

Semantics and Pragmatics of Evidentials in Turkish

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University of Connecticut, 2011

This dissertation investigates the semantic and pragmatic characterization of the evidential morphology in Turkish. That evidentials are parasitic to tense/aspect morphology is well noted (Izvroski 1997, Matthewson et. al 2007 a.o.), and the traditional literature describes the morphemes that encode tense and aspect in Turkish, namely [-mİş] and [-DI] as also employing evidentiality (Lewis 1967, Underhill 1976 a.o.) The main hypothesis pursued in this dissertation is that evidential morphology is semantically decomposed as tense or aspect and epistemicity in Turkish. The evidential morphology differs in its compatibility with specific temporal adverbs, and there are differences between the assertability of each subtype of evidentials. Both of these facts argue for the existence of semantically two distinct indirect evidential forms in Turkish language. A comparison of English Present Perfect Aspect and the indirect evidentiality shows that Turkish is part of the well noted Present Perfect Puzzle. This would be unexpected if Turkish did not possess semantically distinct two indirect evidential morphemes. I claim that the English-like Present Perfect Aspect meaning is contingent on the availability of inferential evidence in Turkish. Cross-linguistically, the level of meaning evidential forms are interpreted in varies. I argue in this dissertation that evidentials are presuppositional operators in Turkish language. To that end, in addition to the regular truth conditionality tests, two arguments are used; (i) a comparison of the Free Choice *Any* in English and the *herhangi bir* in Turkish shows that the type of evidentiality involved in a statement is determinant in the pragmatics of this item, (ii) evidentials can be embedded, and this is unexpected if evidentials were operative at the speech act level. The pragmatic distribution of each evidential form suggests that evidentials convey information about speaker's commitment levels to the truth of a proposition, and each evidential subtype exhibits different pragmatic properties.

One other aspect of evidential morphology discussed in this dissertation is the semantic contribution of reduplication of the indirect evidential morphology in Turkish. Reduplication facilitates a new layer of meaning, which I claim is regulated by an abstract REDUP morpheme.

Semantics and Pragmatics of Evidentials in Turkish

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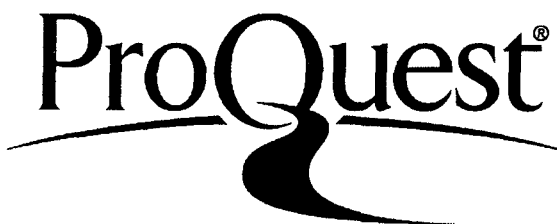
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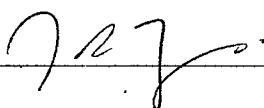
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List of Abbreviations

ABL	ablative
ACC	accusative
AUX	auxiliary
COP	copular
DAT	dative
DIR.EV	direct evidence
DUB	dubitative
IND.EV	indirect evidence
LOC	locative
NEG	negative
NOM	nominalizer
PL	plural
PERF	perfect
POSS	possessive
PRES	present marker
REP	reportative
REL	relativizer
3SG	third person singular
1SG	first person singular

CHAPTER 1

The Semantic Make-Up of Evidentials in Turkish

0. Introduction

This dissertation investigates the general characteristics of evidential forms in Turkish. Evidentiality is commonly viewed as obligatorily marking of speaker's source of information. While many languages do not grammaticalize evidentiality, some systematically make use of this marking. Although the general characterization of evidentiality has been under investigation relatively recently, quite a large number of languages such as Kashaya, Wintu, Maricopa, Tibetan, Quechua among many others have been described as involving grammaticalized evidential systems. Aikhenvald (2004) reports that about a quarter of the world's languages has some type of grammaticalized evidentiality. Turkish is one such language in which evidential information is conveyed through verbal morphology. Encoding of speaker's source of information for a given statement is maintained by suffixes [-mİş] and [-DI]. To the best of my knowledge, the meaning of the morphemes [-mİş] and [-DI] has not been analyzed from a formal semantics point of view. In this dissertation I appeal to the formal tools of the generative approach in analyzing the meaning of these forms and their contribution to a given statement.

The most common definition of *Evidentiality* involves two pieces of information: *evidence type* and *speaker's commitment* (Aikhenvald (2004), Johanson (2000) a.o.).

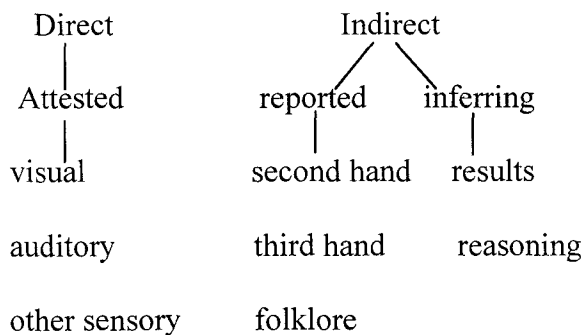
Chafe and Nichols (1986) describe evidentiality as marking speaker-oriented qualifications of propositions along two dimensions:

- (i) *in terms of the evidence the proposition is based on* (i.e., the source of information that a speaker bases their proposition is encoded in their statement);
- (ii) *with respect to the speaker's commitment to the truth of the proposition* (i.e., speaker's belief, disbelief, agnosticism is encoded in the statements made).

When making reference to events that occurred some time before the utterance time, speakers of Turkish qualify their statements by making a choice between past situations that they witnessed and the ones that occurred out of their perceptual field. In that respect Turkish is described to have a two-way distinction for encoding the information source: direct (witnessed), indirect (not witnessed). Turkish evidentials encode both (i) and (ii) above.

What kinds of sources of information are marked grammatically differ from one language to another. As noted in Willet (1988), evidentials are identified to encode three main types of information source cross-linguistically: direct access, reports, and inferring, as illustrated below by Willet's taxonomy:

Types of Evidence: Willet (1988)



The evidential system of Turkish conforms to Willet's generalization, in that the direct information and the indirect information correspond to the subtypes of evidentials he describes as *reportative* and *inferential*. Willet's description draws on the general characterization of the encoded type of information source across languages, and not on how languages structure or order the types of information involved in each grammaticalized evidential form. Aikhenvald (2004) notes that in indicating how the evidential information is acquired individual languages may structure their grammatical devices in various ways. Evidential morphemes are varied in their contributions, and they might not form a natural class cross-linguistically (Matthewson et al. 2007). In that respect, providing a uniform analysis of evidential forms proves complex. The labeling of the subtypes of evidentiality is especially difficult as they stand for different things in different languages (see Wierzbicka 1996). In this dissertation I primarily investigate the semantic make up of each evidential form in Turkish, and characterize the pragmatic conditions under which these morphemes are interpreted.

