted with the fact that future is not only used for predictions or factual questions on future events, but also for "non-factive utterances, involving supposition, inference, wish, intention and desire" (Lyons, 1977:816). Furthermore it is clear that modal expressions have future reference, especially when they have root references (Coates, 1983). This is explained by pragmatic factors that an act can not be laid as an obligation or one can not give permission for a past event

which has already been completed.

The modal elements may refer to future, even mark the future tense (45).

(45) Yarın geleyim.

(Palmer, 1986: 17)

Bybee et al. (1994) states that this close relationship is a result of the synchronic development of language which suggests that the future tense and obligation come from the same sources, which is true of many languages of the world.

III. MODALITY IN TURKISH

After having a general view of what modality refers to in the universal terms, we are going to analyze how this phenomenon is treated in Turkish. In this section we will analyze the studies made on the modality system, define the types of modality that are grammaticalized and the markers of these different modal types.

III.1. Previous Studies on Modality in Turkish

As we have explained in the previous chapter, modality is an important issue in language studies. However, the number of the studies on Turkish focusing on modality is limited. Except from the grammar studies the studies on modality system of Turkish frequently focus on ability (-*Ebil*) or conditional -*sE*, rather than necessity. We can consider the studies on Turkish modal system in two groups generally: the traditional approaches and the modern linguistic studies.

Modality is generally taken as a part of the tense system of language and only in the inflectional system in most of the grammar studies. These grammars generally ignore the lexical items used for the expression of modality. In the traditional approach, modality is defined as the different forms of the predicate of the sentence determined by the temporal and semantic referents of it (Gencan, 2000; 304). The traditional approaches to the studies of Turkish grammar (e.g. Banguoğlu, 2000; Ergin, 1986; Gencan, 2000) take the main tense markers in Turkish as modal expressions at the same time and label the tense and aspect markers as the indicative mood markers (Dilaçar, 1971) or epistemic modality (Gencan, 2000; Kocaman, 1998; Banguoğlu, 2000; Hatiboğlu, 1972; Ediskun, 1984; Üçok, 1947, etc.). In this sense, these grammar studies are in the tendency of defining two main groups of modality in Turkish: one referring to what we call as the

epistemic modality, i.e. the utterances where the speaker aims at informing the hearer, and the second group, *deontic*, where the speaker communicates an attitude towards the predicate. We should note here that, the terms *deontic* and *epistemic* are not used as their general reference but with specific references for the translation of the terms *"bildirme"* (indicative-declerative) and the *"dilek-şart"* (desirative-conditional) to draw a general understanding of modality in Turkish grammars.

The linguistic studies, on the other hand, label the verbal inflectional suffixes as the TAM markers (as defined in § I.4) and distinguish them in terms of their primary functions. According to this, the tenses that are grammaticalized in Turkish and the aspect markers are distinguished from each other and modal markers are categorized in a distinct section (Kornfilt, 1997). The TAM suffixes and their functions are as follows:

-DI	Past tense/ Relative tense/ Present perfect/ Perfective/ Semelfactive/ Punctual/ Telic
-mIş	Past perfect (*-mIştI*)/ Future perfect (*-mIş olacak*) / Evidential
-(I)yor	Present tense/ Continuous/ Progressive/ Ingressive / Iterative
-(y)EcEk	Future tense/ Relative tense *(-mIş/-(I)yor olacak)*
-(I)r	Aorist (present tense)/ Habitual

Table 3: The Turkish TAM suffixes and their functions

The modality markers, on the other hand, cover the *declarative* ("dilek-şart") markers as they are labeled in the traditional grammars. The main modal meanings and the markers of these modal meanings are: conditional (and wish) marker *–(y)sA*, imperative – Ø (*-(Y)In*), optative *–(y)A*, debitive *–mElİ*, potential *–(y)Ebil*, certainty – *mElİ, -(y)Ebil, -*

DIr, assertive *–DI, -mIş, -Ir* (Kornfilt, 1997).

Except from the grammar studies, there are many important researches which focus on concepts related to modality, i.e. possibility, necessity, ability, etc. and mention both the lexical and inflectional markers of modality in relation to other components of the sentence and to each other. Among others, the main of the studies on modality in Turkish are: Slobin and Aksu (1982), Savaşır (1986), Kocaman (1986; 1988; 1996), Aksu-Koç (1988), Ruhi et al. (1992), Erguvanlı-Taylan and Özsoy (1993), Ozil (1994) Kerslake (1996), Schaaik (1994), Aygen Tosun (1998), Cinque (2001), Güven (2001), etc.

Savaşır (1986) mainly studies ability in Turkish. The ability marker *-(y)Ebil* is analyzed in terms of ability expression in relation to other TAM markers, i.e. aorist, in the study. Kerslake (1996) -another study on *–(y)Ebil-* rather focuses on epistemic and deontic possibility use of the morpheme. Kerslake argues conflicting ideas on the use of *–(y)Ebil* and aorist with Savaşır (1986) on the use of marker with the aorist.

Another study on Turkish modal system is Kocaman (1988) which focuses on the fact that modality is directly concerned not only with the verbal complex but also with the whole proposition. He relates this to the fact that Turkish uses not only grammatical markers, i.e. inflectional suffixes for the expression of modality but other lexical items, i.e. modal adverbials such as *belki, herhalde, sanırım, tahmin ederim* as well. Therefore, pragmatic and discoursal considerations such as subjectivity or objectivity should be taken in consideration.

Kocaman (1986; 1996), focus on necessity and are, therefore, more vital for our study. He tries to define the semantic functions of the necessity expressions in Turkish and different markers of necessity: inflection on the verb, lexical items, and modal adverbs (as he refers to them "*modal adjectives*").

Ruhi et al. (1992) try to classify the modal adverbs of Turkish in relation to modal inflectional suffixes and take the work of Palmer (1986) as basis to their discussion. They mainly focus on the epistemic possibility adverbs *herhalde, galiba, belki, kesinlikle, mutlaka* and classify them depending on the assertion and knowledge vs. belief based status expressed by these adverbs (§ III.2). Ruhi et al. (1992) also put forward that some discourse connectors such as *–de* and *–ki* and discourse fillers such as *eee* and *yani* may affect the meanings of the modal adverbs in question.

Erguvanlı-Taylan and Özsoy (1993) take modality as an issue to be taught and focus on the use of modal adverbs in Turkish; they draw the general picture of modality system in Turkish.

Ozil (1994) is another important study on modality which analyzes the subordination process of the modal sentences.

Finally, Cinque supports the idea that the verbal suffixes in Turkish has a fixed order and the flexible uses result from the different functions expressed by the same morpheme. Güven (2001) focuses on the case of ability marker *–Ebil* depending on Cinque's thesis on the modal suffixes.

III.2. Markers of Modality

Like many other languages, Turkish uses various markers for modality, i.e. modal inflection on the verb, particles, lexical items, and intonation. We have mentioned that most important studies on modality focus on mood or the modal verbs (Coates, 1983; Palmer, 1986: 2001; Bybee et al, 1994; Bybee & Fleischman, 1995; Papafragou, 2000; Nuyts, 2001, etc.). However, since Turkish does not use a system of auxiliary verbs as English or Greek, the modal auxiliaries are, naturally, not a part of the modality system of

the language. The lexical items used as predicates replace the modal auxiliaries. Although there are verbal inflection markers, modal meaning can as well be expressed by lexical items due to some syntactic and semantic factors, which is also a common phenomenon in other languages of the world. For example, in case of negation or nominalization process, the inflectional volitional modal marker *–E* can be paraphrased by the verb *iste-*, which is also common with the other modal suffixes in Turkish including necessity marker *–mElİ*.

(46) Yarın   siz-e   gel-e-yim.

    tomorrow   you-dat come-vol.-1sg.

    'I shall visit you tomorrow.'

    a. Yarın size gelmek istemiyorum.

    'I don't want to visit you tomorrow:'

    b. Benden yarın size gelmemi istedi.

    'He wanted me to visit you tomorrow.'

As mentioned before the inflectional modal markers are the major ways of expressing modality in Turkish. The main inflectional modal suffixes are conditional (and wish) marker *–(y)sA*, imperative *–Ø/-(Y)In*, optative *–(y)A*, debitive *–mElİ*, potential *–(y)Ebil*, certainty – *mElİ, (y)Ebil, -DIr*, assertive *–DI, -mIş, -Ir* (Kornfilt, 1997). Banguoğlu (2000) also mentions conditional *–sE*, volitional *–(yA)*, necessitive *–mElİ*, and imperative *–Ø*.

The above markers can be exemplified as follows with the modal references given in the parentheses:

(47) Birkaç kez okusa unutmaz. *(Conditional)*

    'If he reads many times, he would not forget.'

(48) Kalk yerimden! *(Imperative)*

'Go away! That's my seat.'

(49) Yarın kendime güzel bir elbise alayım. *(Optative)*

'I shall buy a beautiful dress for myself tomorrow'

(50) Çocuk odasında toz tutulmasını önlemek için az eşya bulunmalıdır.

(Debitive/Necessity)

'There should be few furniture in the child's room to avoid dust.'

(51) Dakikada seksen kelime yazabilyorum. (Potential/Ability)

'I can type 80 words per minute.'

These markers of modality should be labeled as 'mood' which refers to the inflection on the verb expressing modal meaning rather than modality. However, the inflectional markers of Turkish are not analyzed under the heading of the subjunctive, indicative, realis, or irrealis. Rather these are the modal inflectional suffixes that express optative, imperative modal meanings as mentioned in Bybee et al. (1994).

The modal verb is common with many languages and is seen as the main markers of modality. Since they belong to the grammatical system of the language and have semantic content in the same way as lexical items do, they are frequently subject to both syntactic and semantic studies, the most appealing point about them being the semantic indeterminacy between the epistemic and non-epistemic modal meanings.

However, Turkish does not use a developed system of auxiliary, therefore, does not have modal verbs. Rather Turkish uses lexical items such as modal adverbs, i.e. *kesinlikle, mecburen,* modal adjectives, e.g. *kaçınılmaz, muhtemel, olası,* and the modal predicates that inherently carry modal reference, e.g. *gerek*$_V$, *iste*$_V$, as well.

(52) Çok çalışmam gerek, anne, çook!

'I need to study very hard Mummy, really very hard'!

(53) Telefon numaralarını tek tek kaydetmeniz gerekiyor.

'You have to record each phone number one by one.'

(54) İyi şartlarda yaşamak istiyorum.

'I want to live under better conditions.'

The use of modal adverbs is common in Turkish. Among the modal adverbs of Turkish are *mutlaka, herhalde, belki, galiba, kesinlikle, mecburen, bence* etc.

The modal adverbs can also be used with the modal suffixes and may add to their modal indications (Kocaman, 1986; Erguvanlı Taylan and Özsoy, 1993; Ruhi et al., 1997). This may be true for both epistemic and some agent or speaker-oriented modal suffixes, i.e. possibility, ability, necessity, obligation, advice, permissive, etc. For example:

(55) Bu filmi mutlaka görmelisin.

'You certainly should see this movie.'

(56) Tabii ki başarabilirsin, biraz daha sıkı çalışman yeterli.

'Of course you can do it; all you need is to study a little   harder.'

(57) Bu kitabı mutlaka basalım.

'We shall certainly publish the book.'

Except from the modal adverbs, some predicates that are commonly used in Turkish may inherently express modality, thus determine the modal value of the utterance. The most important examples of these modal predicates are used for obligation or necessity, e.g. $gerek_{V/ADJ}$, $lazım_{ADJ}$, and possibility, e.g. $mümkün_{ADJ}$, $olası_{ADJ}$ ı. The derivatives of most of these modal predicates naturally indicate modality also. Most of

these lexical items are borrowed words, e.g. *muhtemel*ADJ, *elzem*ADJ, *lüzum*ADJ, or derived forms, *olası*ADJ, *gerekli*ADJ, *zorunda*.

Intonation is, as in many languages (Coates, 1983; Palmer, 1986; Bybee et al., 1994), a part of the modal system of Turkish. Intonation especially plays an important role in determination of the strength of the expressed modal meaning such as volition, obligation, assertion, certainty, treat, unwillingness etc.

(58) Yarın burada olacaksın! *(imperative)*

'You will be here tomorrrow.'

(59) Çıkabilirsin! *(imperative)*

'You may go out.'

(60) Derya da gelmek ister *(assertion)*

'Derya also would like to come.'

(61) Şartlarımı kabul etme istersen! *(treat)*

'Don't obey my conditions if you like.'

(62) Speaker 1: Bugün döner mi sence?

'Will he come back do you think today?'

Sp. 2: a. Döner, döner. *(confidence)*

'He will.'

b. Dönecek! (treat)

'He will.'

c. Dönmeli! *(volition/ treat)*

'He should.'

The repetitive and duplicated forms as in example (62a) or the use of idiomatic

expressions as in *"eli mahkum olmak, eli kolu bağlı olmak"* are other modality expressions that require particular intonation patterns.

III.3. Categorization of Modality in Turkish

As we have mentioned before, the notion of modality is studied by different approaches and there are various categorizations of modal types (§ II.2.2.).

Among these various names for the *deontic* and *epistemic* modal meanings defined by Lyons (1977), we will prefer *root* and *epistemic*. The root vs. epistemic distinction will also be useful for the semantic analysis of modality. Within the root modals, we are also going to make distinction between agent-oriented and speaker oriented modals. In other words we will make use of the categorization offered by Bybee et al. (1994) (§ II.2.2.3) as it is more useful in it clearly distinguishes between the notions in root modals and the speech act values of the modal markers are asserted by Dilaçar (1971) as infinite. Furthermore, it includes the agentivity of the subject of the modal sentence within the analysis. Thus, we are going to define four main types of modality in Turkish: *agent-oriented, speaker-oriented, epistemic,* and *subordinating modality.*

Agent-oriented modality involves necessity, obligation, desire, ability, permission, and root possibility (Bybee et al., 1994). These modals are clearly expressed in Turkish by modal suffixes listed in § III.2. Among the modality types, obligation is also commonly expressed by modal predicates and modal adverbs. We are going to take necessity and obligation as the different degrees of necessity, obligation denoting the strong necessity sense among the agent-oriented modals.

Speaker–oriented modality differs from agent-oriented modality in that it refers to the acts performed by the addressee. Speaker-oriented modals carry modal features in that the acts to be performed are conditioned by the speaker (Bybee et al., 1994). The main speaker-oriented modals are *imperative*, *prohibitive*, *optative*, *hortative*, *admonitive*, and *permissive*.

It is natural that these modal be communicated by the same markers with agent-oriented modals. The examples of the modal markers and the speaker-oriented modal values of them given are as follows:

(63) Tamam canım, sen gidebilirsin. *(permissive)*

'Okey dear! You may go.'

(64) Artık okula tek başına gidebilirsin. *(ability)*

'You can go to school alone.'

(65) Okula gitmek için her iki yolu da kullanabilirsin. *(root possibility)*

'You can use both of the ways to reach the school.'

(66) Ninenin evine giderken ormanın içinden geçme. *(prohibition)*

'Don't use the path in the forest while going to grandma's house.'

(67) Çimlere basmayın. *(prohibition)*

'Don't step on the grass.'

(68) Bundan böyle yağlı ve tuzlu yememelisiniz. *(prohibition)*

'You should not eat salty and fatty food from now on.'

Epistemic modality, as defined before, is where speaker commits her/himself to the truth of the proposition expressed. The main types included in the epistemic modality are *speculative*, *deductive*, *assumptive*, and *evidential* (Palmer, 1986)

The epistemic modals in Turkish are generally marked by the TAM markers, e.g. assertive *–DIr*, inferential or evidential *-mIş*, or modal adverbs (§ III.2.) *mutlaka, kesinlikle, kesin, sanırım, bence.*

(69) Böyle şeyleri asla kaçırmaz, mutlaka gelir/gelecektir.

'He would not miss that, he certainly will come.'

(70) Bu kadar lezzetli bir yemeği kesinlikle beğenir/miştir/ecektir.

'S/he would certainly like such a delicious meal.'

(71) Sanırım, annesini yolcu etmeye gider/gidecektir

'I think s/he would come to see her/his mother off.'

Ruhi et al. (1992) state that the modal adverbs *"mutlaka, herhalde, belki, kesinlikle, galiba"*, indicate different levels of assertion –assertive/non-assertive– and different origins for the truth of the propositions –knowledge/belief– after Palmer (1986), and place these items on the scale as follows:

	Assertion (confidance)		Non-assertion (weak confidance, lack of confidence)
Knowledge-based	MUTLAKA	HERHALDE	BELKİ
Belief based	KESİNLİKLE		GALİBA

Table 4: The epistemic modal adverbs in Turkish (Ruhi et al., 1992: 313)

Thus, assertion is a part of the epistemic modality also. Turkish makes distinction in epistemic modality types by the verbal suffixes *–DI, -mIş*, modal adverbs, or the lexical expressions.

Bybee et al. (1994) names the use of some modal verbs within the subordinating purpose and concessive clauses as *subordinating modality* (§ II.2.2.3.). However, since we do not have modal verbs in Turkish we should deal with the modal inflectional suffixes. The subordinating modality examples in Turkish are rare. Among the modal markers of Turkish, the conditional *Eğer ...–sE* (72) can be thought of as subordinating modal since it is obligatorily used within a main sentence.

(72) Eğer gelecekse önceden haber versin.

'If s/he is going to come, tell her/him to inform me beforehand.'

The modality system of Turkish is composed of the modal suffixes, lexical expressions (modal predicates), intonation, and the idiomatic expressions indicating the agent-oriented, speaker-oriented, epistemic, and subordinating modalities. Among these the agent-oriented modal meaning under the overall heading of the root modalities forms the topic of our research. In the following section, we are going to define what is necessity is and the place of necessity in the modal system in Turkish.

IV. EXPRESSIONS OF NECESSITY IN TURKISH

One of the important types of modality is *necessity* since it is one of the basic notions included in the definition of modality (Lyons, 1977), which goes back to the philosophical studies. In order to understand and analyze the necessity in language we should first define what is necessity and the related notions, e.g. obligation. Afterwards, we will analyze the logical and linguistic understanding of necessity as a part of the modal system before we begin our analysis of the markers of necessity in Turkish.

It is seen that necessity is a difficult notion to define since the definitions of it in the dictionaries are made in terms of its derivatives or so. The dictionary definition of adjective *"necessary"* is, for example, made by the synonyms of the word recursively or the verb *'need'*, i.e.

1. absolutely essential

2. needed to achieve a certain result or effect; requisite

3.a. unavoidably determined by prior conditions or circumstances; inevitable.

  b. logically inevitable

4. required by obligation, compulsion or convention (American Heritage).

Similarly, *necessity* is generally defined by the help of its other derivatives or synonyms in the dictionaries, e.g. "a requirement, necessary duty, or obligation" (Webster's dictionary), or "requirement, essential, necessary, requisite, need, prerequisite, basic, fundamental (Oxford). A definition of necessity without using its derivatives or synonyms would be *'the act, event, or thing which another act, event, or thing is bound to'* (Turkish Dictionary).

In our discussion we feel it necessary to include *obligation* in *necessity* since in most works it is used as a synonym of *'strong necessity'* (Bybee et al., 1994; Coates, 1983; Palmer, 1986). Obligation is defined as follows:

1. The act of obligating.

2. That which obligates or constrains; the binding power of a promise, contract, oath, or vow, or of law; that which constitutes legal or moral duty.
   A tender conscience is a stronger obligation than a prohibition.