The existing literature on inflectional forms in Turkish have mostly focused on the morpho-syntactic analyses of these forms (see Sezer 2001 for a detailed overview), and their acquisition by children acquiring Turkish (Aksu-Koç 1986 et seq.), but not much on their semantic analyses. The well-known comprehensive investigation on the semantic contribution of inflectional forms in Turkish is Yavaş (1980). Even though Yavaş discusses the characterization of Tense and Aspect forms in Turkish, she does not specifically investigate the category of evidentiality. To this end, I focus on understanding the interpretive properties of evidential forms in this language. The questions I would like to address can be outlined as the following: What is the meaning

contribution of evidentiality in a given statement? What are the semantic and pragmatic aspects of its meaning? For addressing these questions, my investigation will focus on the distribution of evidential forms both in root and embedded clauses.

One of the most comprehensive works of evidentiality is Faller (2002). She notes that the main questions that the study of evidentiality is centrally concerned with (among others) are the following: i. How are evidential systems structured, both language-internally and cross-linguistically? ii. How is evidentiality related to other categories, in particular, modality? iii. Where does evidentiality fit into the current theories of meaning? Faller (2002) analyzes the evidential system of Cuzco Quechua, a language spoken in southern Peru and East Bolivia, within the framework of the *speech act* theory, yet Faller (2006) notes that the cross-linguistic appearance of evidential forms differ in this respect and that whether or not evidentiality is employed on a truth conditional level or a speech act level meaning depends on how individual languages structure their evidential systems. Izvorksi (1997) treats evidentiality in Bulgarian as a truth conditional phenomenon for instance, and under her account evidential system of Turkish as well is considered as truth conditional. Matthewson et al. (2007) claim that evidentiality may not form a homogeneous category within a language, and that evidentiality in Salish language St'át'imcets (a.k.a. Lilloeet) is not homogeneous. Matthewson et al. (2007) suggest that some evidentials can be treated as epistemic modals in some languages. They note also that even within a single language, elements which encode information source may or may not fall into the category of epistemic modals; although some evidentials can distinguish the source of information, they may not necessarily encode the differences in quantificational force in some languages. For Matthewson et al. evidentiality is a parasitic

category since its meanings may be associated with mood, tense or aspect, yet this does not seem to be the case for all languages. Portner (2009) reports that the literature generally argues that evidentials and epistemic modals can be considered as the same notion, but he adds, it is possible to describe this idea in two distinct ways: (i) epistemic modals are evidentials (ii) evidentials are epistemic modals. Portner argues that these descriptions are not equivalent. He suggests that while the statement in (i) is about epistemics not being semantically modals, but belonging with the class of evidentials (Westmoreland 1995, 1998 and Drubig 2001), the statement in (ii) is about evidentiality being a subtype of modality (the view taken by Matthewson 2006, McCready and Ogata 2007). The claim in (i) has a weak and a strong version. The weak version of (i) says that epistemic modals incorporate evidentiality as part of their meaning, but that they may be different from pure evidentials (Nuyts 2001, von Stechow and Gillies 2007). Portner (2009) notes there is no supporting evidence for (i), and that other possibilities remain as reasonable options to consider in understanding the nature of the relation between epistemic modality and evidentiality. de Haan (1999) argues that an element which distinguishes only the source of information cannot be considered as a modal. Matthewson et al. (2007), however, claim that some forms in St'át'imcets do not encode distinction of certainty degrees, yet they still deserve a modal analysis. In a subsequent work, Matthewson (2010) argues that much of the evidence, which has been advanced for the non-modal status of evidentials rest on mistaken assumptions and that epistemic modals and evidentials must be treated as identical classes. For understanding the true nature of the evidential meanings and the categories it interacts with, an investigation primarily of the individual languages and their cross-linguistic appearance needs to be

taken into consideration. To this end, I describe the semantic properties of the evidential morphology in Turkish, and propose an analysis for their semantic make up.

The overall claim pursued in this dissertation is that the morphology indicating evidentiality in Turkish, when attached to verbal stems, comprises mainly what I refer to as the epistemic component (the information source), the temporal/aspectual component and the evidential origo (*à la* Garrett 2000), which indicates the perspective from which an evidential is interpreted. I also argue that the pragmatics of each evidential type is distinct. There are arguments in favor of a truth conditional analysis of evidentials in Turkish, hence evidentials in this language can be best accounted for under a presuppositional operator analysis.

The focus of chapter 1 as a first step is to lay out the semantic make up of the morphology indicating evidentiality. I claim that the evidential morphology is decomposed in the semantics, and that there are two indirect evidential affixes in Turkish, namely [-mIş1] and [-mIş2], individually these morphemes are decomposed as *inferential-present perfect* ([-mIş1]), and *reportative-past* ([-mIş2]). The suffix [-DI] is interpreted as indicating direct evidence and Past Tense and the Present Perfect Aspect concurrently. My reasons for such an assumption come from the following observations: (i) in the presence of certain temporal adjuncts, systematically only one reading of evidentiality survives, (ii) the availability of a semantic division of *inferential-present perfect* and *reportative-past* follows from the fact that in some other evidential marking languages such as St'át'imcets, distinct grammatical forms mark distinct subtypes of information source such as report or inference, (iii) the form that systematically patterns with inferential evidentiality in Turkish exhibits parallelism in its distribution with the

distribution of the Present Perfect Aspect in English. I suggest that the indirect evidential form [-mİş] encodes, along with the indirect evidential information source, a meaning that corresponds to that of the English Present Perfect Aspect. This argues for the classification of Turkish as a language that is subject to the well noted present perfect puzzle under the [-mİş] *inferential* interpretation. My last piece of argument for such a separation of two forms of the indirect evidential [-mİş] comes from the assertability of [-mİş] in *p* and $\neg p$ statements, which I present in chapter 3. (iv) The assertability facts mainly show that the *reportative* evidential has distinct pragmatic properties from the *inferential* evidential.