3. Any act by which a person becomes bound to do something to or for another, or to forbear something; external duties imposed by law, promise, or contract, by the relations of society, or by courtesy, kindness, etc.

   Every man has obligations which belong to his station. Duties extend beyond obligation, and direct the affections, desires, and intentions, as well as the actions.

4. The state of being obligated or bound; the state of being indebted for an act of favor or kindness; as, to place others under obligations to one.

5. (Law) A bond with a condition annexed, and a penalty for non-fulfillment. In a larger sense, it is an acknowledgment of a duty to pay a certain sum or do a certain things. (Oxford)

The main difference between the *obligation* and *necessity* is that *obligation* denotes stronger illocutionary force. That is, if something is *obligatory* the act to be done is strongly necessary since something that is unwanted occurs, usually on the part of the agent of the act, or there occurs some sanction if the act is not performed. Obligation denotes that there is no choice for the agent but to perform the action. However, in the case of necessity such a sanction does not occur, or even if it does, it is not as powerful on the agent as it is in the case of an obligatory event. In the case of necessity, the agent has the choice of not performing the act. If the agent does not perform the action, something that s/he wants/desires does not take place, it is a matter of choice. Thus, the strength of the necessity expressed by the speaker depends on the strength of the sanction that makes the act a necessity, a requisite, or an obligation.

As mentioned before (§ II.2.1), necessity can be analyzed in relation to possibility in terms of negation and can logically be defined as:

(82) nec= ~pos ~p

That is, if something is necessary it is not possible that it is false/not true, i.e. it is necessarily true. In terms of linguistic modality, we consider necessity under the heading of agent-oriented modality, therefore we are consider the attitude of the speaker towards the proposition rather than the truth value of it. In terms of agent-oriented modality, necessity concerns the status of the acts indicated by the utterances. That is, the completion of the act denoted by the main predicate is necessary/ to be necessarily accomplished.

In our study, we will analyze the modality system of necessity in Turkish in two main terms: formal analysis and the semantic analysis. In the formal analysis of necessity expressions, we are going to focus on the use of expressions of necessity with different tense, aspect, modal markers, active, passive, causative constructions, copula and different complements such as adverbs or purpose clauses. The subject person of the modal sentence is also of importance in terms of formal analysis. Furthermore we are going to see the co-occurrence of necessitive with the different complement that different lexical items of necessity may take and the internal syntactic features of the sentential complements in relation to the modal predicate.

In the semantic analysis, the main variables to be analyzed are (as in § II.5.2) the subjectivity, agentivity, factivity (and certainty, belief, knowledge based inference for epistemic meanings). These values of each modal expression will be analyzed in relation to the formal features.

After defining which forms are used for the expression of necessity and the formal analysis mentioned above, we will define which form expresses what kind of necessity by defining the gradience within the notion of necessity, from obligation to desire. The findings in this part will be based on the semantic and pragmatic studies mostly made on English modal verbs (cf. § II.3.3). The gradience (Coates, 1983) and polysemy (Papafragou, 2000) approaches will be basis for the semantic analysis in our study. We are also going to define the cases when necessity markers behave as a *merger, ambiguity*, or *gradience* in view of the formal and semantic variables that lead such phenomenon.

We have previously mentioned the semantic approach suggested by Coates (1983) (§ II.3.3.5) based on the fuzzy set theory where the modal verbs are analyzed in the fuzzy sets of root and epistemic modal references that are defined for each of them and the membership status of these modal verbs to these sets are discussed in a corpus study. The gradience of the different necessity degrees can be displayed in the following diagram, which includes the different necessity values expressed by different modal verbs in English, e.g. desire/volition can be expressed by SHOULD, while MUST can express weak necessity at the other extreme:

strong necessity/ obligation   weak necessity   volition/ desire

necessity   advice
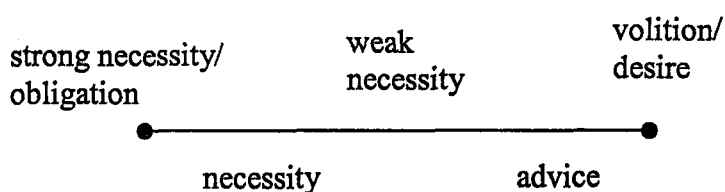
Figure 4: Root meanings of necessity modal verbs in English (Coates, 1983)

The criteria that Coates (1983: 33) uses for the gradience of necessity meaning of the modal verbs in English are:

(i)   Subject is animate

(ii) Main verb is active verb

(iii) Speaker is interested in getting subject to perform the action

(iv) Speaker has authority over subject

The matrix (Coates, 1983: 36) formed in order to analyze the root MUST parameters, which shows the gradient of it involves the following:

(i)   second person subject,
(ii)   speaker involvement,
(iii)   speaker has authority over subject,
(iv)   verb is agentive,
(v)   paraphrasable by 'it is obligatory/absolutely essential that',
(vi)   animate subject,
(vii)   paraphrasable by 'it is important that,
(viii) inanimate subject.

Coates (1983: 37) gives the syntactic features that usually co-occur with the root indication of the modal verb MUST is shown as:

Negation	100 %	+ Root Meaning
Passive	93 %	+ Root Meaning
Agentive verb	91 %	+ Root Meaning
Second person subject	87 %	+ Root Meaning
First person subject	83 %	+ Root Meaning

Table 5: The components triggering root meaning (Coates, 1983)

The table which shows the formal features of the sentence that interacts and triggers the root modal meaning of the necessity expressions. It clearly shows that the negation, passive, agentive verb, second and first person subject uses are frequent and are common in the root necessity. Although we are not going with a corpus, , we will test

whether these features are used with the root necessity in Turkish as well.

In the semantic analysis of the markers of necessity in Turkish we will use these criteria defined by Coates (1983) in order to determine the degree of necessity expressed by each marker. However, these are not the only criteria for Turkish since the system of modality, especially in terms of grammaticalization patterns are not much alike with that of English.

IV.1. Morphological Marker: -mElİ

-mElİ is the main modal inflectional suffix that expresses necessity. In this section, we are going to analyze formal and semantic features of this morpheme and show how it is affected by the other components in the sentence.

The morphological analysis of the morpheme –mElİ includes the place of it in the verbal inflection paradigm with its morphological and semantic status when used with different tense, aspect, modal markers, agreement markers, negation, voice markers, and the copula. Our analysis aims to show that these factors are affective in determining the semantic status of the necessity expression of the morpheme –mElİ.

–mElİ occurs in the verbal paradigm with the modal markers following the negation and aspect markers preceding the tense markers. The place of the suffix in the verb inflection is shown as in Table 6:

V/-(y)a/-bil (Abil)	/-iyor (Prog)	/-(y) di (P) /(y)sA (Cond) / (Agr) /-dir
	/-ir/ar (Aor)	/-(y)mış (Ev) (Ass/Prob)
	/-(y)acak (Fut)	/-(y)sA (Cond)
	/-**malı (Nec)** [ms. D.C.]	
	/-miş (Ev/Perf)	
	/-sa (Cond)	
	/-di (P)	

Table 6: Ordering of the verbal suffixes in Turkish (Göksel, 2001: 153).

IV.1.1. Co-occurring Tense Markers

Among the tense markers of Turkish, the past tense markers –*DI* is the only one that may be suffixed after the necessity suffix –*mElİ*. The present tense markers –*(I)r*, –*(I)yor* and the future tense marker –*(y)EcEk*, on the other hand, cannot be used with –*mElİ*.

The past tense marker –*DI* is conjugated on –*mElİ* after the copula –*i*-, i.e. in the following form, e.g. (83a/b):

(83)   V+*mElİ*+*y*+*dI*

a. İçinden bir ses annesinin zor durumda olduğunu söylüyordu.

Hemen eve gitmeliydi.

'She felt that her mother was in trouble. She should go home immediately.'

b. Elektrik faturasını dün ödemeliydin.

'You had to pay the electricty bill.'

When -*DI* follows –*mElİ*, it indicates that 'the act or event *was* necessary in the past'. The semantic content of the necessity marker, i.e. subjective, factual, and future

referent status, remains unaffected with the use of *-DI*. However, *future* expressed in the semantic content of *-mElİ* is determined according to the time of the act or event expressed by the utterance rather than the time of utterance. So, the perfective indication of *-DI* cannot be expressed when it is suffixed after *-mElİ*. If we formulize this as exemplified in sentences (85-87) the result should be as (84).

(84) past nec p.

(85) Bu iki tepenin arasında bir vadi vardı, biz vadiye ulaşmalıydık, oraya varmayı başarınca gerisi kolaydı.

'There was a valley between thetewo hills, We had to reach the valley, it was easy after we managed to reach there.

(86) Sana bunları en başta anlatmalıydım, biliyorum. Ama yapamadım işte.

'I should have told you al these at the beginning, but I just couldn't.'

(87) Seni hiç ciddiye almamalıydım.

'I shouldn't have taken you serious.'

Examples (85)-(87) all refer to the events that were necessary in the past. Since the events took place in the past and the consequences –whether the necessary act was or was not completed- are known there may be two different readings of these sentences: the act was completed since it was necessary, the act was not completed although it was necessary. The first one makes the non-factual reading of the utterance and the second makes the counterfactual reading of it.

IV.1.2. Co-occurring Aspect Markers

The aspect types and the makers of these aspects are as following: progressive *–yor/-mEktE* (88), perfect *–DI* (89), habitual *-Ir* (90), ingressive *-mak üzere* (91), terminative *-DI* (92), semelfactive *-DI* (93), simultaneous *-yordu* (94) punctual *-DI*(95), telic (end of a situation) *–DI* (96). (Kornfilt, 1997: 350-63):

(88) Hasan sorunun cevabını biliyor/mekte.

'Hasan knows the answer to my question.'

(89) Dün odamı toplarken telefon çaldı.

'Yesterday while I was tydying up my room, the telephone rang.'

(90) Hasan piyano çalar.

'Hasan plays the piano.'

(91) Koltuğa oturmak üzereyim.

'I am about to sit on the armchair.'

(92) Haberleri dinledikten sonra durumun ciddiyetini anladım.

'After listening to the news I understood the seriousness of the situation.

(93) Hasan öksürdü.

'Hasan coughed.'

(94) Hasan resimlere bakarken ben müzik dinliyordum.

'While Hasan was looking at the pictures, I was listening to music.'

(95) Hasan dağın zirvesine erişti.

'Hasan reached the summit of the mountain.'

(96) Hasan masa yaptı.

'Hasan made a table.'

Among these aspects markers, necessitive –*mElİ* can be suffixed after perfect -*mIş*, and continuous/progressive marker-*(I)yor*. The ordering of the TAM suffixes in Turkish (Table 6, p 76) clearly shows that the aspect markers should precede the modal markers in the inflection of the predicate.

(97) Gel*meli-*iyor/*ir/*mekte*.

-*mIş* may have the perfective reading when used with –*mElİ*; however, since the aspect marker is placed before the modal marker but modal marker can not be added to the aspect marker, the copula 'ol-' is used as a syntactic buffer (Göksel, 2001), e.g. (98) (99):

(98) Afganistandaki mevziilerine yönelik hızlı ve etkin bir karşılık,

terörist örgütlerinde şok etkisi yapmış ve Amerikanın zayıflığına

dair inançlarını sarsmış olmalı.

'The rapid and affective response to the Afghan position must have

shocked the terrorists and discarded their belief in the weakness of

the American forces.'

(99) Sayım uzun sürmüş olmalı, baksanıza ekimin 3'üne zor yetiştirdiler.

The census must have lasted long, as they could hardly finished it

at the 3rd October.

It is clear from the examples below that it is the epistemic use of –*mElİ* when it is used after *'V-mIş ol-'*. What's more, the epistemic inference is made on some past event rather than a present event. This may be explained as the result of the past reference which cannot co-occur with the agent-oriented meaning (Lyons, 1977; Coates, 1983).

Another point to mention about *–mIş* is that it may also function as a nominalizer that forms adjective phrases functioning as the characterization attribute where *'ol-'* is used as a copular verb rather than a syntactic buffer and it is only the epistemic meaning that is interpreted, e.g.:

(100) Öncelikle fotoğrafın bir yüzü olması gerekir. Yani, bir birikim

sonucu ortaya çıkmış olmalı. *(epistemic)*

'First of all, a photo should to have a face. That is, it has to be a result

of some experience.'

(101) Jimnastiğin yapıldığı havuzdaki su ısıtılmış olmalı. *(epistemic)*

'The water in the pool where exercises are made should be warm.'

Another aspect marker is the present tense and progressive/continuous aspect marker *-(I)yor*. This marker cannot be conjugated to *–mElI* as the present tense marker, most probably due to semantic reasons, which stems from the fact that *–mElI* has present or future reference, as in the case of *–mIş*.

(102) Geç kaldım. Hemen çıkmalıyım/*çıkmalıyorum/*çıkıyormalıyım

'I am late. I have to go.'

However, *–mElI* can be used with *-(I)yor* as progressive aspect marker by being suffixed to the syntactic buffer *'ol-'*, such as *–mIş*, e.g:

(103)   Bu günlerde ikisi de emekliliğin tadını çıkarıyor olmalı.

'Both of them must be enjoying the retirement nowadays.'

(104) 'Dönüş Yok'un en can alıcı bölümlerini biliyor olmalısınız.

'You should know the most striking parts of the movie *'No Way*

Back'.

(105) Kim bilir, belki sadece çocuklukta değil, her yaşta oyuncağa ihtiyacı

var insanların. Sadece biçim ve oynama tarzı değişiyor olmalı.

'Who knows may be it is not only during the childhood that a

person needs toys. Only the shape and playing techniques may be

changing.

With the perfect –mIş the past meaning is on the act denoted by the predicate of the sentence. Thus the formula (84) of the form *V-meliydi* changes. Theformula of the form *V-mış olmalı* is as in (106).

(106) nec past p

As seen, it is the epistemic meaning that is expressed by the –*mElİ* in the above examples after '*V-(I)yor ol-*'.

We have mentioned before that *-(y)EcEk* cannot be used with –*mElİ* as the future tense marker. The non-occurrence of the future tense with –*mElİ* may be explained as a semantic clash between necessity and futurity. That is, necessity, or as Lyons (1977) refers to, obligation involves futurity since one can not lay an obligation on some event or action that has occurred in the past, but in the future. Therefore, even the predicate is marked with the present the necessary act may refer to some time sooner than the reference time, i.e. future. Coates (1983) explains this by stating that the necessity expressed by the modal verbs refers to present or future events.

(107) Oğluna destek *çıkmalıyacak/*çıkacakmalı.

son-his support-nec-fut/ support-fut-nec

On the other hand, when *–(y)EcEk* functions as the aspect marker *–mElİ* may be used after the semantic copula *ol-* used as the semantic buffer, but the function of *–mElİ* differs in that case the modality expressed being the epistemic meaning of epistemic inference, as in (108); however, this is not a usual and preferred use of the modal marker, since necessity involves futurity inherently.

(108) Uçak saat 5'te kalktığına göre 10 gibi varacak (ASP) olmalılar.

Uçak saat 5'te kalktığına göre 10 gibi varmalılar.

'Since the plane took off at 5 o'clock, they need to be arriving at 10 o'clock.'

-(I)r the present tense (aorist) and *–mEktE,* the ingressive aspect marker, cannot be used with *–mElİ,* e.g.:

(109) Ahmet *git-mekte-meli/*git-meli-mekte/(?) git-mekte olmalı /*git-meli-r/ *gid-er-meli/ *gid-er ol-malı.

Generally, we can conclude that *–mElİ* can be conjugated to different aspect markers *(-mIş, (I)yor, -EcEk)* by the help of ol- as the syntaactic buffer. However, as a result of the semantic considerations it cannot be used after the progressive *-(I)yor* and habitual *-(I)r,* and *–(y)EcEk.* Also the continious/progressive aspect marker *–mEktE* cannot co-occur with *–mElİ.*

IV.1.3. Co-occurring Modal Markers

Among the modal markers, i.e. conditional (and wish) marker *–(y)sA,* imperative *–Ø (-(Y)In),* optative *–(y)A,* ability *–(y)Ebil,* certainty *(y)Ebil,* evidential *-mIş* and assertive/probability *-DIr,* only conditional *–(y)sA,* ability *–(y)Ebil,* evidential *–mIş*

and assertive –DIr can co-occur with –mElİ, e.g.:

(110) Ece okula git-meli-yse/ *meli-Ø/ *meli-ye/ *ebil/ meli-dir/*se-meli/

*e-meli/ ebil-meli/ *dir-meli.

(111) V-Ebil-mElİ (necessity)

(112) Öğrenciler her düzeyde oy ve her sömestr hocalar hakkında not

verebilmeli.

'The student should be able to vote at all levels and evaluate the

tutors each semester.

(113) V-mElİ-y-mIş (inferential)

(114) Demek ki insan her zaman sağlığına dikkat etmeliymiş.

'So, one should always take care of his health.'

(115) Harckct sırasında avuç içleriniz birbirine bakmalıdır

'During the exercise, the palms should face each other.'

(116) V-mElİ-ysE (conditional)

(117) Dürüst ve sağlam bir kişilikte bir adam ne yapmalıysa onu

yapmıştı

(118) V-mElİ-dİr (assertive)

(119) Hastaya destek seyanslarına ihtiyaç duyabileceği söylenmelidir

'The patient should be told that s/he may need extra interviews.'

When the modal markers that are used with –mElİ, the the following suffix
determines the modal type. For example, (114) - (115) are evidential utterances, since it is
–mIş that follows-mElİ.

IV.1.4. Negation and –*mElİ*

The relationship and co-occurrence of –*mElİ* and negation is an important point to be analyzed since there are morphological limitations on the use of these modal markers with the inflectional negation marker –*mE*. The verbal paradigm shows clearly that –*mE* should precede the modal marker –*mElİ* in Turkish. Therefore, –*mE* can not have scope over the necessity modal marker –*mElİ*, but on the verb.

(120) Bu çabayı ona bırakmamalı, onunla beraber sürdürmeliydi.

'He should not leave the endevour, but continue with him.'

(121) Beni asla saçım dagınıkken, makyajsız falan görmemeliler.

'They shouldn't see me with untidy hair, or without make up.'

(122) İstikrarlı olmalı, durmadan değiştirilmemeli.

'The law should be stative. It should not be changed constantly.'

(123) Kesinlikle boyun eğmemeli ve bir önceki hükümetten aldığı dersi

hiç unutmamalı.

'The citizens should never yield and should not forget the lesson

they got with the previous administration.'

(124) Bir cerrah ağır paket taşımamalı

'A surgeon should take care of her/his hands.'

Therefore, it is the predicate that is negated not the necessity itself in the negation of –*mElİ*. That is, with –*mElİ* only the predicate can be negated and the existence of necessity is not, which is formulized by Lyons (1977) as "nec ~p" with the interpretation of "it is not necessary that p".

IV.1.5. Agreement

–*mElİ* takes the subject agreement and unlike imperative necessity can be used with any of the subject persons without any morphologic limitation (Lewis, 2000: 126).

	Singular	Plural
1st	–*mElİyİm*	–*mElİyİz*
2nd	–*mElİsİn*	–*mElİsİnİz*
3d	–*mElİ*	–*mElİlEr*

Table 7: Agreement paradigm of –*mElİ*.

However, as a result of a more common use of the passive forms, the third person subject seems to occur more common than the other subject persons.

(125) Verilen kararlar aynen yapılmalı, uygulanmalı.

The decisions taken should be applied.'

(126) Yemek hazırlanmadan önce eller iyice yıkanmalı.

'The hands should be washed before the meal is prepared.'

(127) Pişmiş yiyecekler oda ısısında 2 saatten fazla bekletilmemeli.

'The cooked meal should not be left at the room temperature more than two hours.'

IV.1.6. Use of –*mElİ* with Active, Passive and Causative Verbs

We have mentioned before that –*mElİ* can co-occur with the active passive and causative verbs and suffixes. Here, we are going to analyze these factors one by one in relation to each other.

The voice of the verb, active vs. passive, does not restrict the use of –*mElİ* as the modal marker. –*mElİ* is placed after the passive marker –(I)n/l

(128) İç kaynak arayışlarında özel kurumların üzerine gidilmeli

'In the seeking of domestic fonds, we should focus on the private

sector.'

(129) Yemek hazırlanmadan önce eller iyice yıkanmalı.

'The hands should be washed thoroughly before the meal is

prepared.'

When compared to the use of *–mElİ* with the active verbs with passives, we can easily conclude from the data that the passive verbs are more commonly used with the morpheme. Coates (1983) mentions that the passive constructions used by the necessitive trigger the root meaning of the marker.

Another voice that *–mElİ* is suffixed to is the causative, which is made by the causative markers *–DIr, -Ir, -T.*

(130) Hastaya besin değeri yüksek yiyecekler yedirmelisiniz/yedirilmeli.

'The patient should be given nutritive food.'

(131) Çocuklara kalın giyecekler, ve atkı bere giydirmelisin/giydirilmeli.

'The children should be worn thick clothes, shawl, and beret.'

(132) Başarı için nasıl bir yol izlemeniz gerektiğini yavaş yavaş kafanızda

oluşturmalısınız.

'You should form up in your mind which steps you should take for

the success.'

(133) Bir kişi yanlış davrandıysa cezalandırılmalıdır.

'If a person has done something wrong s/he should be punished.'

The causative suffix requires a patient and therefore adds to the arguments of the base verb. This does not affect the use of –mElİ or restrict the semantic content of the morpheme.

IV.1.7. Use of Copula with –mElİ

Kornfilt (1997) analyzes three main copulas in Turkish: -i-, -DIr, and ol-. We can see the use of these copulas and the differences between them in terms of formal patterns that they can be used with in the following examples. Togay (1981: 49) includes –DIr in the set of aspect markers denoting non-completion. Tura Sansa (1986) asserts –DIr as assertive modal marker and Göksel (2001) takes it among the modal markers in Turkish with probability and assertion functions. We are going to follow Sansa-Tura in this sense and take –DIr as modal marker. The copulas –i and ol- used with the TAM markers of Turkish can be shown as the following:

(134) a. (Bu) gelen Ahmet/ ti/ se,/ miş/ *meli/ *ebilir/ *(y)a/ *iyor/

*mekte.

b. 'Bu gelen Ahmettir/miştir(?)/*tirmeli/*tirmiş/*direbilir/

*diriyor/dirse(?)/*mektedir.

c. Bu gelen Ahmet olmalı/olabilir/olsa/ola/*du/*muş/.

'It is Ahmet coming.'

(135) a. Derya güzel/ti/se/miş/*meli/*ebilir/*(y)a/*iyor/*mekte.

b. Derya güzeldir/miştir(?)/dirmiş/*tirmeli/*tirmiş/*direbilir/

*diriyor/dirse(?)/*mektedir.

c. Derya güzel olmalı/olabilir/olsa/ola/du/muş/(?)makta/uyor/.

'Derya is beautiful.'

As seen from the examples above, the copula –i–cannot be used with the modal suffixes in the verbal complement, while *ol-* can.

Ol- is structurally different from the other copula –i-, which is a bound morpheme, in that it behaves more as a lexical verb. Therefore, it is natural that *ol-* can be conjugated by all the modal markers in Turkish, *–mElİ, -(y)Ebil, -(y)E, -sE,* and the substantives (as named by Togay, 1981). It may behave as a syntactic buffer after aspect markers, nominalization patterns (Göksel, 2001).

IV.1.8. Semantics of *–mElİ*

Necessity as a universal fact has future reference since one cannot lay obligation or necessity on a past event that has been completed (Lyons, 1977). Thus, the act or event marked as necessary is concerned with some time sooner than the time of utterance. The future referent status of necessity is seen as the reason why it is non-factual (Lyons, 1977). *–mElİ* as the necessity marker of Turkish, thus, marks future reference and non-factuality.

The time reference of the predicate is also an important factor in determining the modal meaning expressed by *–mElİ* with the use of copula, i.e. if the copula takes characterization attribute (manner) the present reference leads epistemic reading whereas future reference leads root (agent-oriented) meaning (cf. § IV.1.1)

Subjectivity is an important factor in modality (Lyons, 1977; Palmer, 1989). In the gradience model, Coates (1983) takes subjectivity as an important variant in the modal meaning expressed by the marker.

In Turkish, *–mElİ* indicates a high degree of subjectivity, that is *–mElİ* marks subjective necessity. The source of the necessity marked by *–mElİ* is the speaker or at least opinion of the speaker confirms the existence of necessity such that it may be paraphrased by "to my belief/idea/opinion, it is obligatory, necessary, advisable that…". Thus, we can conclude that if we are to distinguish necessity in terms of modal bases in the same way as epistemic modal adverbs *–mElİ* can be taken as the belief based necessity. The highly subjective status of *–mElİ* makes it possible to express agent oriented volition or speaker-oriented advice.

The subjectivity of *–mElİ* is affected by the discourse components, such as speaker's authority on subject, speaker's interest in getting the agent to perform the action, subject person and active/passive verb, as defined for English by Coates (1983). Furthermore, some other components, e.g. modal adverbs, copula *–DIr* are also affective in the subjectivity of the necessity expressing utterances in Turkish (Kocaman, 1998, Aygen, 1998).

The main modal meaning of *–mElİ* is root necessity. The modal meanings of *–mElİ* varies. Below is a fuzzy set for *–mElİ*:
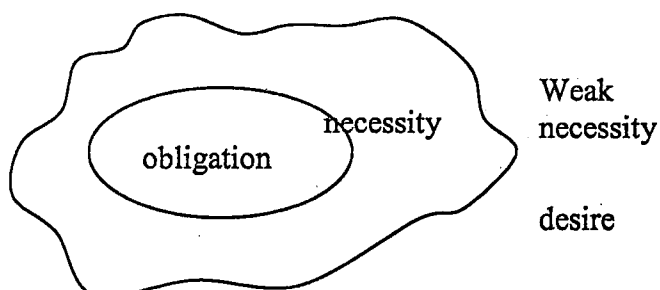
Figure 5: Fuzzy set of *-mElI*

This fuzzy set is similar to the fuzzy set defined for the modal verb SHOULD in English; however, the strong necessity meaning is not expressed by SHOULD but rather MUST.

As seen in the fuzzy set, *–mElİ* can be used to express strong necessity/obligation, necessity, weak necessity and desire. These different modal references of *–mElİ* occur within different contexts due to pragmatic reasons.

The strong necessity/obligation use of *–mElİ* occurs when the agent is not willing to perform the action. What's more the speaker usually has authority over the agent; other wise, it may be interpreted as weak necessity, which may function as an advice. The obligation is expressed by *–mElİ* when the proposition is stating a rule and it is not as frequently used as the other meanings since it is closely related to the speech act values and the context that the utterance is made in.

(136) Riskli bölgelerde çok katlı bina yapılmamalı.

'The multi-folded buildings should not be built on the areas under risk.'

(137) İstek formuna yazacağınız adres, bir posta kutusu adresi olamamalı, hafta içi saat 9:00-18:00 arasında sizi bulabileceğimiz bir adres olmalıdır.

'The adress on the request letter should be a mail-box address.'

(138) İnsan her şeyi kendi başına yapmalı, yoksa tam ve doğru olmayabilir

'One has to do everything by her/himself, or it may not be complete and correct.'

Necessity, as the most common use of *–mElİ*, frequently occurs with passive verbs. In accordance to this, generic and third person subjects are usually used.

(139) Dolayısıyla ABD kendi stratejisi açısından Irak'a girecekse

[Türkiye'de] kalmalı.

'Therefore, USA has to remain in Türkiye if she wants to conquest

Iraq.'

(140) Kazadan sonra bilinciniz açıksa değerli eşyalar hemen kontrol

edilmeli.

'After the accident the valuable belongings must immediately be

controlled, if you're conscious.'

(141) Çocuklara öğünlerden önce şekerli gıda yedirilmemeli.

'Children should not be given sugary food before the meals.'

We have mentioned that –*mElİ* indicates higher portions of subjectivity and the speaker agrees with the idea that the act is necessary. However, in example (140) the expressed necessary act is a uttered by a person who has had an accident and has experienced that the belongings should be checked immediately in the case of an accident is necessary. This can be seen as another important case, which once again proves how important and affective the contextual variables are in the definition of modality.

Weak necessity which may be expressed by –*mElİ* is more subjective than the others in that the act does not stem from the external conditions, rules etc. but from the personal opinion of the speaker. It should be underlined that the speaker's personally agreeing with the necessity of the act denoted by the proposition is different. This use of – *mElİ* may function as an advice since the speaker does not have authority on the agent and the source of the necessity is the speaker him/herself. The necessity of the act is not certain and may not be acceptable for other people or associations.

(142) Bence bir an önce gidip hocayla konuşmalıyız.

'I think we should go and talk to the tutor as soon as possible.'

(143) Sabiha Gökçen, havacılık literatüründe yer almıyor. Oysa onu tüm

dünya tanımalı.

'Sabiha Gökçen does not exist in the aviation literature. In fact,

everybody should know her.'

Volition or desire is another modal meaning that *−mElİ* may mark. Volition, in general, is concerned with unreal/hypothetical situations, which did not, does not, or will not exist, yet the speaker would be pleased if it had been, were, or becomes real. *−mElİ* may also mark this meaning. This use of *−mElİ* may be interpreted as the speaker is laying condition, necessity for a volitive act/situation to come true. This meaning of *−mElİ* naturally indicates high degree of subjectivity (the speaker is willing the act to be completed). The event generally has future reference and is non-factual.

(144) Ankaralı bir sevgilim olmalı

İstasyondan gelip beni almalı.

'I should have a fiancé from Ankara.

He should come and pick me up from the station.'

(145) Pembe panjurlu, bahçeli bir evimiz olmalı. Çocuklarımız evimizin

bahçesinde oynamalı.

'We should have a house with pink shutters and a garden. Our

children should play in its garden.

(146) Mavi gömleğini giyinmelisin. Bende kalan siyah kazağımı

aramalısın. Onu ben giymeliyim.

'You should wear your blue T-shirt. You should search the black

pullover which you left at my house. I should wear it.'

(147) Şimdi düşünüyorum da. Bizler evlenmeliydik. Boy boy

çocuklarımız olmalıydı hatta…

' I think now that, we should have married. We should even have

many children

However, it is also possible that –*mElİ* expresses regret when conjugated with past tense marker –*DI*, i.e. volition on some past event that has not been performed or completed in the past.

Among the speaker-oriented uses of –*mElİ* we can include advice. –*mElİ* may be used to giving advices which is a part of the speaker-oriented modal meaning. This function of–*mElİ* may correspond to the agent-oriented weak necessity use.

(148)   Bu filmi mutlaka görmelisin.

'You certainly should see this movie.'

In the example above, the speaker is advising that the agent should perform the act and uses –*mElİ* to guarantee that the perlocutionary act will be performed since it denotes that the act is necessary.

The use of assertive and evaluative adverbs is frequent with advice function of –*mElİ* since it indicates that the necessity of the act is also the personal opinion of the speaker.

–*mElİ* may mark epistemic modality as well as root modality. Aygen (1998) mentions that epistemic meaning of –*mElİ* is indicated only with the copula *ol-*. However,

it should be noted that *olmalı* may express both root and epistemic modal meanings and may be ambiguous in some cases. The copular use of *ol-* and the different types of its attributes determine the modal reference of *olmalı*.

Coates (1983) mentions that negation is an affective factor on necessitive modal verbs in that, it marks root necessity only. This may lead the question if *olmamalı* should also express root modality. Yet, negation does not affect *–mElİ* in the same way as it does in English. The different behaviors of the necessity markers in Turkish and English are natural since epistemic interpretation of *~nec p* can be expressed by the negation of *–mElİ* on copula in Turkish whereas MUST is replaced by CAN'T in epistemic use, e.g.

(149) Ali hasta olmamalı. Sabah markette karşılaştık.

'*Ali mustn't be ill. We met at the market in the morning.'

'Ali can't be ill. We met at the market in the morning.'

It should be noted that *~nec p* is equal to *pos ~p* thus the replacement of *olmamalı* with *olamaz* is logical/natural. However, in the epistemic sense *olmasa gerek* is more natural with the epistemic meaning of necessity.

(150) Ali hasta olmasa gerek.

'Ali can't be ill.'

The desire and advice meanings of *–mElİ*, which may be expressed with second or third person subjects of the active predicates, can not be expressed with the passive since these meanings require that the act is related to the speaker or the agent which are not explicitly stated by the passive.

Another point to mention is that when the epistemic modal adverbs *herhalde,* *galiba, belki de, sanırım* are used with agent-oriented or speaker-oriented modality, they play a controlling role over the modal meaning and determine the modal value of the utterance. E.g.

> (151) Taşınmanız elzem herhalde.   pos (nec p)
>
>   You will have to move, I guess.'
>
> (152) Galiba yapabilirim.   pos (abil p)
>
>   'Maybe I can do that.'
>
> (153) Sanırım şuradan çıkılabilir.   pos (pos p)
>
>   'I think you can exit there.'

The non-assertive status of the modal adverbs discussed by Ruhi et al. (1992) may be the reason for the controlling role of these items over the modal value of the utterances (c.f. § III.2).

IV.2. Lexical Expressions of Necessity

As mentioned before, modal senses can be expressed by the lexical items, which can be thought of as the periphrasis of the modal suffixes in Turkish (Lewis, 2000). These lexical items express the modal senses in their semantic content. Necessity provides good evidence for the periphrastic use of modal senses by wide range of lexical items that expresses necessity. The main lexical items that express necessity are *gerek*$_{V/ADJ}$, *lazım* and their derivations/compound forms. Besides, the strong necessity/obligation meaning can be expressed by *zorunda/zorunlu, şart, mecbur, icap et-,* and their derivations/compound forms. The lexical items play an important role in the study of modality since their arguments with the predicative use is different than that of the modal suffixes such that

they may indicate the source and degree of necessity in the overall structure of the utterance.

What's more different from *–mElİ*, the lexical items have specific semantic content. Since *–mElİ* is a suffix, the semantic content of it is closely related to the other components in the sentence. The lexical expressions on the other hand have clear indications of the necessity expressed. Thus these two forms of necessity expressions aree different and has important roles within the modal system.

In this section we will analyze and exemplify the derivations, functions that the lexical modal items perform, their arguments structure, and semantic features. Since they are similar in form and function, we are going to analyze the lexical necessity expressions in a single section.

IV.2.1. Derivations of the Lexical Expressions

In this section, we are going to analyze the lexical expressions of necessity in terms of their derivations. In addition, we will analyze and exemplify the verbal compounds they form with the variety verbs *ol-, kal-, kıl-, et-, tut-, bul-(un-), hisset-, gör-, duy-,* etc. We will discuss each lexical modal item with the possible compounds that they can be used in, since not all the lexical modal items can be used with the modal function. These compound verbs formed with the modal lexical items differ in their argument structure, syntactic behavior, and have distinct semantic features, which will be analyzed in the later sections.

IV.2.1.1. Gerek

Historically, the original form of *gerek* is "*kergek-/kerek-*" and was used in Turkish as the expression of necessity in the oldest forms of language before *–mElİ* (Ediskun, 1984: 183). In modern Turkish, *gerek* is used as a verb with the meaning of *to be necessary, to be needed, to be required, to be lacking. Gerek*$_V$, as the only verb among the lexical expressions of necessity, has a different place in the system, both syntactically and semantically.

> (154)   Çocuklara iki ayrı oda gerek
>
>   'We need two separate rooms for the kids.'
>
> (155)   Acilen ikinci bir dil öğrenmen gerekiyor.
>
>   'You have to learn a second foreign language immediately.'

Besides, it can be used as noun with zero derivation to mean *necessity, need*. In this meaning *gerek*$_N$ is synonymous with *ihtiyaç*$_N$ when used with the noun complement in the compound form with the verbs *gerek duy-/ gör-/ hisset-*.

> (156)   Bana uçuş için özel bir kıyafete gerek var.
>
>   'For my permission to fly, a special dress is necessary.'
>
> (157)   Türkiye'ye taze bir başlangıç gerek.
>
>   'Türkiye needs a fresh beginning.'

However, *gerek*$_N$ may mean *what is needed under a particular condition* with the Persian synonym of *icap*$_N$.

> (158) Gereği/icabı neyse yaparız.
>
>   'We will do whatever is necessary.'

(159) Mesleği gereği/icabı bu tavırlara alışık.

'Due to her/his job s/he is used to such behaviors.'

Gerek is also used as noun with the meaning of *necessity* in predicative function with existentials *var/yok (exist/not exist)*.

(160) Senin gelmene gerek yok.

'There is no need for you to come with me.'

(161) Hem ne gerek var ki kendi evinde rahat rahat oturmak varken

başkasının evine gidip sıkılarak oturmaya!

'What use is there in sitting at another's house uncomfortably,

instead of being comfortable at home?'

(162) Benim de gelmeme gerek var mı?

'Do I need to accompany you?'

The noun *gerek* is used with modal reference with negation and question form, but does not take nominal complement in the affirmative.

(163) ??/*Benim gelmeme gerek var.

'I need to come also.'

Gerek$_N$ can also function as the predicate in the sentence by the conjugation of copula *–i-*, or *ol-*. The distinction between *gerek$_V$*, *gerek$_N$* is made by the help of the inflection and negation they take: *gerek$_V$* takes verbal conjugation whereas *gerek$_N$* is used predicatively by the existentials *var/yok*. *Gerek$_N$* is negated by *değil*, whereas *gerek$_V$* is negated by the verbal negation *–mE*. We should note that *gerek değil* does not frequently occur and does not seem as natural as the other negated derivations of *gerek*, it is more common with the noun complement rather than nominal.

(164)   a. İkinci bir dil öğrenmen gerekmiyor.

        b. İkinci bir dil öğrenmene gerek yok.

        c. ? İkinci bir dil öğrenmen gerek değil.

        d. İkinci dil gerek değil.

        'You don't need to learn a second foreign language.

(165)   Kalem artık bana gerek değil.

        'The pencil is not necessary for me anymore.'

Gerek$_V$ is the only verb among the lexical expressions of necessity can take the inflection and can be used in subordinations without copula *ol-*.

(166)   Seni görmem gerekiyor/ ecek/ ti/ miş/ meli/ se/ ebilir.

        'I may need to see you.'

(167)   Seni görmem gerekeceğini sanmıyorum.

        'I don't think that I will need to see you.'

(168)   Seni görmem gerekince çağırırım.

        'I will call you when I need to see you.'

The zero-derivation of *gerek* extends the possible derivations. The noun *gerek*$_N$ has derivations of the following:

Gerek-çe $_N$: excuse, reason, justification, rationale.