In chapter 2, I show that the evidential morphology imposes certain restrictions in the quantificational domain. In particular, the legitimate use of the free choice (henceforth: FC) item *herhangi bir/any* in Turkish is regulated by speaker's knowledge state. Evidentiality induces presuppositions. FC *herhangi bir* is authorized depending on the form of the evidentiality employed and the specific presuppositions an evidential induces. This brings support to the claim that evidentials are operative at the propositional level of meaning in Turkish.

In chapter 3, I consider the embedded clauses and the characterization of evidential meaning in finite complement clauses in Turkish, and show that unlike in the root clauses in which evidential origo is always interpreted as the speaker, in the embedded clauses the evidential origo can shift from speaker to subject, and that the pragmatics of individual evidential forms exhibit variability.

Finally in chapter 4, I discuss the effects of reduplication of the evidential morphology in Turkish, and show that unlike the single [-mİş] form which encodes that

the speaker is not committed to the truth of the proposition, the reduplicated form conveys that the speaker does not believe to the truth of the proposition, and that a semantically available reduplication operator assigns this meaning to [-mIş-mIş] statements.

1. The temporal-Aspectual-Epistemic characterization of the evidential morphology in Turkish

In the literature and the descriptive grammars of Turkish, the morphemes [-mIş] and [-DI] are mainly classified as expressing tense and aspect meanings (see Yavaş 1980, Slobin and Aksu 1982, Aksu-Koç 1984, Göksel & Kerslake 2005, a.o.).¹ The individual descriptions of the properties of temporality and aspectuality involved in these morphemes vary, however, in that these morphemes are considered to be compatible with contexts in which the reference point is that of *past* or *past with a present consequent state*. There seems to be no unequivocal description on the exact temporal/aspectual characterization of these forms. In this initial chapter, I set out to arrive at a descriptive generalization on the temporal semantics of the evidential morphology. In trying to understand the temporal/aspectual value of these forms, I appeal to temporal adjuncts, and check their compatibility against evidential morphology. I show that the distribution of [-mIş] and [-DI] in temporally modified sentences reveals that these morphemes encode what can be described as Past tense and as English-like Present Perfect Aspect when they appear on the verbal stems. More precisely, the two readings of [-mIş] and

¹ The capitalized vowels indicate alternations in vowel quality due to vowel harmony. Capitalized consonants indicate changes due to phonological rules such as devoicing. [I] stands for a high back unrounded vowel in Turkish.

their compatibility with specific past denoting adverbs can be taken as an evidence for the ability of the morpheme [-mİş] to encode past reference the English-like Present Perfect Aspect meaning. The novel observation reported in this chapter is the availability of a connection between the evidential meanings and the temporal/aspectual meanings. This is taken to argue for the existence of two distinct [-mİş] morphemes, encoding different meanings. As for the temporal interpretation of [-DI], there seems to be no evidence arguing for such a separation.²

1.1 Evidentiality in Turkish

The descriptions regarding the morphemes [-mİş] and [-DI] in the literature take into account certain aspects of the meaning of these forms, but none of these descriptions provides a complete picture regarding the full semantic import of evidentials in a given statement. There is a considerable amount of work on the morphosyntactic properties of the verbal and nominal inflectional affixes in Turkish (see Deny 1921, Kronov 1956, Lewis 1967, Underhill 1976, Ediskun 1985, Johanson 1971, Aksu-Koç 1988, Erguvanlı-Taylan 1986, 1988, 1996, Kocaman 1996, Kuruoğlu 1986, Slobin-Aksu 1982, Yavaş 1980, 1982, and Kornfilt 1997 among others (see Sezer 2001 for a summary)). As noted before, the morphology that marks evidential forms is generally assumed to encode Tense and Aspectual meanings. Lewis (1971) for instance, describes [-mİş] as a Past Tense morpheme that is further subdivided as (un)witnessed or as reflecting '*a present state caused by a past action*' or '*things the speaker is reporting without having seen*'. This

² In fact, Enç (2004) notes that [-DI] always refers to past, yet Sezer (2001) introduces some examples where this generalization is challenged.

description is important as it highlights the common intuition about the temporality of the evidential statements. In order to arrive at a precise description on the interpretation of evidential forms, I start out my discussion by focusing on the evidential contribution of these forms.

1.1.1 The evidential characteristics of [-mİş] and [-DI]

When making references to temporally past situations, the source of information is necessarily disclosed in Turkish. While past events for which the speaker has a direct source of information is conveyed via the marking of [-DI], those for which the speaker has an indirect source are obtained via [-mİş].

Both [-mİş] and [-DI] are suffixes that can attach to verb stems or to nominals as illustrated below:

(1) Ayşe konuş-tu.

Ayşe talk –past-DIR.EV-3SG

Speaker has direct evidence that Ayşe talked.

(2) Ev kırmızı-ydı.

house red- COP-past-DIR.EV-3SG

Speaker has direct evidence that the house was red.

(3) Adam anla-mış.

man understand-past-INDIR.EV-3SG

*It was reported to the speaker that/speaker inferred that, the man understood/has understood.*³

(4) Adam-ın evi-ymiş.⁴

man-gen house-3SG- COP-past-INDIR.EV-3SG

It was reported to the speaker that/speaker inferred that, it has been /was the man's house.

Sentences involving the indirect evidential marker [-mİş] typically give rise to the following interpretations:

- (i) **Inferential meaning:** indicating information gained through drawing conclusions from the contextually available evidence
- (ii) **Reportative meaning:** indicating information received from second or third parties

³ Faller (2002) notes that evidentials are difficult to translate, and translations into English tend to suggest that the evidential meaning does not contribute to the proposition expressed. The difficulty is not only for the translation into languages that lack evidentials, but also into those that have them; their uses can differ subtly or dramatically from language to language. Izvorksi (1997) uses an approximate translation for the indirect evidential, namely the adverb 'apparently' in English, yet she points to the fact that this adverb does not exactly convey the meaning of the evidential forms in languages that make use of them.

⁴ When attached to nominals, morphemes [-DI] and [-mİş] attach onto an empty copular form.

Essentially, either of the meanings above indicates that the event that the proposition describes is not witnessed by the speaker. The contexts below are intended to illustrate the characteristics of possible situations in which an indirect evidential sentence can be used:

(5) Usain Bolt koş-muş.

Usain Bolt run-past-INDIR.EV.3SG

It was reported to the speaker that/speaker inferred that Usain Bolt ran/has run.