(169)   Geçen hafta yönetim kongre telaşi içindeyken, Ali Sami Yen'deki

        Bursaspor mücadelesinde Sarı-Kırmızılı takımın nizami bir golü

        ofsayt gerekçesiyle iptal ediliyor

*Gerek-çe-len-dir-*_V: juşitfy.

(170) Sezer, veto kararını şöyle gerekçelendirdi: ...

*Gerekçeli*_{ADJ}: justified.

(171). Gerekçeli karar...

*Gerek-li*_{ADJ} necessary, essential, wanted, requisite, imperative, indispensable, needful, obligatory.

(172) Ancak bu stratejileri gerçekleştirmek için devlette iyi yönetim gerekli.

(173) Gerekli belgeleri tamamladıktan sonra bürolara şahsen başvurmanız gerekmektedir.

*Gerek-li-lik/gerek-lik*_N :necessity, requirement.

(174) Artık öğrenciliğin geeklerini öğrenmiş olmanız bekleniyor sizden.

*Gerek-se-/Gerek-sin*_V :consider necessary, feel the need of.
*Gerek-sin-im*_N: need, necessity, requirement.

(175) Çiçekli bitkilerin toprak gereksinimleri ise şöyledir.

*Gerek-siz*_{ADJ} : unnecessary, inappropriate, inessential, needless.

(176) Gereksiz tamiratların yüzünden evdeki herşey bozuldu.

*Gerek-siz-lik*_N : Inessentiality, verbosity.

(177) Zaten çalışan teybin yerine gidip yenisini üstelik de o kadar pahalısını almanın gereksizliği gün gibi ortada.

Among the derivations of *gerek, gerekli* is the one of the forms to be used as necessity expression also. However, the predicative use of *gerekli* is notably rare.

The derivations of verb *gerek*ᵥ on the other hand are limited, which can be shown as follows:

*Gerek-tir*ᵥ : require, consider necessary, necessitate.

(178)   Şartlar böyle gerektiriyor, yapacak birşey yok.

*Gerek-ir-lik*ₙ : necessity

(179)   Özür dilemenin gerekirliğiyle boğuşuyorum.

The other possibilities are all compounds that are formed with the verbs such as *kal-, et-, tut-* etc. which vary depending on the part of speech of the necessity expression. The possible compound verbs that *gerek*ₙ and *gerekli*ₐ𝒹𝒥 are used in and the examples are as follows:

Gereğini duy-/hisset -:feel the necessity of.

(180)   Nedense aniden gidip ocağı kontrol etmeye gerek duydum.

(181)   Kim olduğumu söyleme gereği bile duymuyorum.

Gerek gör-/ Gerekli gör-: consider necessary, necessitate.

(182)   Beni aramaya gerek bile görmemişler.

(183)   En yakın olduğumu sandığım arkadaşımla selamlaşmaya gerek bile duymuyoruz.

Gerek kal-: (usu. negated) (not) to be necessary (anymore)

(184) O halde benim seninle yaşamama gerek kalmadı.

Gerekli kıl-: necessiate.

(185) Yasada sözü edilen değişiklikler tekrar gözden geçirmeyi gerekli kılar.

We should note here that *gerek kal-* is never used in the indicative form, but is acceptable only in the negative context.

(186) Gelmene gerek kalmadı, biz işi hallettik.

(187) Gelmeme gerek kaldı mı?

(188) ?? Gelmene gerek kaldı.

IV.2.1.2. Zorunda/Zorunlu

Zorunda stems from '*zor*' means '*force*' whose derivations are '*zor kullan-*' and '*zorla-*', which mean '*to force somebody to do something that s/he is not eager to do*', thus inherently express causation. *Zorunda* (obligatory) or *zorunlu* (obliged to) is related to this *force* sense of '*zor*' since it indicates that the act is unwilled or accomplished with the force of some authority. Thus, *zorunda* and *zorunlu* express strong necessity/obligation. These items are used with predicative function in the sentence with copulas –*i*- and –*DIr*.

Zorunda ADJ: obliged, compelled, have to

(189) Önceliğimiz verimlilik olmak zorunda.

(190) Herhangi bir nedenle toplantıya katılamayacak üye bunu sekretere bildirmek zorunda.

(191) Türkiye her alanda çağdaş sınırları yakalamak zorundadır.

zorunlu ADJ: Essential, obligatory

(192) Vekaleten oy kullanacak kişinin vekalet ve imzalı beyannamesi ile üyelik kartını beraberinde getirmesi zorunludur.

*zorunluluk*N: obligation, compulsion

(193) Bu bizim için hayati bir zorunluluktur.

(194) Devamı alınmış bşr derse tekrar devam etme zorunluluğu yoktur.

In addition to that *zorunda/zorunlu* can be used in compound verbs in the same way as *gerekli*ADJ and *gerek*N does. The compound verbs of *zorunda/zorunlu* are:

zorunlu tut-/ zorunlu kıl-:to make stg. necessary,

(195) Küreselleşme maliyetlerin düşürülmesini zorunlu kılıyor.

zorunda bırak-: to oblige sb. to do stg.

(196) Beni yeni bardak almak zorunda bıraktın.

(197) Beni sana kötü davranmak zorunda bırakma!

*zorunda kal*V: to be obliged to

(198) Şiddet kullanmak zorunda kalıyorum.

(199) O aptal fırfırlı gömleğe 80 milyon ödemek zorunda kaldım.

*(kendini) zorunda hisset-/ (kendini) zorunlu hisset*V: to feel obliged to.

(200) Kurulun alınmasını zorunlu gördüğü tedbirler şunlardır:...

(201) Kendini bana ardım etmek zorunda hissetme.

(202) Bunun bir örneği ordunun kendini toparlama zorunluluğu

duymasıdır.

Zarurî$_{ADJ}$ is also another the adjective derivation of *zor*, from Persian, which occurs in some idiomatic compounds and is not used in the daily language except from these compounds, e.g.: *Zarurî ihtiyaç,*

IV.2.1.3. Şart

Şart$_N$ means *condition* in the noun use as the main meaning and can be used as indicating conditional.

(203) Yalnız bir şartım var.

'But I have a condition.'

(204) Bana bir hediye getirmek şartıyla gidebilirsin.

'You may go on condition that you may go.'

Yet, *şart*$_N$ can also be used as predicate with the copulas *-i-* and *ol* in the root necessity sense.

Şart$_N$: Necessary.

(205) Ülke ekonomisini düzeltmek için birşeyler yapılması şart.

The compound verbs that are formed with *şart*$_N$ are:

şart kıl$_V$: to make necessary

(206) Böylece beş vakit namaz şart kılındı.

(207) Markanın tesicili için ihbarname çıkarılması şart kılındı.

şart ol$_V$: become necessary, unavoidable.

(208) Artık hükumetin önlem alması şart oldu.

IV.2.1.4. Mecbur

Mecbur is a borrowed Persian adjective, which means *obligatory*. *Mecbur* is used with predicative function in the sentence, as the other lexical modal items in Turkish, with *-i-* and *ol-*.

Mecbur ₐDJ: Compelled, forced, bound, doomed.

(209) Patronun kaprislerini çekmeye ve anlayışla karşılamaya mecburum.

Mecburen ₐDV: compulsorily, forcedly.

(210) Patrona en yakın adam olduğunuz için diğerleri mecburen size çok iyi davranırlar.

Mecburi ₐDJcompulsory, obligatory, forced.

(211) Mecburî hizmet..

Mecburiyet N: obligation, compulsion.

(212) Türkiye'nin davranışını mecburiyetler belirleyecek idiyse, siyasi kadronun o veya bu olmasının, iktidarın nimetlerinin el değiştirmesinden başka ne anlamı var?

Mecburiyetten ₐDV: due to an obligation.

(213) Mecburiyetten valla bu kadar erken kalkıyorum, yoksa hiç yapamam.

Among the derivations of *mecbur* we can mention the only necessity modal adverb *mecburen* and the adjective *mecburî*. *Mecburen* is a verb phrase adverb, which may occur in sentence initial, medial or final position in the utterance, imposing obligation.

(214) Mecburen başka bir yere gideceğim.

'I hve to go somewhere else.'

(215) Yani işinizi mecburen eve taşırsınız.

'That is, you obligatorily bring home work.'

(216) Şimdi yaz okuluna gidiyorum mecburen.

'Now, I obligatorily attend the summer school.'

The adjective *mecburî* means *compulsory,* and occurs in the idiomatic uses as *mecburî hizmet* and is rare in daily use. However, the compound with *mecburî tut-* may occur in the daily language with the meaning of *to make obligatory*.

The compound verbs formed with *mecbur* are:

mecbur ol-/mecbur kal-: to be obliged to do stg.

(217) Birbiriyle çatışan görüntüler arasında seçim yapmak hepimizin

mecbur olduğu bir şey.

(218) Amerikan vatandaşlarının mecbur olmadıkça seyahat etmemesi

gibi   uygulamalar var.

mecbur et-/mecbur tut-/mecbur kıl-: to compel stg.

(219) İslamcıları bile gerçekçi bir politika izlemeye mecbur etmekte.

mecbur bırak-: to oblige sb. , compel sb.

(220) Çin idaresini uzlaşma yolu ile bazı vaadlerde bulunmaya *mecbur*

bıraktı.

(221) Bu gelişme RSFBC Başkanı Boris Yeltsin'i bir ileri hamle

yapmaya   *mecbur bıraktı*.

Mecbur hisset-: to feel (oneself) obliged to.

(222) Ama arkadaşlarımdan kitabın ne kadar harika bir kitap olduğunu

öyle çok şey duydum ki, bir süre sonra kitabı okumaya mecbur

hissettim kendimi

IV.2.1.5. Lazım

In the same way as *mecbur* (compelled), *lazım* (necessary) is also borrowed from Persian expressing necessity. It can be used as predicate with the copulas *-i-* and *ol-*.

Lazım: Requisite, required, necessary

(223)   Arko, her eve lazım.

'Essential for every home.'

(224)   Herkese lazım öneriler.

'Suggestions for everybody.'

(225)   Maddelerin demokratik ve daha özgürlükçü şekilde düzenlenmesi

lazım.

'The items should be organized in a more democratic and liberal

way.'

The derivations of *lazım* are also borrowed from its origin language, Persian: *lüzum*$_N$ (*necessity*), *elzem*$_{ADJ}$ (*most necessary, essenial*).

The Turkish derivation can be added on *lüzum* to make adjective *lüzumlu*$_{ADJ}$ and *lüzumsuz*$_{ADJ}$.

(226)   A: Şu kadınları anlamıyorum: çantalarında onca lüzumsuz şeyi

doldurup tüm gün omuzlarında taşıyorlar.

'I don't understand the women. They carry everything –necessary

or not- in their bags and carry.'

B: Öyle demeyin efendim, bu bahsettikleriniz çok lüzumlu

eşyalardır.

'Don't say that sir, the things you say are so essential.'

The compounds of *lazım* are limited and are rare in daily language use:

lüzumlu gör-: to necessitate stg.

(227)   Muhafazasına lüzum görülmeyen malzeme kaldırılıp atılır.

IV.2.2.   Inflection of the Lexical Necessity Expressions

We have seen that the lexical modal expressions of necessity are nouns or adjectives that are usually used as nominal predicates with the copulas *-i-* and *ol-*. If not, they are used in the form of compound verbs. Otherwise they do not express modality since modality is related to the whole sentence.

The predicative uses of the lexical modal items can be conjugate by *–DI*, *-mIş* and *–DIr* with copula *-i-*, and are ungrammatical with the others.

(228)   a. Sabretmek gerek/lazım/şart/zorunlu IdI/ImIş/TIr/Ø.

b. Sabretmek zorunda-ydı/ymış/dır/Ø.

c. Sabratmeye mecbur-du/muş/dur/Ø.

'S/he has to be patient.'

However, the copula *ol,-* and compounds that *gerek, zorunda/ zorunlu, şart, mecbur, lazım* can be conjugated with the following tense, aspect and modal suffixes.

(229)   gerek/lazım/mecbur/zorunlu/şart ol-muş/acak/ur/uyor/malı/*a/*sa/makta.

In the above ordering the optative *–A* and the conditional *–sA* are unacceptable due to semantic considerations.

The predicative uses of lexical expressions of necessity differ in their use in terms of person agreement due to the arguments that they take (§ IV.2.4)

Gerek$_N$, gerek$_V$, zorunlu$_{ADJ}$, lazım$_{ADJ}$ and *şart$_N$* may be used with 3rd person singular subject person only, which is the only possibility with the sentential complement, whereas *mecbur$_{ADJ}$* and *zorunda$_{ADJ}$* can be used with all of the persons.

(230) Onun yanında olmak zorunda   yım/sın/Ø/yız/sınız/lar
       'I/you/s/he/we/they have /has to live with her/him.'

(231) Ailemle yaşamaya mecbur   um/sun/Ø/uz/sunuz/lar.
       'I/you/s/he/we/they have/ has to live with my family.

IV.2.3. Negation of the Lexical Expressions of Necessity

The negated forms of the lexical items differ in terms of their parts of speech. The predicative use of the adjectives *zorunda, zorunlu, gerekli, mecbur, lazım* are negated by *değil*, the *gerek$_N$* is negated by *yok*, whereas the compound verbs that are made by these items and *gerek$_V$* are negated by the verbal negation suffix *–mE*. As we have mentioned before *gerek/ lüzum kal-* is only used in the negated context.

(232) Bunun için bankaya gelmenize gerek yok.
       'You don't need to come to the bank for that.'

(233) Bu ittifağa katılmaya mecbur degilsiniz.
       'You are not obliged to join this allience.'

(234) Benimle aynı fikirde olmak zorunda değil.
       'S/he does not have agree with me.'

(235) Beni mutlu etmek için yalan söylemen şart değil.
       'You don't have to lie to make me happy.'

(236) Artık kadın erkeğin soyadını almak zorunda değil.

'Wife does not have to take the husband's surname any longer.'

(237) Bulaşıkları hemen yıkaman gerekmiyor.

'You don't have to wash the dishes right now.'

(238) Savaş çıkarmak için bahane bulmaya bile gerek görmüyor.

'They don't need even a reason to wage a war.'

(239) Başka hiçbir ülke deprem sigortasını zorunlu tutmaz.

'No other country obliges the insurance against the earthquake.'

(240) Çok şükür ki babam beni yalan söylemek zorunda bırakmadı.

'Thanks God, my father did not compell me to lie.'

Gerek değil is not used in the negated form with nominal complement. It is rather acceptable with noun complement.

(241) ?? Bulaşıkları hemen yıkaman gerek değil.

'You don't need to wash the dishes immediately.'

(242) Senden gelecek yardım bana gerek değil.

'I don't need your help.'

Negation of lexical necessity items is different than the negation of the morphological marker of necessity –*mElİ*. We have mentioned that –*mElİ* cannot be negated with the suffix –*mE* due to syntactic considerations, therefore it is only the predicate that can be negated in the sentence, formulized as (243). On the other hand, there does not occur any such limitation for the verbal items *gerek*$_N$ and *lazım*$_{ADJ}$ –verbs formed with *ol-*, e.g. *gerek olmaz, lazım olmuyor, gerekmez*, etc. both of the possibilities may apply with the negation of the lexical expressions of necessity: *nec ~p* (244) and *~nec p* (245).

(243) *nec ~p*

(244) Hasta ziyaretini uzatmamak gerek.   *nec ~p*

    'The visit to the ill person should no t last long.'

(245) Çalışmak için illa üniversite mezunu olman gerekmez.   *~nec p*

    'It is not obligatory that you have a B.A. degree to work.'

(246) Babana küstün diye benle de konuşmaman gerekmiyor.   *~nec ~p*

    'It is not necessary for you not to talk to me once you have broke up with your father.'

The other lexical expressions of necessity, *zorunda/zorunlu, şart, mecbur* can also be used with negated nominal complements.

(247) Artık babanı üzmemek zorundasınız.

    'You should not upset your father.'

(248) Bir hafta çukulata yememeye mecburum.

    'I must not eat chocolate for a week.'

(249) Bir süre ortalarda görünmemem şart.

    'I must disappear for a while.'

However, especially in some cases the lexical items may seem unacceptable with negated nominal predicate, and their replacement with the necessity suffix –mElİ or the possibility marker –*Ebil* seems more appropriate. The reasons are semantic/pragmatic, rather than syntactic.

(250) ?? Bir hafta evden çıkmamaya mecbur/çıkmamak zorunda.

    'S/he has to/she is obliged to not go out for a week.'

(251) Bir hafta evden çıkmamalı

    'S/he mustn't go out for a week.'

(252) ?? Türkiye bu savaşa girmemeye mecbur/girmemek zorunda!

'Türkiye has to not / is obliged not to wage this war

(253) Türkiye bu savaşa girmemeli.

'Turkey should not participate this war.'

The negation of predicate in the following example is not acceptable with the negated predicate in the nominal, since its modal domain denotes obligation and the obligation on a negated act is prohibition, which is rather expressed by negation of possibility –*Ebil*. This phenomenon is usual with the English obligation marker MUST.

(254) ?Arkadaşınla sinemaya gitmemek zorundasın.

'You must not go to the cinema with your friend.'

(255) Arkadaşınla sinemaya gidemezsin.

You can't go to the cinema with your friends.'

The negation of the compound forms of the lexical expressions of necessity is also possible, although rare due to semantic/pragmatic reasons.

(256) Benim gelmemi zorunlu kılmadı.

S/he did not oblige me to come.'

(257) Toplantılara katılmayı şart koşmuyoruz/gerekli bulmuyoruz/.

'We do not oblige to attend the meetings.'

(258) Sizi evden çıkmaya mecbur etmiyorum.

'I don't push you to leave the house.'

To sum up, it is clear that the lexical expressions of necessity play an important role in the negation of the necessity. They provide the form for the negation of the proposition in the necessity rather than the necessity itself in Turkish, which is the only case with the suffix –*mEl*İ.

IV.2.4. Argument Structure of the Lexical Expressions

We have previously mentioned that the argument structures of the necessity expressing lexical items differ. The distinction can be defined between the causative compound verbs made with *bul-, kıl-, gör-, et-, bırak-, tut-, koş-,* and the non-causatives, *kal-, hisset-* and *gerek-.* Except from the argument structure, each lexical necessity item differs in the type of the complements they take, i.e. they may take sentential and nominal complement as subject of the sentence. That's why we are going to analyze each lexical item of necessity, their arguments, argument structure, and case marking in separate sections.

IV.2.4.1. *Gerek$_{V/N}$*

We have mentioned that *gerek* can be used as verb, noun and adjective with zero derivation which are distinguished from each other by the help of the conjugation and in the sentence when they are used as predicate. In the predicative use it is difficult to decide which form is used in the sentence without conjugation. These forms of *gerek* are also similar in their syntactic behavior. *Gerek$_V$* and *gerek$_N$* can take both noun and sentential complements, on the other hand, *gerek$_N$* and *gerekli$_N$* are rare with nominal complements.

When *gerek$_V$,* and *gerek$_N$* take noun complement they denote that the item is needed/necessary to complete some act/event, in other words the noun is a need of the object of the sentence. With the noun complement *gerek$_V$,* and *gerek$_N$* have two arguments, patient (subject) marked with nominative case and the theme (object) marked with dative case.

(259)   Bu iş için biz-e iki adam daha gerek.

        This job for we-dat two man more necessary

        'We need two more persons for this job.' /'Two more persons

        are necessary for us for this job.'

We should note here that although *gerek*$_V$, and *gerek*$_N$ communicate a need, they do not have any modal reference since modality involves the attitude towards an act/event/situation. With the noun complement, on the other hand, there are not any propositions expressing an act/event/situation assessed as necessary, which makes the sentence a factive statement with no modal value. Consequently, we are concerned with the sentential complement of *gerek*$_V$ and *gerek*$_N$ in our study.

Gerek$_V$ and *gerek*$_N$ take complement that is nominalized with the action nominal marker –*mE* and is ungrammatical with any complement marked as the factive nominal by the suffix –*DIk*.

(260)   Bu gece evde olmam gerek -Ø.

        tonight home be-ACT-1sg necessary   -3sg

        'I should be home tonight.'

(261)   Önemli günlerde biraraya gelmek gerek -Ø -Ø.

        important days together come necessary –pres -3sg

        'People should be together at the important days.'

(262)   *Bu gece evde olduğum gerek- Ø.

        tonight home be-FAC-1sg necessary -3sg

        'It is necessary for me to be at home.'

The ungrammaticality of the factive nominal with the necessity expression is explained by the non-factuality involved in modality.

The nominal marker occurs with *gerek*_V and *gerek*_N in two forms: in agreement with the subject of the nominal and in generic implication without any agreement.

(263)   a. Çocukların okula gitmesi gerek.

          b. Okula gitmek gerek.

In sentence (263a), the necessity of the act is for the children, whereas in (263b) it is not mentioned for whom the act is necessary, i.e. the agent of the necessary act. The second example focuses on what is necessary rather than for whom it is necessary. If the agent is understood from the context of utterance, then it may not be expressed in the nominal:

(264)   Sanırım Selda bugün toplantıya katılamaz. Enstitüye gitmesi

          gerekti.

          'I think Selda will not be able to attnd the meeting today. She had

to   go to the Institute.'

The action nominal may also be nominalized by infinitive –*mEk*, which can also co-occur with *gerek*_V, and *gerek*_N in the nominal case, if the necessity is imposed on a generic act with generic subject.

(265)   Hasta ziyaretlerini kısa tutmak gerek.

          'The visits to the ill people should not last long.

IV.2.4.2. Zorunda/Zorunlu

Although they are derivations of the same stem the *zorunda* and *zorunlu* are different from each other in terms of their syntactic behavior, especially in their argument

structure. *Zorunda* is a two-place predicate, which can only be used with nominal complement whereas *zorunlu* is a one-place argument, which can be used with both noun and nominal complements.

> (266) a. Bu kitabı okumak zorundayım.
>
> b. *Kitap zorunda(yım)./*zorunda kitap
>
> (267) a. Bu kitabı okumam/okumak zorunlu.
>
> b. Kitap zorunlu./ ?zorunlu kitap

As seen in the examples above, although *zorunda* and *zorunlu* take action nominal as complement, they differ in the possible agreement status of the nominal complements they take. Agreement on the action nominal is optional when *zorunlu* is the predicate of the sentence (267 a) in the same way as in *gerek*$_{V/N}$ The formulation of this can be made as the following:

> (268) S-gen$_i$ Obj. V-mE-poss$_i$/ACT zorunlu.

The nominal complement of *zorunda*, on the other hand should be used without any agreement, since the subject of the nominal is identical with the subject of the main clause, which can be shown as in (269):

> (269) S$_i$ PRO$_i$ Obj$_j$. V-mEk zorunda-aggr$_i$.

With the use of *zorunda* the subject of the main clause is not the necessary act but the doer of the necessary act, i.e. the agent. That is why the action nominal marker is not marked with the possessive marker

(270) (ben) Para   biriktir mek   -Ø   zorunda - Ø   -yım.

(I)   money   save   -INF   -nom   obliged -pres   -1sg

'I have to save money.'

(271) (Ben -im)   para   biriktir   me   -m -Ø   zorunlu   -Ø   - Ø.

(I-gen)   money save -ACT-1sg -nom   obligatory -pres -3sg.

'I have to save money.'

The arguments of both *zorunlu* and *zorunda* are marked with the nominative case, as the subjects of the sentences.

IV.2.4.3. Lazım

*Lazım*ADJ can function as a one place predicate, with both noun and nominal complements.

(272) Sana ucuza şehir içinde bir daire lazım.

'You need a cheap apartment in the city.'

(273) Bütün bunlar için çok paran olması lazım.

'For all these you need to have lots of money.'

The argument structure of *lazım*ADJ is similar to the *gerek*V/N and *zorunlu*ADJ. The agent of the necessary act is mentioned within the nominal clause with genitive possessive marking on the subject and the predicate of the nominal clause, respectively. The form of generic subject in the nominal is marked by the infinitive, as with *gerek*V/N and *zorunlu* ADJ

(274) Ben im   ev   -e   git-me-m -Ø   lazım-· Ø-   Ø.

I- gen_i   home -dat go-ACT-poss_i-nom necessary-pres-3sg

'I have to go home.'

(275) .Sakin ol   mak   -Ø lazim-Ø -Ø.

       calm be   -INF   -nom   necessary pres -3sg

       'It is necessary to be calm.'

The complement of *lazım* is marked with the nominative case as seen in the examples above.

IV.2.4.4. Mecbur

Mecbur is similar to *zorunda* in terms of its argument structure. It takes two arguments, one being the agent of the necessary act (subject) and the other the nominal (object).

*Mecbur*ADJ takes the agent of the necessary act as the argument in the main clause; thus, the subjects of the main clause and the nominal are necessarily identical. According to this, the nominal does not mark any genitive-possessive agreement in the internal structure. Instead there is agreement between the subject and predicate *mecbur*.

(276) (Ben)   çalış -ma -ya mecbur -Ø -um.

      I work   -ACT -dat obliged   -pres -1sg

      'I have to work.'

(277) (Zavallı çocuk) Hırsızlık yap-ma -ya mecbur- Ø -Ø.

      poor child   theft do -ACT dat   obliged-pres -3sg

      'Poor child had to steal.'

Different from the other lexical expressions of necessity *mecbur* assigns dative case on the theme (object) and nominative case on the agent (the subject), when used as the predicate of the sentence.

It may also be used non-modally with noun argument in the highly marked rethoric sense which is used with 'san-a/ on-a' (you/s/he-dat) e.g.:

(278)   Ben sana mecburum!

'I need you.'

IV.2.4.5. Şart

*Şart*ₙ shows similar features with *gerek*ᵥₙ, *zorunda* and *lazım*ₐₐⱼ: it takes single argument with nominative case in the infinitive, depending on the subject of the nominal: impersonal use does not require agreement.

(279)   (ben im) Yarın Ankara'da ol-ma -m - Ø şart-Ø-Ø.

(I-gen) tomorrow Ankara-locbe-ACT   poss-nom

obligatory-pres-3sg

'I have to be at Ankara tomorrow.'

(280)   Bugünlerde temkinli ol   mak -Ø şart -Ø -Ø.

nowadays prudent be   INF -nom necessary -pres 3sg

'One has to be prudent these days/nowadays.'

The nominal complement is marked with nominative case and the predicate is in agreement with the nominal, i.e. third person singular as all other necessity expressing adjectives used as predicate.

IV.2.5. Lexical Necessity Expressions and Voice

Passive with the use of lexical expressions of necessity can be analyzed in two ways: the passivization of the necessity, and the passivization of the predicate of the nominal. The lexical expressions of necessity can only be passivized in some of the

compound forms, and the predicate of the nominal can be passivized with the lexical necessity expressions, except form *mecbur*.

We have mentioned before that necessity cannot be passivized with *–mElİ* due to morphological rules of Turkish. Similarly, the verb *gerek*$_V$ and other lexical expressions of necessity, *gerek*$_N$, *zorunlu*$_{ADJ}$, *şart*$_N$, *lazım*$_{ADJ}$, cannot be marked with passive suffix *–In/-Il*, when they are used as predicate in the sentence with the copula *ol-* and in the compounds with the verbs *kal-* and *hisset-*. Contrary to this, *zorunda/ mecbur kal-/ ol-* can be used in the passive form. The argument structure of these items is the reason for their occurrence/non-occurrence with passive: when the subject of the main predicate is/is not the agent.

> (281) a. Gelmen gerek oldu/*olundu.
>
> b. Gelmen lazım oldu/*olundu.
>
> c. Gelmeye gerek hissetti/?hissedildi.
>
> d. Gelmeye gerek/zorunlu *kaldı/*kalınmadı.
>
> e. Gelmeye zorunlu oldu/*olundu.
>
> f. Gelmek zorunda kaldı/kalındı.
>
> g. Gelmeye mecbur kaldı/oldu/kalındı/?olundu.
>
> 'It was (*been) necessary to come.'

On the other hand, the verbal compounds with the verbs *tut-, gör-, bul-, kıl-, bırak-, et-, koş-, duy-*, can be made passive, again due to their argument structure, which clearly notes the source of necessity/obligation.

> (282) a. Gelmen/mek gerekli görüldü/bulundu/kılındı.
>
> b. Gelmeye/mene gerek duyuldu.

c Gelmen/mek zorunlu kılındı.

d Gelmek zorunda ?tutuldu/bırakıldı.

e. Gelmeye mecbur bırakıldı/kılındı/edildi.

f. Gelmen/mek şart koşuldu/kılındı.

'It is obliged that you come.'

The predicate of the nominal can also be marked as passive. Nearly all of the lexical items, used with copula or in compound form, can take nominal complement with passive, except from the predicate uses of *mecbur*ADJ. The agent of the necessary act should also be identical with the subject of the main sentence (subject of *mecbur*ADJ to whom the necessity is imposed) with *mecbur*ADJ. In addition to that *mecbur*ADJ, *mecbur et-/bırak* require human subject, thus, they are unacceptable with passive predicate in the nominal (283e, 283i). *Mecburi*ADJ is acceptable as the predicate in such cases (283b). In addition to that the use of passive nominal is rare with *zorunda*. The compound forms of *zorunda kal/mecbur kal* if these compounds are not in passive form.

(283) a. ?? Süt(ün) içilmesi mecbur/mecbur etti.

b. Süt(ün) içilmesi mecburidir.

c. ? Süt içilmek zorunda.

d. Süt içilmesini mecbur tuttu/kıldı.

e. *Sütü içilmeye mecbur etti/bıraktı.

f. Süt(ün) içilmesi gerek/lazım/şart/zorunlu.

g. Süt(ün) içilmesine gerek gördü.

h. Sütün içilmesini gerekli buldu/kıldı.

i. Sütün içilmesini şart koştu/tuttu/kıldı.

j. Sütün içilmesi zorunlu buldu/tuttu/etti/kıldı.

k. Sütün içilmesi(ni) zorunda kalırız/ zorunda kalındı.

l. Sütün içilmesi(ni) mecbur kaldı.

'To drink the milk is (made) obligatory.'

The examples here clearly show the passive is acceptable on the necessity, if it is expressed via the compound forms of the lexical items.

IV.2.6. Lexical Expressions of Necessity and Causation

As the only verb that indicates necessity *gerek*ᵥ can take the causation suffix –*DIr* and differs from the other means of expressing necessity. The other lexical markers of necessity on the other hand, cannot be used with the causation suffix –*DIr* in predicative function with copulas *ol-* and –*i-*.

(284) (a) İnsan olmak akıllı olmayı gerektirir.

(b) *İnsan olmak akıllı olmayı gerek/ lazım/ zorunda/ zorunlu/

mecbur/ şart oldurur.

'Being human requires being intellectual.'

However, the compound verbs formed with *bul-*, *gör-*, *kıl-*, *et-*, *bırak-*, *tut-* inherently express causation. To put in other words, the compound verbs *gerekli bul-*, *gerekli kıl-*, *gerekli gör-*, *zorunda bırak-*, *zorunlu tut-*, *zorunlu kıl-*, *zorunlu bul-*, *mecbur tut-*, *mecbur bırak-*, *mecbur kıl-*, *mecbur et-*, *lüzumlu kıl-*, *şart koş-*, *şart kıl-* are causative in their internal semantic structure. This internal causative semantics of compound forms is also effective on their argument structure that makes passive use of these items possible.

The causation of the predicate of the nominal complement is also acceptable with the use of lexical expressions of necessity.

(285) a. Çocuğa yemek yedirmek zorunda.

b. Çocuğa yemek yedirmeye mecbur.

c. Çocuğa yemek yedirmesi gerek/ şart/ zorunlu.

'She has to feed the child.'

IV.2.7. Adverbs and Lexical Expressions of Necessity

The modal adverbs function as specifier in the use of modal suffixes. This is valid for the lexical expressions of necessity. The modal adverbs modifying the modal predicate specify root necessity with lexical expressions also. The important point is that the adverb may modify the predicate of sentential/nominal complement or the modal predicate of main clause. The specifying function is only possible with the second case.

The adverbials usually do not occur between the complement and the necessity predicate, but if they can, this shows that the adverb modifies the modal predicate.

(286) Ahmetin dün okulda olması gerekiyordu.

'Ahmet had to be at the school yesterday.

We have touched the use of the modal adverbs with the necessity suffix –*mElİ*, and displayed the difference between the use of assertive and non-assertive epistemic modal adverbs with –*mElİ*. With the lexical expression of necessity, the assertion status of the epistemic modal is effective. With *gerek*$_V$, *gerek*$_{ADJ}$ and *lazım*$_{ADJ}$ the assertive epistemic modals strengthen the necessity expressed by the item. On the other hand, the assertive epistemic modals are unacceptable with *zorunda/zorunlu, mecbur* and *şart* due to their specified modal domain.

(287)   (a)Mutlaka/kesinlikle gelmen gerek/lazım.

    'It is certainly necessary for you to come.'

  (b)?? Mutlaka gelmek zorundasın.

  (c)?? Gelmeye mutlaka mecbursun.

   'You are certainly obliged to come.'

  (d)? Toplantıda bulunmak kesinlikle zorunlu.

   'To attend the meeting is certainly obligatory.

However, with the future tense marker on these lexical items, functioning as epistemic prediction sense, the utterances become acceptable. In this case the sentences are:

(288)   Mutlaka gelmek zorunda kalacaksın.

   'You will certainly have to come.'

(289)   Gelmeye mecbur olacaksın.

   'You will have to come.'

(290)   Toplantıda bulunmak kesinlikle zorunlu olacak.

   'To attend the meeting will certainly be obligatory.'

The non-assertive modal adverbs behave in a similar way with the lexical items as with –*mElİ*: they mark epistemic possibility on the necessity of the act/event/situation, with the formulation of *pos nec p*.

(291)   Galiba gelmeye mecburum.

   'I think I have to come.'

(292)   Herhalde gelmek zorundayım.

   'I have to come I guess.'

(293) Sanırım bunların tamamını yemem lazım.

'I think I have to eat all of it.'

(294) Belki de gitmem gerekiyordur/gereklidir.

'Maybe I have to go.'

IV.2.8. Compounds with the Lexical Expressions of Necessity

We have shown that the lexical expressions of necessity are different from each other in terms of their syntactic behavior. The compound forms that these lexical expressions of necessity are used also differ from each other in terms of the syntactic behavior according to the argument structures they take.

As we have mentioned before, *gerek gör-, gerekli bul-, zorunda/mecbur bırak-, zorunda hisset-, zorunluluğunu/gerek duy-, zorunlu/mecbur tut-, zorulu/mecbur/şart kıl-, zorunlu bul-, zorunlu gör-, mecbur et-, şart koş-* imply causation which assign an extra argument, as a universal phenomenon. However, the case suffixes and the arguments that each verb requires differ depending on the possible arguments of the lexical expressions they are used with, e.g. the one place predicates $gerek_N$, $lazım_{ADJ}$ and $şart_N$ differs from the one place predicates *zorunda* and $mecbur_{ADJ}$ in the compound forms also.

(295) Babas-ı, Sedef'-in ev-den ayrıl-ma-sı-nı gerekli/zorunlu gördü/bul-du

şart koştu/ zorunlu/ mecbur

tutu/ zorunlu buldu/

zorunlu/mecbur/şart kıldı.

father-poss Sedef-gen$_i$ home-loc-leave-ACT-poss$_i$-acc necessary find-past

'Her father necessiated/ obliged Sedef to leave home.'

(296) Baba-sı, Sedef-i ev-den ayrıl-mak- zorunda bırak-tı.

father-poss Sedef-acc home-loc-leave-INF-Ø obligatory leave-

past

'Her father obliged Sedef to leave home.'

(297) Baba-sı, Sedef-i ev-den ayrıl-ma-ya mecbur bırak-tı/et-ti.

father-3sg poss Sedef-acc home-loc-leave-ACT-Ø compel/past

'Her father compelled Sedef to leave home.'

In the example above the source of imposition is 'father of Sedef' who necessitates (compounds with *gerek*) or obliges Sedef to leave home, which is absent in the sentence with non-causative predicate.

(298) a. 'Sedef'in evden ayrılması gerek/zorunlu/şart'

b. 'Sedef evden ayrılmaya mecbur/ayrılmak zorunda.'

As seen in the examples above, the case suffix and the roles of the arguments do not change in the compound forms of the lexical necessity expressions *gerek*$_{V/N}$, *zorunda*$_{ADJ}$, *mecbur*$_{ADJ}$, *şart*$_N$. They remain the same as in their predicative use. The additional role assigned by the causation is the source of the imposition with the compound verbs. The imposer of necessity (source) is marked with the nominative with the compound forms. Furthermore, the nominal complement is marked by the accusative in the case of *gerek*$_N$, *lazım/şart/zorunlu*$_{ADJ}$ which assign nominative case when used alone as the predicate. On the other hand since *mecbur*$_{ADJ}$ and *zorunda* express the agent of the necessary act in the main clause, they do not need any change in the case marking they require in compound forms.

Yet the compound verbs that do not express causation (*kal-*, *ol-*, *hisset/duy*) do not have any influence on the roles assigned by the predicate. *Zorunda/ mecbur kal-* does not express any source of imposition marked in the sentence.

(299) a. Arkadaş-ım oda-dan çık-mak-Ø zorunda kal-dı-Ø.

friend-1sg room go out-INF-nom obliged stay-past-3sg

'My friend was obliged to leave the room.'

b. Arkadaş-ım oda-dan çık-ma-ya mecbur kal-dı-Ø.

friend-1sgposs room go out-ACT-dat compelled stay-past-3sg

'My friend had to leave the room.'

c. Arkadaş-ım-ın oda-dan çık-ma-sı-na gerek kal-ma-dı-Ø.

friend-1sg-gen$_i$ room go out-ACT-poss$_i$-dat need stay—neg-past-3sg

'It is not necessary for my friend to leave the room any more.'

It is clear form the examples that the lexical expressions of necessity preserve their original syntactic features with their use in the compound verbs. The compounds with causative implication assign an extra role of the source of the necessity the compounds made by *kal-*, *hisset-*, and copula *ol-* do not.

IV.2.9. Lexical Expressions in Subordinating Clauses

The lexical items can occur in the subordinating clauses both in subject and object position without any restriction. Besides, we should note that the uses of lexical necessity items in the predicative function and in the compound verbs differ in their form in the subordinating clause.

(300) a. Çalışması gerek/gerekiyordu.

'He had to study.'

b. Ona çalışması gerektiğini söyledim.