Context 1: *Indirect Evidence*-Inferential

Usain Bolt is giving a TV interview, all sweaty and tired right after he runs the 100 meter race. The speaker infers what the proposition is describing from the observable evidence, which is Usain Bolt looking tired.

Context 2: *Indirect Evidence*-Reportative

The news on TV relating to the Beijing Olympics report Usain Bolt's run (i.e., an information gained through third parties).

The sentence in (5) can be felicitously used by a speaker whose best evidence can be represented either by Context 1 or 2. A speaker cannot utter (5) felicitously, if s/he observed the actual event under discussion.

The suffixal form [-DI], however, indicates that the information source is firsthand and that the speaker relies on his/her own observation, thus the sentence in (6) can be used in context 3 below:

(6) Usain Bolt koş-tu.

Usain Bolt run-past-DIR.EV.3SG

Speaker has direct evidence that Usain Bolt ran.

Context 3: Direct Evidence

Usain Bolt runs the 100 meter race. The speaker actually witnesses the race that took place some time before the utterance time.

The compatibility of the sentences in these contexts shows that both [-mİş] and [-DI] are forms through which speakers of Turkish obligatorily indicate a source of information for their statements. Even if someone else reported the speaker that the event took place, the speaker would still use the direct evidential marker in cases where s/he has direct evidence, because her personal observation is the best evidence that she has.

1.1.2 The temporal and epistemic value of the morphemes [-mİş] and [-DI]

The descriptions in the literature take into consideration certain aspects of the temporal/aspectual meaning of the evidential morphemes, yet a full examination of each of these forms is not provided in the literature. Gencan (1979), Ergin (1986), Banguoğlu

(2000) describe both [-mİş] and [-DI] as Past Tense markers. Slobin and Aksu-Koç (1982) assume [-mİş] is a conflated category of Tense-Aspect and Modality, and Taylan (1988) treats [-DI] as an Aspectual-Modal marker. Johanson (1974, 2000, and 2003) classify these morphemes as Aspectual markers because of their post-terminal value, and due to their reference to the completeness of the event, Lewis (1967), Underhill (1985), Kornfilt (1997), and Göksel and Kerslake (2005) also classify both of [-mİş] and [-DI] as Perfective markers.

In what follows, I further examine the temporal properties of these morphemes. In doing so, I focus on the meaning of these affixes when they appear as attached to verbal stems.

Reichenbach (1947) employs the reference time as a means to describe the differences between Past Tense, Present Perfect Aspect (and the Past Perfect, which I do not discuss here). He uses three points in his description: the speech time (S), event time (E), and the reference time (R) as illustrated below:

- | | |
|----------------------|---------|
| (7) a. I saw John. | E,R___S |
| b. I have seen John. | E___R,S |
| c. I had seen John. | E__R__S |

In sentence (7)a the reference time is located before the speech time and it overlaps with the event time, whereas the event time and the reference are distinct in (7)b, in that, the time the speaker is referring to overlaps with the speech time, (i.e., the present moment). The reference time of (7)c is located between S and E, and the event, ‘my seeing John’,

occurs prior to the time of the reference. Reference time allows for the context-dependency, and separates the time of the event from the interval that the tense refers to.

Let us initially describe the intuition for the meaning of Past Tense as '*a time that is provided by the context that precedes the utterance time*' (see Kratzer 1996 among others), and Present Perfect Aspect as '*A time in which a consequent state of an eventuality that culminated holds*' (Moens 1987, Parsons 1990, and Giorgio & Pianesi 1996, a.o.).⁵ Different approaches have been proposed for the characterization of the meaning of the Present Perfect Aspect (see Pancheva and Bhatt 2005 for detailed information). According to the Result State approach, for instance, perfect has the semantic import that the *result state* of the underlying event obtains at the reference time. Consider the following example in this respect:

(8) Alicia has drunk the wine.

The result state of Alicia drinking the wine obtains at the speech time.

The description in (8) regarding the result state of an event in English summarizes the meaning I will refer to as Present Perfect Aspect in my discussion.

In what follows, I show that what we observe as past tense and Present Perfect Aspect distinction in English obtains in Turkish as well.

Consider the example in (9) with the direct evidential morpheme (-DI):

⁵ I adapt, however, in the sections to follow the quantificational semantics for past tense for simplicity and implement this model theoretic definition.

(9) Usain Bolt koş- tu.

Usain Bolt run-past-DIR.EV.3SG

Speaker witnessed that Usain Bolt ran/ has run.

Below I provide two contexts one of which exhibits that the time the sentence refers to is past on the time deixis, and the other exhibits that the reference time involves a consequent state of a past event (i.e., Perfect Aspect):

Recall that we illustrated in contexts 1 and 2 above, the possible environments in which distinct evidential types can be used. Contexts (10)a and (10)b, and contexts (12)a and (12)b below illustrate potential situations in which the sentences (9) and (11) that consist of direct and indirect evidential morphemes can be uttered.

Temporal adverbs such as *5 days ago* are used to convey the reference point on the time deixis as past. In the example in (10)a the event takes place *5 days ago*, while in (10)b, the adverb *just* indicates that the event is finalized at the moment of speech. Similarly, observe that in (12)a and (12)b, the adverbs modify the event. This as well intends to show whether or not the sentences are compatible with Past Tense and Present Perfect Aspect interpretations (i.e., a time in which a consequent state of a past eventuality holds).

Context 4: Direct Evidence

Reference point: Past

- (10) a. The Olympic 100 meter race took place **5 days ago**. Jane **witnessed** Usain Bolt's running 5 days ago. Jane reports this to a friend by uttering the sentence in (9).

Reference point: Past with a consequent state extending to the speech time

- b. Jane has witnessed Usain Bolt's running and finalizing the race, which has **just** taken place. Right at the moment when the race is over she calls her friend and reports this to her by uttering the sentence in (9) above.

The compatibility of the sentences in (9) with contexts (10)a and (10)b above suggests that a [-DI] sentence can be uttered both as indicating Past Tense and Present Perfect Aspect meanings. Also, examine the sentence in (11) which can be used in *context 5* (i.e., in (12)a and (12)b) in which the temporal reference points are distinct:

- (11) Usain Bolt koş- muş.