'I told him/her that s/he had to study.'

c. Ona çalışmak zorunda olduğunu söyledim.

'I told him/her that s/he had to study.'

d. Çalışmaya mecbur kaldığı için habersiz ayrılmış.

'S/he left without informing since hs/he had to study.'

(301) a. Pek çok çocuk çalışmaya mecbur/ mecbur kalıyor.

'Many kids are obliged to work.'

b. Çalışmaya mecbur olan pek çok çocuk var etrafımızda.

'There are many kids around that have to work.'

In the examples above it is seen that when the predicative uses of the lexical items of necessity are used in the subordination, the subordination marker is added on the copula *ol-*, which is a common phenomena in the subordination of the nominal predicates in Turkish.

The compound verbs, on the other hand, are marked by all of the subordinating markers in Turkish. Thus no change in their structure is necessary except from the omission of the agreement and tense markers.

(302) Gitmek zorunda kaldığı için özür diliyor.

'S/he apologizes for he had to leave.'

(303) Babası onu çalışmaya mecbur bıraktığı için okuyamadı.

'S/he had to leave the school since her/his father obliged her/him to work.'

*Gerek*_V as the only root verb expressing necessity in the I language system has an important role in the subordination of necessity especially when the modal morpheme – *mElİ* is to be used in the subordinating clause, e.g. in the reported speech (304b).

(304) a. Önce alışveriş yapmalıyım.

'I have to do shopping first.'

b. Önce alışveriş yapması gerektiğini söyledi.

'S/he said s/he has to do shopping first.'

Thus, the most common form of the necessity being expressed in the subordinating clause is by *gerek*_V. *Gerek*_N, *lazım* _{ADJ}, *-mElİ*, i.e. all necessity and weak necessity expressions are replaced by *gerek*_V in subordinated clause. This wide range of the periphrastic use of *gerek*_V is the reason why the semantic range of the morpheme seems to be larger than it is.

On the other hand, *zorunda, mecbur, şart* cannot be replaced by *gerek*_V due to the specified strong necessity domains (§ IV.2.4). They are used in the subordination clause by the help of the copula *ol-*. The other expressions on the other hand are common with the reported form.

IV.2.10. Semantic Features of the Lexical Expressions

As seen in section IV.2.1. the lexical items *gerek*_{V/N}, *zorunda/ zorunlu*_{ADJ}, *şart*_N, *mecbur*_{ADJ}, and *lazım*_{ADJ} and their derivations have similar semantic contents, all expressing necessity. Among these, *gerek*_{V/N} and *lazım*_{ADJ} are synonymous to each other in that they express necessity and weak necessity, and they take the same argument structure with same implication. Besides, *mecbur*_N, *zorunda/zorunlu*_{ADJ}, *şart*_N are synonymous with the indication of strong necessity. The synonymous items are different in terms of their collocations, argument structure, and case marking.

Up to now, we have analyzed the meanings (§ IV.2.1) of the lexical necessity

items and their syntactic features (§ IV.2.1-IV.2.9). Now we are going to analyze the semantic content of these items and try to define their range of use and distinctions between the synonymous items.

IV.2.10.1. Factuality, Future Reference and Subjectivity

The lexical expressions of necessity, *gerek*_{V/N}, *zorunda/ zorunlu*_{ADJ}, *şart*_N, *mecbur*_{ADJ}, *lazım*_{ADJ} and their derivations all indicate necessity with modal implication when they take nominal complement. As mentioned before with the nominal complement it is the subject of the nominal clause on whom the necessity is imposed. In the sentence "*Huzur evlerini ziyaret etmek gerek*" the speaker is expressing a general necessity of the act "*visiting the old age asylum*".

The semantic features that have been analyzed for the suffix *–mElİ* exists for the case of the lexical items. That is, the lexical items *gerek*_{V/N}, *zorunda/ zorunlu*_{ADJ}, *şart*_N, *mecbur*_{ADJ}, *lazım*_{ADJ} and their derivations also have the features of non-factuality, future reference and subjectivity. Yet, the future reference and non-factual values may be influenced by the use of tense or aspect markers in some cases. What's more, the lexical items vary in the degree of subjectivity they denote as they have different modal domains.

The lexical items and their derivations/compound forms mark the act as non-factual and future referent. For example, in the sentence "*Ankara'da olmam gerek*" it is not certain that the agent will complete the necessary act or not.

We have mentioned that the lexical expressions of necessity may be used with the tense and aspect markers without any restriction (§ IV.2.1). This leads us to question the future reference status of these modal expressions. However, we should note that the future reference is not considered for the modal expressions; rather we are concerned with

the future reference of the proposition expressed in the nominal. The lexical expressions also include futurity, reference to the completion of the act at a latter time than the time of event/act with all tenses.

The subjectivity of the lexical expressions of necessity differs from that of the necessity suffix –*mElİ* in that *gerek*_{V/N}, *zorunda/ zorunlu*_{ADJ}, *şart*_N, *mecbur*_{ADJ}, *lazım*_{ADJ} and their derivations indicate less subjectivity and are neutral in terms of the attitude of the speaker on the necessitive status of the event (Kocaman, 1988 mentions about the subjective status of *gerek*). The lexical items imply that the speaker does not evaluate the necessity of the act/event/situation rather they indicate that the speaker is just narrating that such a necessity occurs without any evaluation on the truth of the necessary status of the act/event/situation (Lyons, 1977).

IV.2.10.2. Root Necessity

The lexical expressions of necessity may be used to indicate strong necessity, necessity and weak necessity. However, they differ in their use for these different necessity degrees. Among the lexical expressions of necessity *gerek*_{V/N}, *lazım*_{ADJ} and their derivations/compounds express necessity or weak necessity and cannot have strong necessity indication. The other items, *zorunda/zorunlu*, *mecbur*, *şart* and their compound forms, express only strong necessity/obligation.

(305) a. Sabahları erken kalkmam gerekiyor. *(necesssity)*

'I have to wake up early in the mornings.'

b. Yarın erken kalkmam lazım. *(weak necessity)*

'I need to wake up early in the morning tomorrow.'

c. Her sabah erken kalkmak zorundayım. *(strong necessity)*

'I have to wake up earl in the mornings.'

d. Askerde erken kalkmak zorunludur. *(strong necessity)*

'To wake up early in the morning is obligatory.'

e. Eğer iyi bir iş istiyorsa okumaya mecbur. *(strong necessity)*

'S/he must have a good education for a good job.'

We have mentioned that *gerek$_V$* has a special role in terms of its syntactic and semantic features and explained the syntactic features of the lexeme. Semantic features of *gerek$_V$* are due to the wide range of its syntactic use. It may be used to express weak necessity and necessity in the main clause

The other lexical expressions of necessity and their compound forms indicate strong necessity only with different modal domains. *Mecbur* implies that the agent has to perform the action since there is no other choice left.

Zorunda$_{ADJ}$ implies that the act is obligatory by the force of some authority or rule governing the process.

Şart implies that the only way to achieve the desired act/event/situation is to perform the necessary act. It is also used with similar indication with *zorunlu* in formal contexts in the compound form *şart kılın-*.

IV.2.10.3. Pragmatic Analysis of the Lexical Expressions of Necessity

In the pragmatic analysis of lexical expressions of necessity, we include the source of imposition and the domains of necessity, which is treated and marked in different ways by different necessity expressions, which differ in the argument structure.

Zorunda and *mecbur* are the items that essentially require the agent of the necessary act (perlocutor) and the imposer of necessity in the sentence, as the subject of the main clause.

(306) Avukatlar müşteri tahsilat makbuzu düzenlemek zorundadır.

'The lawyers have to arrange a revenue receipt for the customers.'

When *zorunda* and *mecbur* are causated in the compound verb form, the source of imposition becomes the subject of the sentence, and has to be overtly expressed in the sentence, if the verb is not made passive.

Gerek$_{V/N}$, *lazım*$_{ADJ}$, *zorunlu*$_{ADJ}$, *şart*$_N$, on the other hand, do not mark the agent of the necessary act (perlocutor) in the structure of the main clause, but in the nominal as the subject of the subordinating clause. The complement is marked with infinitive with impersonal use.

(307) Ayşe'nin İngilizce'den ek ders alması gerek.

'Ayşe should have additional English courses.

(308) a. Ellerin sabunlu su ile yıkanması gerekir/lazımdır.

'The hands should be washed by the soap.'

b. Elleri bol su ile yıkamak gerekir/zorunludur/şarttır.

'It is obligatory that hands are washed with water.

(309) c. Hastalara iyi bakılması gerek.

'The patients should be taken care well.'

In example (307) the agent of the necessary act , Ayşe, is expressed in the nominal subordinating clause, whereas it is not mentioned in example (307) and a generic

necessity with social or moral domains is expressed. In (308) although the imposer or perlocutor are not stated, the patient is expressed in the nominal clause, which is passive in the non-nominal from.

Since these items are distinct lexemes with different semantic content, the external and internal source of imposition are distinct from each other as well. In other words, the lexical items expressing external source of imposition may differ from each other in terms of the domain of necessity, which is communicated by the semantic content of the lexical items. In the case of *zorunda* and *zorunlu*ADJ, for example, the domain of necessity is some authority; however, with *mecbur*ADJ the expressed domain is the lack of alternatives other than the necessary act/event/situation.

*Şart*N indicates that the necessary act is obligation defined by external conditions. *Gerek*V/N and *lazım*ADJ denote external source of necessity with social or moral domains, such as definition of the ideal especially with the passive.

IV.2.10.4. Epistemic Necessity

The lexical items that may express both root and epistemic necessity are *gerek*N and *lazım*ADJ. Since the modal domains are unspecified (see Papafragou, 1998, 2000), they can be used to express epistemic modality.

(310) Bu ingilizce seviyesiyle bu bölümü kazanamamaları lazım.

'They should enter the department with this level of English.'

These utterances are ambiguous in that they may be interpreted as marking both root and epistemic necessity. The first reading is epistemic with *ol-* as the predicate in nominal and root with noun complement. The ambiguity of these utterances is resolved

only in context. However, we can apply some generalizations when root reading is prior to epistemic (taken from Coates, 1983).

Furthermore, the conditional conjugated form of the copular verb ol- may co-occur with *gerek*$_N$ with the epistemic necessity indication also. In this case, we cannot think of root necessity, thus, no ambiguity occurs.

(311) Tüm bardaklar aynı yerde olsa gerek.

'All the cups should be together.'

(312) Bütün bu yasalar, tasarılar önceden hazırlanmış olsa gerek.

'All these laws and the projects should be prepared beforehand.'

-sA gerek with root modal indication is very rare, and is idiosyncratic in that it are limited to narrative use of language, figure of speech. *-sA gerek* in the following stanza marks certain future.

(313) Fırsat elde iken amel kazan

Gül cemalin bir gün solsa gerektir;

Zevkine aldanma tapma dünyaya,

Dünya malı burda kalsa gerektir.

IV.3. Other Expressions of Necessity

Except from the morphological and lexical expressions of necessity, Turkish uses some idiomatic expressions that denote the obligatory status of the action. We should note here that the obligation expressed by *–(y)EcEk* is the speaker oriented modal sense imperative, or for the third person the jussive. To Bybee et al. (1994) speaker-oriented imperative is the counterpart of agent-oriented obligation. Thus, although Turkish

imperative mood is not included in our research, since it has a different place in the Turkish modal system, we are going to mention the obligation imposing use of *–(y)EcEk* in this section.

IV.3.1. Idiomatic Expressions

The idiomatic expressions inherently indicate the necessity status of the proposition or the necessity imposed on the agent. The semantic content of these expressions pragmatically leads the obligatory reading for the proposition. Thus, the modal domains are well defined for these expressions. The idiomatic expressions that are used in Turkish can be analyzed and categorized in terms of their modal domain and the degree of necessity that each expresses. The structures and forms of these expressions vary: there are full idioms as full sentences, or particles indicating that a specific behavior or act is the only choice, etc. However, we are not going to analyze the grammatical structures of these expressions in detail.

In the first place, we are going to analyze the full idiomatic sentences, which differ from the other expressions in that they are full sentences. These idioms express that the act is obligatory for the agent and mark the agent by the inflection on the verb (i.e. the verb is in agreement with the agent of the action). Some of the idioms expressing obligation are exemplified in the following.

Eli kolu bağlı olmak: to be unable to do anything, to be helpless.

(314)   Elim kolum bağlı. Beklemekten başka çarem yok./ beklemeye

      mecburum.

Eli mahkum olmak: to have no other choice, to be obliged to.

(315)   Bana gelip benden para istemeye eli mahkum. Parayı bulabileceği

başka hiçbir yer yok.

Onu bunu bilmem: this or that / neither this nor that

(316)   Valla onu bunu bilmem! O filme birlikte gideceğiz.

There are doubling constructions with idiomatic function that indicate necessity/strong necessity.

Lamı cimi yok: no 'but's accepted

(317)   Lamı cimi yok Berna, Bu yaz bize en az bir haftalığına kesin geliyorsun!

Aması maması yok: no 'but's accepted

(318)   Aması maması yok. Geleceksin/ sen de bizimle geliyorsun.

İstesen de istemesen de...:

(319)   İstesen de istemesen de bu işin bir parçası olacaksın.

Hoşuna gitse de gitmese de...:

(320)   Hoşuna gitse de gitmese de babanla gideceksin.

The clitic particle *de* is used in the expressions above in the concessive meaning of *'no matter... or not, ...'*. As seen, the concessive relation is set between the declarative and negative forms of the verbs *want* or *like*, which underlines the unwilled status of the obligatory act. These expressions are necessarily followed by a future referent proposition. Thus, it is possible to say that they function as adverbial to specify the necessity expression of TAM suffix *–(y)EcEk*.

Another use of concessive particle *de* is with the verb *git* (go) in an idiomatic expression that denotes there is no alternative but to act/behave in a certain way. The modal meaning that *gel de* expresses is not obligation and no source that imposes

obligation exists. Rather, the act is the only and best conclusion that the conditions lead. Although *gel de* can be used in declarative, it occurs in negative contexts more frequently. The uses of gel de in necessitive contexts are:

Gel de V*mE*:

(321)   Gel de isyan etme, haydi ge de küsme;

O kadar kolaysa şimdi gel de içme!

The existential *var/ yok* (exist/not exist) can also be used in the prohibition function with the infinitive *–mEk* if the speaker has authority or power to prohibit the action on the hearer. It is the usual case that this use of *–mEk yok* appears with the time adverbials *bundan böyle/ artık/ bundan sonra* (from now on).

(322)   Bundan böyle geceleri arkadaşlarınla takılmak ve eve geç gelmek

yok. (wife to husband)

(323)   Sana söylüyorum: Artık Şule'yle görüşmek yok.

Another expression is with the copula *ol-* in the negative contexts. This pattern notes that it is not acceptable that the act expressed in the sentence is not performed; thus, it is the only choice and the best thing to do. Examples of this are as follows:

(324)   Şimdi gitmemek olmaz, küserler.

(325)   Olur mu hiç çalışmamak!

(326)   Anneyi dinlememek olur muymuş evladım!

The expressions used in necessitive contexts with the indication of the act being the only possible choice are not limited with the idioms formed with the concessive and verbs of want. The adverb *çaresiz* is also used to express necessity especially with the

suffix *–(y)EcEk*. Examples are as follows.

> (327) Çaresiz gideceğiz.

> (328) Yapacak bir şey yok. Fidyecilerin isteğini çaresiz kabul edeceğiz.

The other similar utterances where the lexical items *çare/yol* (way) are used with the negative existential *yok* to indicate the only way is the necessity act are: *kaçarı yok, başka çare yok, çıkarı/çıkar yol yok, yol yok, seçenek yok*; and the adjectival and predicative uses of these items: *tek çare/seçenek/çıkar yol/yol*.

> (329) Madem içinde şüphe kaldı dönüp bakmak tek çıkar yol.

> (330) Hastanın durumu çok kritik ve eğer ameliyat etmezsek onu kaybedebiliriz. Sizin anlayacağınız ameliyattan başka çare/çıkar yol/seçenek yok.

As the last idiomatic expressions used for the modal expression are the following, which in fact denotes advice. However, they may be inferred as treat or if the speaker has the authority they may convey necessitive meaning with the speaker-oriented modal imperative function.

V-san iyi olur: 'd better

> (331) Yarın benim odama gelsen iyi olur.

V-manı tavsiye ederim: I advise you to

> (332) Çıkışta benim odama gelip yönergeyi almanı tasiye ederim.

Ben olsam V-ardım: If I were you, I would...

> (333) Ben olsam bu konuyu çok daha sınırlı olarak ele alırım.

As seen in this section, the idiomatic expressions may either be used alone or with the future marker *–(y)EcEk* to create necessitive contexts. The pragmatic

considerations that obligation and necessity indicate are the main points that are underlined by the idiomatic or conjunctional expressions, e.g. the unwilled status of the obligatory act, or the authority of the speaker on the hearer that makes the future event/act definite, thus obligatory. This, we are going to mention in the following section as well with the use of the future suffix *–(y)EcEk* with the function of obligation.

IV.3.2. *–(y)EcEk, –(I)yor, –Ir* as Expressing Obligation

As mentioned in the previous section, the future marker *–(y)EcEk* may be used to mark obligation when used with some adverbials that adds certainty meaning to the telicity of the event/act expressed by the proposition. Kocaman (1998) also notes the use of the certainty expression of Turkish *–DIr* with *–(y)EcEk* denoting necessity. The modal meaning of *–(y)EcEk* may also be affected by the authority of the speaker on the agent of the action, where *–(y)EcEk* marks imperative. In sum, *–(y)EcEk* is used in Turkish as necessity marker in different contexts. In fact, this phenomenon does not only occur in Turkish. The close relation between futurity and modality is a universal fact (Lyons, 1977; Kiefer, 1981; Palmer, 1986, 2001).

Now we are going to exemplify the uses of *–(y)EcEk* with necessity meaning, and imperative uses of the form. We should note here that the obligation indication of *–(y)EcEk* occurs with other items that are used in the utterance denoting that act/event is the only and best choice in a particular situation or items that denote the certainty of the act/event expressed by the proposition, i.e. the certainty marker *–DIr* (Kocaman, 1988). The assertive epistemic modal adverbs *mutlaka, kesinlikle, elbette* (Ruhi et al., 1997) can as well be used with *–(y)EcEk* in necessitive contexts. The uses of *–(y)EcEk* with the epistemic modal adverbials marks imperative, as well.

As –*(y)EcEk* is used in the imperative function, the other TAM suffixes –*(I)yor* and –*Ir* are also used to mark imperative, thus express necessity which derives from the authority of the speaker over the agent of the necessary act. These uses of the suffixes are highly marked and context bound.

(334) (Mother to her son) Başka laf istemiyorum. Bu akşam o yemeğe geliyorsun!

(335) Student: Hocam, İrem kitabı fotokopi için bana vermak istemiyor.
Tutor: Verir, verir!

To sum up, necessity is expressed via –*mElİ* and the lexical items, and the idiomatic expressions in Turkish.Each of these markers have particular uses and/or collacations with specific semantic contents in relation to other components in the sentence.

In this section we have analyzed the ways that Turkish uses to express necessity. In the next section we are going to analyze the whole system and the importance of these expressions.

V. NECESSITY AS A SYSTEM IN LANGUAGE

In the previous sections, we have analyzed the morphological and lexical means of expression of necessity in Turkish. We have examined the relation between the different expressions of necessity and other categories, their interchangeable uses, the grammatical patterns that affect the modal meaning or the pragmatic structure of the modal utterance, and the degrees of necessity that each expression in Turkish communicates. In this section, we are going to analyze the unmarked forms of the necessity expressions in relation to each other and try to outline and show how the modal system works in Turkish with necessity in syntactic, morphological, semantic and pragmatic levels of language. In other words, we are going to try to define the necessity system of Turkish in this section by the help of the findings in the previous sections on the use of different expressions of necessity.

The unmarked expressions of necessity in Turkish are the modal suffix *–mElİ*, the lexical expressions *gerek, zorunda, zorunlu, mecbur, şart,* and the derivations/compound verb forms of these lexical items. On the other hand, the future suffix *–(y)EcEk* and the idiomatic expressions that create necessitive contexts form the marked expressions of necessity.

In the unmarked use, the necessity expressions mark root necessity of different degrees depending on the modal domains of the modal expressions. Among the root necessity meanings, we can include agent-oriented necessity (obligation as referred to by Bybee, 1994) and speaker-oriented imperative. However, since the imperative has a different place in the modal system and has a distinct marker in Turkish it is not included in our study.

In the analysis of necessity in Turkish, we include the strong necessity/obligation, necessity and weak necessity meanings. We are going to analyze the use of the modal expressions in Turkish with the other categories in the language. The categories/systems that will be examined in relation to necessity are the tense, aspect and modal suffixes, copular verbs, passive, causative systems, subordination. In addition to that, we are going to try to outline the ambiguity of the modal expressions and try to account the cases where ambiguity occurs and where it does not.

V.1. Expressions for Different Degrees of Necessity in Turkish

As we have mentioned before, concept of necessity denotes that an act, event, or situation is dependent on another act, event, or situation. This dependency may occur in several different ways and make necessity a gradable concept composed of different degrees. The different degrees of necessity can be listed as strong necessity, necessity, and weak necessity. In Turkish, these necessity types are communicated by different expressions of necessity. What's more, the same expression can also be used for more than one type of necessity depending on the semantics of the expression.

If we show the uses of the expressions of necessity in terms of the different necessity degrees (types) they denote in a scale, the places of the Turkish necessity expressions will be as the following:

Strong necessity		weak necessity
şart	*gerek*	*lazım*
mecbur	*lazım*	*-mElİ*
zorunda/ zorunlu	*-mElİ*	
gerek		
-mElİ		

Table 8: Degrees of necessity in Turkish.

The modal sense of strong necessity is expressed by the lexical expressions *zorunda, zorunlu, mecbur, şart,* the derivations and compound forms of these expressions. In addition to these expressions, *–mElİ* may be used to express strong necessity, although this use of the modal suffix is rare and bound to some certain pragmatic conditions and discourse. Although these expressions all mark strong necessity, their modal domains and the sources of imposition may vary. The modal domain of *zorunda* and *zorunlu* is specified with some rule or law. On the other hand, *mecbur* indicates that there is only one choice for the agent to perform, and *şart* indicates that the situation or condition that the agent of the necessary act is in forces the agent to perform the act.

The modal domain of *–mElİ* is not as definite as the lexical expressions. *–mElİ* indicates a modal domain internal to the speaker. That is, the speaker internally agrees or confirms that the expressed act is necessary. *–mElİ* expresses strong necessity when the source of imposition is a rule or law, or the will of some authority. In the first person singular subject use *–mElİ* can also express strong necessity if the speaker aims at reporting the existence of a force/authority on her/himself to perform the action.

(336)   Sorulara cevabınızı 5 saniye içinde vermelisiniz.

'You should answer the questions in 5 seconds.'

(337)   Patron aradı, çıkmalıyım.

''The boss called I've got to go out immediately.'

Although it is possible that the necessitive suffix *–mElİ* can express strong necessity, Turkish mainly uses lexical expressions *zorunda, zorunlu, şart,* and *mecbur* for the strong necessity meaning. These expressions, with different modal domains, indicate strong necessity. Thus, the strong necessity in Turkish is communicated by the lexical

rather than verbal inflection.

The expressions that indicate necessity in Turkish are *gerek*, *lazım*, their derivations and compound forms, and *–mElİ*. These expressions indicate different modal domains and sources of imposition *Gerek* and *–mElİ* differs in terms of their modal domains: *gerek* indicates external source of imposition, and *–mElİ* indicates internal source of imposition. *Lazım* on the other hand can be used for both internal and external domains of necessity. Thus, the expression ways of weak necessity sense are similar with necessity sense: *gerek*, *lazım* and *–mElİ*.

It can be interpreted form the scale that the items that are mentioned to express the same degree of necessity, such as *zorunda* and *mecbur*, etc., can replace other without difference in the degree of necessity. However, they vary in terms of the modal domains and the sources of imposition that they denote. Therefore, even if these expressions replace each other, the source of necessity and the modal domain will change.

Although the use of each item is clearly distinct, there are, still, some cases where the replacement of one necessity expression with another is possible. This is especially the case where the replacement of one expression with another is due to the syntactic rule such as the use of the necessitive utterance in subordination, and the negation of the necessity.

As known, Turkish requires infinite clause during subordination in most of the cases, e.g. reported clauses, adverbial clauses etc. Thus, the necessitive suffix *–mElİ* as a part of the verbal inflectional system of Turkish, cannot be used during subordination on the verb. In order to express the necessitive meaning of the utterance in the subordination, *-mElİ* needs a substitute form in the subordinating clause, which may be *gerek*$_V$or another appropriate verb compound of the lexical expressions such as *zorunda kal*$_V$, *zorunda ol*$_V$.

Thus, *-mElİ* in the sentence (338) is replaced by the peripherasis *zorunda* (339). This is the reasons why Lewis (2000) names *gerek* as the periphrastic form for *-mElİ*.

(338) Sınavı geçmek istiyorsan çok çalış*malı*sın.

'You have to study if you want to pass the exam.'

(339) Rehberlik danışmanı Ali'ye sınavı geçmek istiyorsa çok çalış*ması*

gerektiğini söyledi.

'The consultant told her that he had to study hard if he wants to

pass   the exam.'

(340) A: Çık*malı*yım. Masadakilerden benim adıma özür diler misin?

'I must go. Please can you tell my apologies to the stuff?'

B: Çık*mak zorunda kaldığı* için hepinizden özür diledi

'S/he apologized for she had to go out.'

Another case where *-mElİ* is to be obligatorily substituted by the lexical expressions is during negation of the necessity. Negation of necessity is a problematic phenomenon in many of the languages that express necessity in the syntactic system, rather than in the lexicon (Palmer, 1986, Lyons, 1977). We have mentioned that the necessitive utterance, as all modal utterances, is composed of two parts: the modal (nec/pos) and the proposition (p). These two parts can be negated independent of each other: (~) nec (~) p. However, when necessity is expressed by the morphological device, *-mElİ* the modal part of the utterance cannot be negated: negation suffix *-mE* may have scope over the predicate only but it cannot have scope over the necessitive *-mElİ*. In this case, a common phenomenon of Turkish occurs, and the suffix element is replaced by the lexical periphrasis. Thus, the only form for the ~nec p in Turkish is the case where necessity is negated is by *lexical expression of necessity +mE*.

(341) Gelmemeli $nec \sim p = \sim pos\ p$

      'S/he mustn't come.'

(342) Gelmesi gerekmez $\sim nec\ p = pos \sim p$

      'S/he does not need to come.'

(343) a. Gitmeliyim $nec\ p$

      'I must go'

      b. Gitmek zorunda değilim. $\sim nec\ p$

      'I don't have to go.'

(344) a. Kalmalıyım. $nec\ p$

      'I must stay.'

      b. Kalmam şart değil. $\sim nec\ p$

      'I don't have to stay.'

In some cases the question form of *–mElİ can also require the lexical periphrasis of the necessitive. E.g.* the sentence *gitmelisin* turns into *gitmek zorunda mısın* in the question form and this use is more acceptable than the question form of *–mElİ gitmeli misin*? Although the second form is not ungrammatical, since the speaker questions the semantic content of *–mElİ*, s/he wants to make it clear by using the lexical expression.

V.2. Tense Markers

Tense is one of the three verbal categories that are in close relation to each other. This relation between these categories is so close that they may even be expressed via same marker, named as TAM markers in some languages, one which is Turkish. The close semantic and formal relation between these categories results in some hindrances of their co-occurrence. In this section we are going to analyze the use of necessity expressions

with the tense markers.

The necessity suffix –mElİ and the lexical expressions of necessity differ in their use with the tense markers. –mElİ as the verbal suffix cannot co-occur with the tense markers, with the exception of past tense marker -DI, whereas the lexical expressions in the verb forms can.

(345) Gelmeli(-y)*ecek/di/*ir

(346) gelmesi gerek-ecek/ti/ir

(347) zorunda kal-acak/dı/ır etc.

Thus, the lexical necessity expressions in the verb form have to be used to communicate a necessity in the future, or a necessity in the aorist form.

(348)   Eğer dediğimi yapmazsa, bunun bedelini ödemek zorunda kalır.

'If s/he does not obey what I say s/he has to pay for it.'

(349)   Sanırım evden çıkmamız gerekecek.

'I guess we will have to get out the house.'

The past tense marker –DI, the only tense marker that can be used with –mElİ, may have different referents with the root modals in Turkish. –DI requires special analysis in terms of its use with the necessity expressions, since it is the only grammatical tense form with –mElİ and the semantic referent of it when used with –mElİ, gerek and lazım, i.e. the weak necessity expressions. -DI is used as the definite past tense marker in Turkish, and it is used to express the factual statements in the general use. However, as Palmer (2001) notes for the past tense markers of many languages, -DI be used to mark counter factuality of the proposition when it is used with the root modals in Turkish, including the necessitive as in the sentences (350-351) indicating the necessary act was not completed.

(350)   Ankara'da olmalıydım.

'I had to be in Ankara.'

(351)   Bu görevi yerine getirenleri kutlamak gerekirdi, yermek değil.

'We should have congratulated the people to perform the task, not

to criticize them.

V.3. Aspect Markers

There is a clear distinction between the lexical expressions of necessity and the suffix –*mElİ* in terms of their use with different aspect markers. The necessitive suffix –*mElİ* can co-occur with certain aspect markers, whereas the lexical expressions are used with all of the aspect markers, with exception of the progressive marker –*mEktE*.

Suffix –*mElİ* can co-occur with the *perfective* –*mIş* and the progressive or continuous –*(I)yor*, after the syntactic buffer *ol*- (Göksel, 2001).

(352)   Uydurduğumu düşünüyor olmalısınız/*düşünmeliyor.

'You should be thinking that I am making up.'

(353)   Yazıktır, garibanların ülkesinden sermaye kaçırmayalım, diye düşünmüş olmalı/ *düşünmeliymiş

'They must have thought that they should not embezzle the country of these poor-fellows.'

(354)   Yansıtması gerek-ir/iyor/mekte/ti.

As seen in the examples, the reverse order of the aspect markers and –*mElİ* is ungrammatical. However, this does not mean to say that necessity cannot be marked with the aspect markers. The lexical expressions of necessity replace –*mElİ* when the aspect

markers are to be suffixed on a necessitive verb phrase.

The only exception for the use of the verbal expressions of necessity with the aspect markers in Turkish is the progressive aspect. The strong necessity expressions, *zorunda, zorunlu, mecbur, şart* are not acceptable with the progressive *–mEktE* without assertive *–DIr*. Due to semantic/pragmaic reasons, *–mEktE* is used with *–DIr* in formal contexts or with the generic use of the first person plural subjects.

(355)   Bu ilişkilerde bazı bölge ülkelerinin de beraberce dikkate alınması

yaralı ve/veya zorunlu olmaktadır.

'In such relations the region countries should be handled together.'

(356)   İnsan organizması uygarlık geliştikçe daha az hareket etmek

zorunda kalmaktadır.

'the humanbeing has to exercise less as the civilization develops.'

(357)   Biz   avukatlar   savunmayı   savunmak   zorunda   kalmaktayız.

We, as the lawyers, have to defend the defence.'

To sum up, the aspect markers are used with the lexical expressions to mark the necessity. The aspectual values, perfect and progressive, of the necessary act leads the epistemic reading of the modal utterance. In other words, *nec (asp) p* has epistemic reading. The relationship between aspect and modal is an important linguistic phenomenon also by the use of *ol-* as syntactic buffer.

V.4. Modal Markers

In the same way as the tense and aspect markers, the modal suffixes of Turkish can also be used with the necessitive. The modal markers that can co-occur with the necessitive are conditional *–sE*, abilitive *–(y)Ebil*, the evidential *–mIş*, the assertive and

probability expressing –*DIr*. Use of –*mElİ* and the lexical expressions of necessity is not the same for all modal markers. As we have mentioned before the ordering sequence of the different modal markers determine the modal value of the utterance. The scope relations among the verbal inflectional suffixes in Turkish makes the last modal suffix on the predicate determine the modal value, i.e. if the conditional is added later in the sequence, the utterance is a conditional, or if the possibility marker –*Ebil* is added the utterance expresses possibility.

(358) Biraz   daha   bekle-me-miz   gerek-ebil-ir. (possibility)

      A little bit   more   wait-ANom-1stPl   be necessary-Poss-Pres-3rdSing

      'It may be necessary for us to wait a little longer.'

(359)   Gerek-ir-se   soruşturma   aç-acağ-ız. (conditional)

      Be necessary-aor-Cond. investigation   wage-Fut.-1stPl

      'If necessary, we are going to accuse.'

(360)   Reklam   ve   ilanlar   sayfa   dolu-su   yazı-nın   arasından

okuyucu-nun   ilgi-si-ni çek-ebil-meli.

      Ad   and   announcements paper   full-pos   text-gen among

      reader-gen   attention-pos-acc   bear-Abil.-Nec.

      'Ads and announcements should be able to bear attention of the reader among the paper full text.'

The modal suffixes in Turkish and their use with the necessitive can be shown in a table as the following.

Base	Modal suffixes	Necessity
V	*-ysE	*–mElİ
	*-ymIş	
	*-dIr	
	-Ebil	
	.*-(y)A	

Table 9: Other modal suffixes and –mElİ.

Base	(-i-) Modal marker	necessity
V	-(y)sE	gerek(epistemic)
	*-(y)mIş (modal)	lazım (+v)(epistemic)
	*-dIr	şart (+v) (root)
	*-(y)Ebil	zorunlu (+v) (root)
	*-(y)A	zorunda(+v) (root)
		mecbur (+v)(root)
	gerek	-(y)sE
	lazım (+v)	-(y)mIş (modal)
	şart (+v)	-dIr
	zorunlu (+v)	-(y)Ebil
	zorunda(+v)	*-(y)A
	mecbur (+v)	

Table 10: Modal suffixes and lexical expressions of necessity..

The lexical expressions of necessity can also be used with the necessitive suffix –mElİ, e.g. *gerekmeli, zorunda kalmalı*, with the paraphrase of '*I want it to be necessary/obligatory that...*'. The examples of this use are as follows:

(361) Artık pratiler de kendilerine çeki düzen vermek zorunda kalmalı.

'From now on the parties should have to repair.'

(362) Ona öyle şeyler yapmalıyım ki gelip önümde diz çökmek zorunda kalmalı!

'I should do such things to her/him that s/he must come and kneel down.'

The conditional –*sE* can occur both with –*mElİ* and the lexical expressions of necessity. The order of the necessity expression, the use of the verb *ol-* and the marker used for the necessitive are the main factors that affect the use of –*sE* with the necessitive especially in semantic terms. The conditional and necessitive may follow or precede each other in the verbal form. When the conditional –*sE* follows the necessitive, the utterance is inferred as conditional, and functions as the subordinating clause of the sentence. When the conditional suffix –*sE* precedes the necessity expression, on the other hand, –*mElİ* cannot be used. And the use of *gerek* is possible only if the verb is *ol-*. In addition to these, the modal value of the utterance with the verb phrase *olsa gerek* is interpreted as having epistemic modal meaning of inference.

(363) Kalabilirsen kal, gitmeliysen git/ *gitsemeli.

Stay if you may, go if you have to.

(364) Komutan cepheye askerini sürmeden önce ne yapmalıysa bir teknik direktör de aynı yolda yürümelidir.

'A trainer should do what a commander should do before sending his soldier to the forehead.'

(365) Eğer öğrenci konaklamasını kesmek zorunda kalırsa herhangi bir şekilde tazminat istemeye hakkı yoktur.

'If the student has to quit before the estimated time, s/he does not have any right to demand her/his compensation.'

(366) Gerçekten öyle midir, en yakınındakiler bilse gerek.

The people close to her/him must know whether he is so or not.'

(367) Okul ve iş hayatındaki başarında yelkenciliğin getimiş olduğu

disiplin önemli rol oynasa gerek.

'The principles that s/he has acquired during sailing must play an

important role in her/his success at the school and work

In sum, the lexical and inflectional markers differ in the use of the verbal category modal as well as tense and aspect, and the ordering of the modal expressions has an important role in determining the modal value of the utterance.

V.5. Negation

Since negation marker *–mE* has a fixed place in the morphological paradigm, as mentioned before, the inflectional modal markers follow *-mE* in the verbal inflection. This results in the use of modal under the scope of the negation. This is especially common with the root modals. We should note that *–(y)Ebil* may behave different from the other modal markers in this respect, since it may only occur before negation in the verbal paradigm with the possibility and permission meaning (but not with ability meaning) and make it possible to negate the modal reference as well as the predicate. (Aygen Tosun, 1998; Schaik, 2001; Göksel, 2001).

(368) Yarın erken kalkabilirim.   *pos p*

'I can wake up early tomorrow'

(369) Yarın erken kalkamam.   *~pos p*

'I can't wake up early tomorrow.'

(370) Yarın erken kalkmayabilirim.   *pos ~p*

     'I may not wake up early tomorrow'

(371) İstersen bugün okula gelmeyebilirsin.   *pos ~p*

     'You do not have to come to school today if you don't want to.'

The effect of negation on the modal value may be similar in other languages as well. The examples from other languages on the negation modal reference interaction are as follows (Auwera, 2001: 24-29):

(372)   French

    a. Tu ne *peux pas mang*er de la viande.

    you not can not eat   of the meat

    'you can not eat meat.'

    '~ p'

    b. Tu *peux ne pas manger* de la viande.

    you can not not eat   of the meat

    'You can not eat meat.'

    ' ~p'

(373)   English

    a. John *must not* eat his soup today.

    ' ~p'

    b. John *need not* eat his soup today.

    '~ p'

(374) Russian (cf. Weidner 1986: 192)

Mne   *nel'zja*   igrat'.

To   me not   possible   play

'I may no t play.'

'~   p'

(375) Sweedish

Lasse *får* köra bil.

Lasse gets drive car

"Lass gets to drive the car."

'Lasse may/must drive the car.'

The same phenomenon occurs with the necessity expressions. As we have mentioned before, the necessity suffix *–mElİ* does not let the predicate to be negated while the lexical expressions do. Thus, the lexical expression repleaces the suffix when the predicate is to be negated.

(376) a. Gitmemeliyim   *nec ~p*

'I mustn't go'

b.Gitmek zorunda değilim.   *~nec p*

'I don't have to go.'

(377) a. Hazır yiyecekler yememelisin.   *nec ~p*

'You mustn't eat fast food.'

b. Hazır yiyicek yemen şart değil.   *~nec p*

'I don't have to eat fast food.'