Usain Bolt run-past-INDIR.EV.3SG

*It was reported to the speaker that/the speaker inferred that Usain Bolt ran/
has run.*

Context 5: *Indirect Evidence*

Reference point: Past

- (12) a. The Olympic 100 meter race took place **5 days ago**. Susan who is a close follower of all the races told Jane that Usain Bolt ran the race. Jane reports this to a friend by uttering the sentence in (11).

Reference point: Past with a consequent state extending to the speech time

- b. Jane knows that Usain Bolt is one of the contenders in the 100 meter Olympic race. She wants to watch the race live, but gets stuck in the traffic and cannot make it on time to the Olympic stadium where the race was supposed to take place. She enters the stadium and sees on the big screen that Usain Bolt is giving an interview all sweaty and tired. Jane infers that Usain Bolt has **just** run, and immediately calls her boyfriend and utters the sentence in (11) to report what she has just found out.

The fact that sentences such as (9) and (11) are compatible with the above illustrated temporally specified contexts can be taken to indicate that both [-mİş] and [-DI] statements exhibit ambiguity with respect to encoding temporal/aspectual information. This is in fact in line with the general tendency in the literature towards describing the temporal meanings of these morphemes as ambiguous. More precisely, because of such a compatibility, the morphemes [-mİş] and [-DI] are taken to convey both Past Tense and Present Perfect Aspect interpretations in the literature on Turkish. It is questionable, however, whether these compatibilities can straightforwardly argue for a

temporal/aspectual ambiguity in their meanings. The above description leads to the following two possibilities regarding the temporal characterization of [-mİş] and [-DI]:

- (i) morphemes [-mİş] and [-DI] do not distinguish between Past Tense and Present Perfect Aspect meaning, rather each of these affixes has one meaning, namely *anterior* that covers both of these meanings (a form of underspecification).
- (ii) Each of [-mİş] and [-DI] are represented as two separate forms in the lexicon, and that they are reserved for two different meanings: [-mİş₁] for Past Tense and [-mİş₂] for Present Perfect Aspect, and [-DI₁] for Past Tense and [-DI₂] for Present Perfect Aspect.

Below I use temporal adverbs *yesterday* and *just* to modify the evidential statements under discussion. Notice importantly that even though both are time adverbs, adverbs such as *yesterday* and *lately* differ, in that while the former makes reference to a specific time on the time deixis and has a definite interpretation (like *two years ago* or *5 o'clock*), the latter does not refer to a designated point on the time deixis. The compatibility of *yesterday/dün* with the morphemes [-mİş] and [-DI] aids us to uncover what temporal value these morphemes bear.

- (13) Usain Bolt az önce koş-tu.

Usain Bolt just run-past-DIR.EV. -3SG

Speaker has direct evidence that Pelin has just run

(14) Usain Bolt dün koş-tu.

Usain Bolt yesterday run-past-DIR.EV.-3 SG

Speaker has direct evidence that Usain Bolt ran yesterday.

The grammaticality of the sentences in (13) and (14) suggests that the morpheme [-DI] is compatible with a specific time denoting adverb that locates the event on the time deixis at a specific time that is prior to the speech time, and with an adverb whose reference is a time that extends to the speech time. This compatibility again, seems to favor the hypothesis in (i), namely that suffix [-DI] is underspecified temporally between Past Tense and Present Perfect Aspect interpretations (i.e., past with a consequent state interpretation).

Consider now the compatibility of the same temporal adverbs with the morpheme [-mİş]. Recall also that the suffix [-mİş] gives rise to *reportative* and *inferential* interpretations:

(15) Usain Bolt az önce koş-muş.

Usain Bolt just run-past-INDIR.EV. -3SG

It was reported to the speaker that/ the speaker inferred that Usain Bolt has just run.

Reportative interpretation: ✓

Inferential interpretation: ✓

(16) Usain Bolt dün koş-muş.

Usain Bolt yesterday run-past-INDIR.EV. -3SG

It was reported to the speaker that Usain Bolt ran yesterday.

Reportative interpretation: ✓

Inferential interpretation: *

Both the sentence in (11), in which there is no specific time denoting adverb, and the sentence in (15) in which there is the temporal adverb *az önce/just*, a [-mİş] statement is grammatical in either of its readings (i.e., inferential and reportative interpretations). The sentence in (16) that is temporally modified with a specific past denoting adverb *dün/yesterday*, however cannot encode inferentiality. This contrast suggests that [-mİş] is sensitive to the temporal value of the adverb that it co-occurs with and that the loss of inferential interpretation could be tied to its aspectual interpretation. The examples above indicate that inferentiality and specific past interpretations are at odds due to a temporal/aspectual restriction on inferential evidential. Before I draw any conclusions regarding the proposed connection, in context 5 below, I illustrate a scenario in which the context is manipulated so as to avoid ambiguity relating to the source of the information. If it is in fact the case that the noted connection between inferential evidential and the restriction on the temporal/aspectual meaning of the evidential morphology is on the right track, the temporal adverb *dün/yesterday* is predicted to be incompatible with a situation in which the only intended meaning is the inferential interpretation. The speaker relies on his/her inference (i.e., drawing conclusions through reasoning) not report (i.e., information gained from third parties) in the following scenario.

Context 6 (enforcing inferential interpretation): The 100 meter Olympic race was supposed to take place on Monday. Mary who knows Usain Bolt is a successful athlete and that he would run the 100 meter race in this Olympics, yet is not aware of when the 100 meter races would take place, comes to the stadium for another event. When she sits on the grandstand she sees some left over placards on the floor with the note “*Go Usain Bolt!*” on them.

Notice that the sentence in (17) is ill formed in this context:

(17) * Usain Bolt dün koş-muş.

Usain Bolt yesterday run-past-INDIR.EV. -3SG

Speaker inferred that Usain Bolt has/ run yesterday.

Inferential interpretation: *⁶

In Context 6, the speaker has no direct evidence, and she did not receive any information in the form of a report. Recall that a condition indispensable to an inferential assertion is speaker’s personal consideration of the logical possibilities to draw conclusions. The context above is about an event that occurred at a specific time in the past. The only available evidence for the speaker is the contextual clues indicated in context 6. The specific time of the running event is not disclosed in the context itself. In such a scenario, it is not possible for the speaker to assert a statement that consists of the exact time of the running. The presence of a *placard* alone is not sufficient to license the inference that UB

⁶ Note that the sentence would be grammatical with its reportative meaning in a context enforcing reportative interpretation, which I illustrate in context 7.

ran *yesterday* as opposed to some other time. Below I qualify the context a bit further and illustrate a scenario in which a note is used as an implication that UB's running actually took place.

Context 7: Usain Bolt runs the 100 meter race, and all the newspapers report that it was such an impressive race. Mary, who was looking forward to the race, was travelling the day the race took place, and she couldn't make it to the race. She comes home the next morning and she reads on the newspaper the following headline: "*UB ran the 100 meter race yesterday. What a victory!*"?

Note first of all that the speaker cannot utter the sentence in (17) in context 7 with the intended meaning being *[-mIs]* inferential either. Importantly, this time this is because the type of the evidence is reportative evidence. All the necessary pieces of information about the event are introduced in context 7. Even though the available information introduced in contexts 6 and 7 are very similar, in context 7 the newspaper writes "*UB ran the 100 meter race yesterday. What a victory!*", which implies that UB's running took place yesterday. This makes it possible to utter the sentence in (17) with the intended meaning being *[-mIs]* reportative, but crucially not *[-mIs]* inferential. The information provided in the context does not leave room for the speaker to take logical steps, construct hypotheses, and draw conclusions. Thus the sentence in (17) can only be asserted with the intended meaning being *[-mIs]* reportative in such a context, and this is actually irrelevant for the fact that (17) is incompatible with an inferential enforcing context as in context 6.

Let us suppose now that the contextual information is limited to the one as in context 6, and that the speaker had prior information that UB's running would take place *yesterday* and that usually after the events the stadium is not cleared immediately. Considering the evidence that is available and pursuing the logical steps, the speaker draws the inference that *UB must have run* and that this could have been *yesterday*. In a situation where the speaker wants to convey her inference and indicate the precise timing of the event she appeals to a sentence such as the one in (18), which consists of a participle form and an epistemic modal *-malı/must*. The temporal specification of the proposition described can be represented by the temporal adverb *dün/yesterday* and can be understood as part of the inference in this case:

(18) Usain Bolt dün koş-muş ol-malı.⁷

UB yesterday run-past-INDIR.EV. aux-must(epistemic)-3SG

UB must have run yesterday.

Reportative interpretation: *

Inferential interpretation: ✓

Thus, the sentence in (18) suggests that a specific time adverb can be part of the assertion when [-mIş] and [-mAlI] co-occur.

⁷ In Turkish, the necessity modal *must* is a suffix that attaches to verb stems. When it appears on a verb stem, it indicates deontic modality, while its concurrent presence with a participle as in (18) indicates epistemic modality. Thus, the source of the inference is [-mIş] in (18) above. It is very reasonable to assume that epistemic modal in (18) is a modal concord in Turkish, because elsewhere [-mAlI] indicates only deontic modality.

Recall once again that the sentence in (9) is compatible with both of the contexts that involve an event whose temporal specification is of past and contexts in which an event whose temporal specification is past that extends to speech time (i.e., the present perfect). The sentence in (11) also illustrates the same compatibility. The sentence in (16), however, shows that the specific time denoting adverb *dün/yesterday* is at odds with one of the readings of [-mİş]. I take the fact that the sentence in (16) cannot be modified with the specific time denoting adverb *dün/yesterday* indicates that the temporal reference point of [-mİş] is exclusively that of past. If indeed it were the case that [-mİş] was underspecified for its temporal meaning, we would not expect different distributions in the presence of temporal adverbs such as *dün/yesterday* and *az önce/just*. In other words, we would expect *dün/yesterday* to be incompatible with either of the readings of [-mİş], yet this is not the case. The fact that one of its evidential meanings survives and that the other disappears point to the possibility that there are semantically distinct two [-mİş] forms in Turkish.⁸

⁸ Only relying on the adverb test may not be as convincing for detecting the availability of the *Present Perfect Aspect* meaning. Regardless of the ability of this test to detect the Present Perfect meaning, however, compatibility with *yesterday* reveals the fact that otherwise what is described as tense/aspect ambiguous morpheme [-mİş] exhibit distinct temporal/aspectual restrictions.

In principle, the specific time denoting adverbs such as *yesterday*, *5 o'clock* are compatible with Past Tense. This is true in the case of languages such as German which are described to be not part of the group of languages that exhibit the present perfect puzzle, whose relevance will become clear in the sections to follow. If [-mİş] morpheme is purely a past tense morpheme, we would not expect its incompatibility with the temporal adverb *yesterday*, as past tense is always compatible with a time denoting adverb *yesterday*. This suggests that [-mİş] must be bearing a meaning that is different from the purely past tense meaning. Recall that I describe this meaning as the aspectual meaning. Below, I appeal to other tests for detecting this distinct meaning (i.e., the present perfect-like interpretation):

An interesting parallel arises if we take into consideration the above noted distribution of the reportative and the inferential interpretations of [-mİş] on the one hand and the distribution of past and present perfect interpretations on the other. This parallel is illustrated in Table 1 below:

Context: Seda and Ayşe are at a beach. Seda cannot find her sunglasses. She checks her bag in which she thought she had her sunglasses, and she couldn't find them there either. She takes a walk and finds her glasses on the sand. Seda comes back and tells Ayşe:

(i) # Gözlük-ler-im-i kaybet-miş-im, ama bul-du-m.

Glass-pl.poss-acc. lose- inf-1 SG but find-past.DIR.EV-1SG

I have lost my glasses, but found them.

(ii) Gözlük-ler-im-i kaybet-miş-ti-m, ama bul-du-m.

Glass-pl.poss-acc. lose- inf-Dir.Ev-1 SG but find- past.DIR.EV-1SG

I had lost my glasses, but found them.

The sentence in (i) is infelicitous, because since the speaker found her glasses, she cannot assert a [-mİş] *inferential* statement. The sentence [-mİş] *inferential* implies that the glasses are still lost at the moment of speech. Note that the impossibility of the assertion of (i) cannot be due to the fact that the speaker has now “somewhat” direct evidence, because she found her glasses. More precisely, because the speaker inferred that she lost her glasses, but now she has direct evidence that she found them. If the sentence is uttered without the continuation “ama buldum” (but I found them), the sentence is felicitous with a continuation “hala bulamadım” (still could not find them). This implies that they are still lost and the sentence is felicitous in such a situation. Thus, inferential form exhibits a parallel behavior to the present perfect puzzle in English. Note also that in (ii) [-mİş] and [-DI] form a unit and indicate past perfect temporality, and the evidential value of a [-mİş-DI] sentence is direct evidential as [-DI] is the outermost assertion.