V.6. Copula

Among the copulas in Turkish, Kornfilt (1997: 87) mentions *ol-* and *i-*. Both copulas can be used with the necessity expressions with different functions. In the use of aspect and modal markers, the copula is an important item in the analysis of necessity.

The copula *-i-* is used with the verbal inflection of past tense *-DI*, evidential *-mIş* and the conditional *-sE* after *–mElİ* and the lexical expressions. It is also obligatory in the inflection of the use of adjectives *zorunda, zorunlu, şart, mecbur*. However, it is non-concurrent before the necessity expressions. Due to the syntactic features that it carries, it is not a verb base and cannot be used with the verbal inflection.

Modal marker	Copula *-i-*	TAM markers
–mElİ	*-i-*	-sE
gerek	*ol-*	-dI
zorunlu/zorunda		-mIş
şart		
mecbur		

Verb base	Copula	Modal marker
ADJ/N/V	**-i-*	*–mElİ*
	ol-	*gerek*
		zorunlu/ zorunda
		şart
		mecbur

Table 11: Copula and the necessity expressions.

Kornfilt (1997: 87) states the copula *ol-* in Turkish may be used with two different semantic referents: the verb *'to become'* and the copular verb *'to be'*. Both referents of the copular verb *ol-* can co-occur with necessity expressions and have different affects on the necessity expressions. The copular use of *ol-* is essential with the co-

occurrence of –*mElİ* and the aspect markers. However, copular use of *ol-* does not co-occur with the lexical expressions of necessity since they may take the inflection on the verb forms and the syntactic buffer *ol-* is not necessary with the use of these expressions. The co-occurrence of the non-verb lexical necessity expressions with the verb ol- is restricted with its verb use meaning '*to become*', e.g. *gerek ol-, lazım ol-, zorunlu ol-, şart ol-*.

In the previous section, we have analyzed the use of *ol-* with conditional –*sE* before *gerek* with epistemic reading.

(378)   Ahmet şu anda evde olsa gerek.

Ahmet should be home right now.

Similarly, the co-occurrence of *ol-* with –*mElİ* has epistemic connotation. When –*mElİ* is suffixed to *ol-*, the semantic content and the ambiguity of the copular verb leads ambiguity in the modal meaning: if ol- functions as a copula –*mElİ* may mark root or epistemic necessity, whereas use of *ol-* as verb with –*mElİ* has root necessity reading only. We are going to deal with the ambiguity of the form *olmalı* in the following section.

The copula *ol-* is also essential with the subordination of the necessitive sentence, when the necessity is expressed by *zorunda* ADJ, *zorunlu* ADJ, *şart* ADJ, *mecbur* ADJ as the predicate. The factive nominal marker –*DIk*, the act nominal marker –*mE*, and infinitive –*mEk* may mark the necessitive as in the examples (379 b/c/d)

(379)   a. Herşeye rağmen hala onunla yaşamak zorundayım.

'I have to live with her/him despite everything.'

b. Herşeye rağmen hala onunla yaşamak zorunda olmak gücüme gidiyor.

'To be obliged to live with her/him despite all that have happened offends me.'

c. Onunla yaşamak zorunda olduğumu düşündükçe kahroluyorum.

'I feel terrible when I thinl that I have to live with her/him.'

d. Onunla yaşamak zorunda olmanı kabullenemiyorum.

'I can't endure that you have to live with her.'

If we show the use of copulas i- and ol- in Turkish in short, the following table would be the result.

Necessity items	*ol-*ᵥ / *ol* Copula	Necessity
-mIş	*ol-* (verb/copula)	*malı*
-(I)yor		*-sa gerek*
*–mElİ	*ol-* (verb)	
gerek		
zorunlu		
zorunda		
şart		
mecbur		
zorunlu	*ol-* (copula)	*-dIk*
zorunda		*-mE*
şart		*-mEk*
mecbur		

Table 12: The use of *ol-* with the necessity expressions.

It is clear that the copular verb *ol-* has important semantic and syntactic functions with the necessitive, especially with the subordination of the lexical itemsand the inflection of the aspect markers on the predicate marked with the necessity suffix *–mElİ*.

V.7. Semantic Analysis of the Necessity Expressions

The most important two semantic issues in the study of necessity modal are the degrees of necessity as expressed by different expressions and the ambiguity between the epistemic and root modal meaning. In this section, we are going to define the different degrees of necessity communicated by different expressions and specify the special uses of the expressions of necessitive. In addition to that, we are going to focus on the important universal phenomenon of ambiguity between the epistemic and root meanings defined for the modal expressions. We are going to define the cases where necessity expressions are and are not ambiguous, and how disambiguation is possible.

V.7.1. Degrees of Necessity

We defined the degrees of necessity and the expressions that Turkish uses for expression of each meaning, depending on the criteria defined by Coates (1983) for the distinction between the different degrees of necessity which are related to certain features of the modal utterance. The gradience model uses the following features.

(v)   Subject is animate

(vi)   Main verb is active verb

(vii)   Speaker is interested in getting subject to perform the action

(viii)   Speaker has authority over subject (Coates, 1983: 35)

In the analysis of the degrees of necessity *–mElİ* has a special role in that it can be used to express all types of necessity, while the other expressions of necessity indicate one of the different degrees of necessity. This wide range of meanings expressed by *–mElİ* is related to the fact that it is a bound morpheme, i.e. a suffix, whose semantic reference is more related to that of other elements, such as the verb or the adverb, in the sentence.

Therefore, the subject person, dynamic or stative verb, or the type of the attribute used, negation are all affective in the meaning of the suffix.

V.7.2. Ambiguity between Root and Epistemic Necessity

Ambiguity of the root and epistemic uses of the same modal expression is a universal phenomenon which is subject to many researches on different languages. Many explanations, using various different theories have been made to explain the ambiguity of the modal expressions. However, it seems that the ambiguity is a natural part of the language and occurs due to the logical factors that leads language use. The case of ambiguity in the modality system is not an easy job to do, and needs a detailed study. Therefore, we are going to try to define the cases ambiguous cases in our study and the factors that lead the ambiguous use of the necessity expressions in Turkish.

Among the different degrees of necessity the data shows us that the ones that are used to express necessity or weak necessity are also used to express epistemic modality, i.e. *gerek*, *lazım*, and *–mElİ*, while the strong necessity/obligation expressions are unambiguous with their clear semantic content referring to the existence of an obligation, rule or inevitability. There are certain conditions for the epistemic use of *gerek*, *lazım*, and *–mElİ* and only some of these conditions create ambiguity.

The epistemic use of *gerek* is not restricted with its use with the conditional. In the unmarked use of *gerek* with nominal complement it may express epistemic meaning also,

(380)   Şimdiye varması gerekti.

'S/he should have arrived by now.'

The act expressed in sentences (380) is necessary due to the normal course/nature of the events, thus the speaker judges that the situation is necessary when the natural course of events is considered. These examples of the *gerek*$_V$ may be said to express alethic necessity with factual domain.

The ambiguous use of *lazım* is also similar to the use of *gerek*. The similarity in the root necessity meaning between *gerek* and *lazım* is also valid for the epistemic use. The knowledge of the speaker on the natural/genaral/usual course of events leads the speaker to make an inference which s/he communicates by *lazım*. The examples of the epistemic uses of *lazım* are as follows:

> (381) Beni çoktan araması lazım.
>
>   'S/he had to call me.'

In addition to these, co-occurrence of *–mElİ* with the copular verb ol-, which has different functions in Turkish, leads the epistemic reading of the modal expression. In fact, this affect of *ol-* is not limited with the pattern *olmalı* as mentioned in the previous sections. The epistemic meaning of *gerek* and *lazım* are also usually triggered by the use of copular verb *ol-*. The ambiguity of *ol-* between the dynamic verb '*to become*', the stative verb '*to be*' and the copular use as syntactic buffer (Göksel, 2001) contributes the ambiguity in the meaning of the necessity expression that co-occur.

Heine (1995) defines the properties of the modal utterances and claims that these properties may be used to determine what the modal value of the utterance are:

a. There is some force F that is characterized by an element of will" (Jespersen 1924: 320-1), i.e. that has an interest in an event either occurrig or not occurring.

b. The event is to be performed typically by a controlling agent C.

c. The event is dynamic (D), i.e. it involves the manipulation of a situation and is conceived of typically as leading to a change of state.

d. The event has not yet taken place at reference time, i.e., its occurrence, if it does

in fact take place, that will be at a time later than the reference time (L).

e. The event is non-factual (Palmer, 1986: 96), but there is a certain *degree of probability* that it will occur (**P**).

According to Heine "while prototypical instances of agent oriented modalit are characterized by the presence of the properties, prototypical instances of epistemi modality lack all properties except **P**". He adds that the property F is basic for the roc modal sense, and it is of the main importance in the modal type to be expressed. Coate (1995:) states that although it is clear that these properties are affective on the moda reference, they are not adequate to distinguish between the epistemic and root uses of th expressions, thus, she adds the subjectivity (S) among the properties, which show the wea distinction between root and epistemic modals.

Heine (1995) also suggests that the contextual frames are important in the case where the property F is absent in the utterance. The main frame has to do with th following factors:

i. Contextual clues

ii. Knowledge of the world.

iii. Social norms.

Our concern is that the ambiguous cases of necessity expressions in Turkish may be analyzed in terms of these properties of the modals. Therefore, we are going to analyze the sentences (382)-(392) and try to outline the cases where the modal values of sentences differ, and what properties the Turkish expressions have in terms of the properties listed above. The example sentences, with their paraphrases/contexts to illustrat the modal values of them, are as follows:

(382) Ahmet cesur olmalı.

'Ahmet must be brave.'

a 'He must behave in a courageous manner..'

b.'What he has done shows that he is so.'

(383) . Seyfi korkak olmalı.

'Seyfi must be a coward.'

'His behaviors show that he is so.'

(384) . Güzel olmalıyım.

'I must be beautiful.'

(385)   Oturma odasında olmalısın.

'You must be at the living room.

a. I hear the noise of the TV

b. There is something that we have to talk in the evening..

(386)   Yapılacaksa bu geniş tabanlı bir reform çalışması olmalı.

'If they are to make a reform, it should be a broad one.'

(387)   Bu yaptıkları olan geniş tabanlı bir reform çalışması olmalı.

'The reformation in progress should be a broad one.

(388)   a Yarın Ankara'da olmalıyım.

'I have to be in Ankara tomorrow.'

b.Şu an Ankara'da olmalı/sın/sınız/lar

'You/they must be in Ankara now.'

(389) a. Bu kadar sıkı eğitimle iyi işler yapmaları lazım.

'They should do good work with this study.'

b. Bu kadar eğitimle çok daha iyi işler yapmaları lazım.

'They should have done better work with this study.'

(390)   İyi bir adam olması gerek.

'He must be a good man.'

a 'İnsanlara bu kadar yardım ettiğine göre...'

b 'Yoksa buradaki yetkisini kendi çıkarlarına kullanabilir.'

(391)   Ayşenin doktor olması gerek.

'Ayşe must be a doctor.'

a. Her father wants her to be a doctor.

b. ?I see her going out with the white apron.

(392) Hasan hasta olmalı.

'S/he must be ill.'

'Okula gelmediğine göre'

	F	C	D	L	P	Modal Meaning
382a/384/385b	+	-	+	+	+	Root necessity
388b	+	+	-	+	+	Root necessity
385b/390a	+	-	-	+	+	Root necessity
387a/390a/391a	+	+	+	+	+	Root necessity
387b	-	+	+	-	-	Epistemic necessity
382b/383/385a/ 389a/388a/391a/392	-	-	-	-	-	Epistemic necessity

Table 13: The variables F, C, D, L and P (Heine, 1995) defined for (382-392

It is clear on the table that F, S, A, N, and Q factors are important in the root necessity reading of the modal utterances. According to Heine (1995) F is basic since it entails the others. The features C, D, L, P, are assessed to be of less importance.

Knowledge of the world, as stated by Heine, is important and affective in epistemic reading. In sentence 393, for example, if the speaker has been to Italy and knows that the medical service is not free, then the utterance expresses root necessity. However, if s/he does not have any idea about the topic, then the utterance is epistemic.

(393) Italya'da sağlık işlemleri parasız olmalı.

 'I know that is not so, and think it is should be.'

 'I guess it is so by some evidence.'

Negation of the epistemic meaning is not possible with the form of *olmalı*. Instead the probability modal *-DIr*, or the *olsa gerek*, whose inferential epistemic reading is certain are used in the negation of epistemic necessity when the main verb is to be negated.

(394) a. Hasta olmalı. *(epistemic)*

 'S/he must be ill.' *(epistemic)*

 b. Hasta olmamalı. *(root)*

 'S/he should not be ill.' *(root)*

 c. Hasta değildir. *(epistemic)*

 d. Hasta olmasa gerek. *(epistemic)*

 'He mustn't be ill.' *(epistemic)*

Coates mentions that the negation has different scopes over the root and epistemic modal markers. The use of negation with root marker only in Turkish and the

değildir, form for the negation of the ambiguous case of *olmalı* shows this distinction clearly.

Aspect on the main verb is another factor that affects the modal value of the utterances, as stated in the previous sections. The continuous and perfect aspects on the verb marks the verb as occurring simultaneous to or before the reference time; thus, they are incompatible with the future reference of root modality and express epistemic necessity.

(395)   Kan davasının ilk kıvılcımlarından birini hatırlıyor olmalısınız.

'You should be remembering the first flames of the blood feud.'

(396)   Yarışı kazanmış olmalısınız. Bu neşe başka ne anlama gelir ki!

'You must have gotten the match. What else does this cheer mean?

Ambiguity is a part of the modal system in universal terms. In short we can say that there are certain patterns that triggers the root or epistemic reading of the necessity expressions. Negation, future reference, the semantics of the predicate, and world knowledge trigger root necessity whereas *ol-* and the past reference triggers the epistemic reading of the modal utterance.

V.8. Conclusion

The analyses that have been made on the use of necessity expressions of necessity have shown us that *gerek* and *–mElİ* are the two important expression ways of necessity which have special place both semantically and pragmatically in the necessity system of Turkish.

—mElİ as the morphological marker, does not specify a definite modal domain d can be used with more than one type of necessity in the whole system. Syntactically it s a certain place in the verbal paradigm and the relation of it with the other expressions of importance in the study of verbal categories.

Gerek, as one of the lexical expressions of necessity, has zero derivation form d the verb *gerek-* functions as supplementary for most the cases where other expressions, pecially *—mElİ*, cannot occur due to syntactic considerations. The unspecified modal main of *gerek* provides the possibility of expressing different degrees/types of necessity · *gerek*. In other words, the modal domain of *gerek* will be a rule or the circumstances, uch belong to different necessity degrees. Other lexical expressions are also of portance especially with their definite semantic content, with specified modal domains d sources of impositions. They also have an important role in the passive and causative rms of the necessitive.

The marked forms of necessity are also a part of the whole system. Especially э idiomatic expressions are usually used for the stylistic purposes.

To sum up, necessity system in Turkish is composed of many different ways of pressions, with certain functions defined for each. Every single pattern expressing cessity has its own place and role in the broader system of language.

CONCLUSION

Modality as the verbal category that communicates the speaker's attitude towards or assessment on the truth value of the proposition expressed in sentence is one of the frequently studied subject matter in linguistics, especially in semantics and in typological studies. Modality deserves attention from many points of views among which are its historical development, its acquisition, its use in the social environments, its semantic complexity (ambiguity and the different possible speech-act values), and its syntactic properties.

Within the system of modality in language are a number of modalities one of which is necessity. Necessity is one of the two most basic types in modality, the other of which is possibility. These two are best explained in relation to each other:

i) nec: ~pos ~p

ii) pos: ~nec ~p.

Necessity in this sense, expresses that the only possibility that the agent of the act expressed by the main predicate of a modal sentence has is to perform the act, which can be the result of some rule authority on the agent or to achieve a desired state. In this respect, the reason that causes the necessity is affective on the semantic and pragmatic use of necessitive utterance.

As a part of modality, as with entire root modals, has the notions of futurity, factuality and subjectivity (Lyons, 1997). These features are also important in the study of modality. They mark the distinction between the root and epistemic senses of modal expression.

In contrast with tense and aspect, modality is related not to the verbal phrase only, but rather it has to do with the whole sentence, since it is related to the judgment of the proposition expressed. This makes modality a more complex issue in relation to the whole sentence and its interaction with each component of the sentence in semantic, functional, discourse manners. Although a complex and a broad issue in language, modality studies on modality are not very ancient, except for the logic studies of ancient times. Thus, modality resumes important attention in recent linguistic studies, especially in the fields of semantics and pragmatics.

We have analyzed the necessity system in Turkish with semantic and syntactic aspects in this study. Although necessity system provides a noteworthy matter of study since it provides different features with the frequent use of the lexical expressions, and with different necessity degrees mentioned by the same expression, the topic has not received due attention. Among other, Slobin and Aksu (1982), Savaşır (1986), Kocaman (1986; 1988; 1996), Aksu-Koç (1988), Ruhi et al. (1992), Erguvanlı-Taylan and Özsoy (1993), Ozil (1994) Kerslake (1996), Schaaik (1994), Aygen Tosun (1998), Cinque (2001), Güven (2001) are only few that adopts modality in Turkish.

In our study we tried to define the necessity expressions in Turkish in terms of their syntactic and semantic features. The major types of necessity expressions in Turkish are the suffix –*mElİ*, lexical expressions *gerek*V/ADJ, *lazım*ADJ, *zorunda*ADJ, *zorunlu*ADJ, *mecbur*ADJ, *şart*N, and the compound verb forms and derivations of these lexical expressions. In our study where we analyzed the data gathered via the internet, various newspapers, and spontaneously occurring natural utterances, we have derived the following conclusions.

i. Among the different markers of necessity in Turkish, *–mElİ*, the verbal suffix has a special place within the system since it may express the different necessity degrees of weak necessity, necessity and strong necessity.

ii. *Gerek*~V~ also deserves special attention in the study of necessity in Turkish as the only base verb form for necessity. It has special uses and functions as a supplementary form for the suffix *–mElİ* with the negation, question and subordination forms of the necessity expressing sentence.

iii. The lexical forms *gerek*~V/N~, *zorunda*, *zorunlu*~ADJ~, *şart*~N~, *lazım*~ADJ~, *mecbur*~ADJ~ provide Turkish with a wide range of modal domains and sources of impositions with different argument structures, and causative and passive forms that are available with them.

iv. *Ol-* triggers the epistemic meaning of the modal expressions. The use of conditional before *gerek* is also another factor that makes the sentence epistemically modal in Turkish.

v. The idiomatic expression of necessity, which has close relationship with the future marker, makes it possible to express stylistic differences and express the nuances of different necessities.

vi. The operator that Coates (1983) states to trigger the root modal meanings, negation, passive verb, 1st and 2nd person subject, have the similar uses of the necessity markers in Turkish. In addition to these, the assertive *–DIr* and modal adverbs interact with the necessity and determine the root or epistemic modal value of the sentence.

It is really noteworthy to make further researches on the use of the modal markers in context, since modality is directly related to the discourse that the sentence is uttered in. The ambiguity of the necessity expressions is also an important matter that may be focused in a detailed study with analyzing the interaction of the modal expressions other components of the sentence such as adverbs, copula, tense markers. A study on the conceptual structure of the expressions of the notions of necessity or other modality types would also provide a significant research matter.

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