Table 1

	$[-mI\dot{s}]$	<i>yesterday</i> + $[-mI\dot{s}]$	<i>yesterday</i> + $[-mI\dot{s} \text{ ol-mali}]$ be-must	<i>just</i> + $[-mI\dot{s}]$
Reportative Anterior	✓	✓	*	✓
Inferential Present Perfect Aspect	✓	*	✓	✓

The cases in which the reportative interpretation is available and the cases in which the inferential interpretation is available parallels with those cases in which it is possible for the suffix $[-mI\dot{s}]$ to make references to past events and to past events whose consequent states hold at the time of the utterance (i.e., English-like Present Perfect Aspect). This parallel supports the claim that there exists two $[-mI\dot{s}]$ forms in the lexicon. $[-mI\dot{s}]$ *inferential* whose temporal meaning can be paraphrased as the English-like Present Perfect Aspect and $[-mI\dot{s}]$ *reportative* that encodes anteriority. Izvorski (1997) claims that the Present Perfect Aspect morphology and the indirect evidentiality are tied in Bulgarian, which leads her to suggest that evidentiality in Bulgarian can be defined as *perfect of evidentiality*. As we have observed in Turkish as well a condition indispensable to indirect evidentiality is the presence of a $[-mI\dot{s}]$ morpheme that is reported to encode tense and aspect interpretations.

Recall that the English Present Perfect Aspect as described in Reichenbach (1947) necessitates an overlap of the reference time and the speech time. Extended now (XN)

theory of present perfect says that the time Present Perfect Aspect conveys (reference time) extends to the speech time in English. I submit that [-mİş] in Turkish also encodes an XN interpretation of the Present Perfect Aspect. This meaning only surfaces when there is inferential evidence, since inferential evidence encodes a speaker's inference at the moment of speech, hence creates the current relevance. In other words, the meaning of *speaker's now* (i.e., the speech time) is encoded through inferentiality. The proposed meaning connection between the Present Perfect Aspect interpretation and the inferential evidentiality predicts that in other languages in which aspect morphology and evidentiality overlap the inferential interpretation of the evidential may facilitate the surfacing of a meaning which connects the reference time to the speech time. Note, however, that for such a facilitation effect to surface in another evidential marking languages, the evidential form should concurrently convey evidentiality and temporality/aspectuality meanings through single morphology just like in the case of [-mİş] in Turkish.

The parallel in table 1, I claim, shows that while [-mİş] *inferential* encodes an English-like *Present Perfect Aspect* meaning, and [-mİş] *reportative* can be characterized as encoding *anteriority* meaning. Therefore;

- (i) Turkish has a way to encode the English-like Present Perfect Aspect, and this is mediated by [-mİş] *inferential*.
- (iii) Turkish makes a two-way distinction in referring to Past: *reportative-past* (encoded by [-mİş] *reportative*) and *witnessed-past* (encoded by [-DI]).

Each [-mIş] affix can be semantically decomposed as evidentiality and temporality:

[-mIş] reportative : [reportative evidence, anteriority]

[-mIş] inferential : [inferential evidence, present perfect]

It is noted in Willet (1988) that among the evidential marking languages different divisions are made for encoding indirect evidential subtypes. Distinct enclitics are used for conveying different subtypes of indirect evidence source in Lilloet, a Salish language also known as *St'át'imcets*. The clitic *ku7* marks reportative evidence, while *an'* marks inferential evidence in this language. (see Matthewson et. Al 2007):

(19) *ku7*: reportative

an': inferential of result (perceived evidence)

The contexts in which the evidential enclitic *ku7* and *an'* are used parallel with those of [-mIş] in Turkish.⁹ The parallel between St'át'imcets enclitics and [-mIş], then supports our

⁹ Reportative: *ku7*

Speaker is talking about the birthplace of her grandmother's mother. She was told about this by one of her relatives, but not by anyone who witnessed the birth:

(i) *l-ta cácl'ep-a ku7 lh-kwís-as ku skícza7-s*

in-DET Fountain-EXIS REPORT HYP-fall-3CONJ DET mother-3POSS

“[reportedly] Her mother was born at Fountain.”

(=7, Matthewson 2007)

(ii) *Annesi Fountain'da doğ-muş.*

Her mother Fountain-LOC- born- past-IND. EV-3SG

proposal that [-mIş] is used for indicating two different types of evidential information in Turkish, namely the reportative and the inferential:

- (20) [-mIş] reportative = **ku**⁷
 [-mIş] inferential = **an'**: inferential of result (perceived evidence)

1.1.3 Evidence access time and the event time

I would like to clarify in this dissertation a point regarding the temporal value of the evidential statements. In the examples we have considered so far, we have not noted whether or not the temporal specification of the event and the temporal specification of the evidence access is required to be the same.¹⁰ I examine below the difference between

“[reportedly] Her mother was born at Fountain.”

Inferential (perceived evidence): an'

You had five pieces of ts'wan (wind-dried salmon) left when you checked yesterday. Today, you go to get some ts'wan to make soup and you notice they are all gone. You are not sure who took them, but you know that John is the person in your household who really loves ts'wan and you see the ts'wan skins in his room.

- (iii) *ts'aqw-an'-ás-an'* *I* *ts'wán-a kw s-John*
 eat-DIR-3ERG-PERC.EVID DET.PL wind-dr.salmon-EXIS DET NOM-John
 “John apparently ate the *ts'wan*.” (=12, Matthewson 2007)

- (iv) *Ts'wan-i John ye-miş.*
 Ts'wan-acc John eat- past-IND. EV-3SG
 “John apparently ate the *ts'wan*.”

¹⁰ Thanks to Susi Wurmbrand for bringing this point to my attention.

the evidence access time and the time of the described event. I show below that there can be a mismatch between the time of the described event and the evidence access time both of which are interpreted as part of the same morpheme, namely [-mİş] in the example below. The sentence in (21) can be uttered in situations in which the evidence access time varies. In particular, it is compatible with situations in which the evidence access time for the speaker can be *last week* or *now*, while the time of the described event is located in the past:

Situation 1: Jane won the lottery *last week* and Mary informed John about it *last week*.

Situation 2: Jane won the lottery *last week* and Mary, *just now*, informs John about it.

(21) Jane piyango kazan-mış.

Jane lottery win-past-IND.EV-3SG

The speaker has indirect evidence that Jane won the lottery.

The sentence in (21) can be uttered in either of the situations above. Whether the speaker receives the information about Jane's lottery win *last week* or *now* does not seem to affect the compatibility of the sentence in (21) with the situations given above in which the time of the described event is that of past. Furthermore, if the evidential requires that the event time and the evidence access time necessarily overlap, we expect that the (un)availability of a certain type of information affects the interpretation of the event time, yet it does not. Whether speaker's source of evidence in (21) is *Jane's excessive money spending* or *the winning numbers of the lottery* that is taken to be the information for the statement in (21)

does not seem to affect the pastness of the *winning* event. Also note that it is always the current evidence that takes precedence over any other type of evidence: Suppose, for instance that, two hours ago Mary had inferential evidence that *Sally left*, and now she has inferential evidence that *Sally didn't leave*. In such a situation, the second evidence takes precedence over the first one for evaluation. Thus, I take that the evidence access time is independent of the time of the described event.¹¹

Therefore, the fact that there exists two distinct forms of [-mIş] rather than a single form that is ambiguous between the *inferential* and the *reportative* readings is supported by both the behavior of the evidential and the temporal components of the evidential morphology, and from the existence of languages that make use evidential marking for distinct evidential subtypes such as St'át'imcets.

In the section below, I compare English and Turkish and show that the distribution of inferential evidential in Turkish resembles the distribution of Present Perfect Aspect form in English. This further argues for the existence of two distinct forms of [-mIş], namely [-mIş] *reportative* and [-mIş] *inferential* in Turkish.

2. The present perfect puzzle

It has been noted since McCawley (1971) that in contrast to simple Past Tense sentences, Present Perfect sentences cannot be felicitously modified by *past-time* adverbials (see also Klein (1992) among others). The following examples from English illustrate this:

¹¹ Note that as we mentioned before, in the case of inferential evidence, the evidence acquisition time follows the event time.

(22) John went to Boston yesterday.

(23) *John has gone to Boston yesterday.

When the sentence involves a modal such as *must* as in (24) below, it becomes compatible with *yesterday*.

(24) John must have gone to Boston yesterday.

Notice that the restriction is only relevant when the adverb is a specific past denoting one. The Present Perfect sentence in (25) below is grammatical with a time adverbial such as *just*:

(25) John has just gone to Boston.

The examples illustrated above forms what is known as the Present Perfect Puzzle in English.

Below I illustrate the parallel between the *Present Perfect Aspect* morpheme in English and the *[-mİş]* *inferential* morpheme in Turkish:

Table 2:

	English <i>Present Perfect</i>	Turkish <i>[-mİş]</i> (Inferential)	English <i>must have</i>	Turkish <i>[-mİş] olmalı</i> (Inferential)
<i>Yesterday</i>	*	*	✓	✓
<i>Just</i>	✓	✓	✓	✓

Notably, not all languages are subject to the puzzle noted (22) to (25) above. The prohibition against specific past denoting adverbs is not attested for instance, in German, Dutch, Icelandic, or Italian. Giorgi and Pianesi (1998), and Musan (2001) note that this is due to the fact that the present perfect morpho-syntax in these languages lack the meaning of *past*. Taking the parallel noted in table 3 above, *[-mİş]* *inferential* behaves like the English-like present perfect, and Turkish is subject to the noted present perfect puzzle.

Before I move on to the analysis of the meaning of the evidential forms in Turkish, I provide a brief background on the existing accounts of the so called Present Perfect puzzle in English, and note why these analyses do not seem to be tenable for Turkish.

2.1 Approaches to the present perfect puzzle

2.1.1 Katz (2002)

Owing to McCawley (1971), Katz (2002) notes that as opposed to Past Tense sentences, present perfect sentences carry a presupposition of *future possibility* in English. It presupposes that it is possible for the event to occur at a time after the time of the speech, and asserts that one has occurred in the past. The event predicate modified by a past-time adverbial as in sentence (23), necessarily violates this presupposition, and the sentence results in ungrammaticality. The future Possibility (POSS) Katz notes holds between an event predicate, an interval, and a context as given below:

$$(26) \quad \text{POSS}(P, t, c) = 1 \text{ iff } \exists w \exists e [w \in cs_c \ \& \ \tau(e) \subseteq t \ \& \ P(e)(w)]$$

The sentence in (27) has the logical form in (28), where the perfect takes scope over the temporal adverbial.

$$(27) \quad * \text{Katrin has taken out the trash last week.}$$

$$(28) \quad \begin{array}{l} \text{a. } [\text{PRES-PERF } [\text{Katrin take out the trash last week}]] \\ \text{b. } \exists e [\tau(e) < t_c \ \& \ \text{take-out}(w, e, Ka, tr) \ \& \ \exists (e) \text{ is on the week before } c\text{'s} \\ \text{week}]; \\ \exists t [t_c < t \ \& \ \text{POSS}(\lambda e \lambda w [\text{take-out}(w, e, ka, tr) \ \& \ \tau(e) \text{ is on the week before} \\ c\text{'s week}], t, c)] \end{array}$$

The sentence in (27) is ruled out as it presupposes that it is possible for there to be an event of Katrin taking out the trash last week that takes place both after the time of the utterance and before the time of the utterance. This is a presupposition that can never be satisfied, hence the clash.

Katz's (2002) analysis does not seem suitable for Turkish, because it does not provide a mechanism that can capture the relevance of evidentiality that we have discussed to be important for Turkish. Note also that Katz's proposal falls short in accounting for sentences with epistemic modal *must* in English in which the Present Perfect appears to be able to host the temporal adverb *yesterday*. Thus, this approach does not fully explain the facts in English and cannot be assumed for Turkish.

2.1.2 Pancheva and von Stechow (2006)

Pancheva & von Stechow (2006) suggest that Present Perfect locates an eventuality relative to a time interval that extends to past. In English, this interval necessarily includes the speech time, hence cannot be modified by positional adverbials. Their proposal is that past, present perfect and non-past form scalar alternatives. Past is a stronger scalar alternative to Present Perfect, and Present Perfect is strengthened to non-Past, requiring inclusion of the speech time in English. Moreover, Perfect relates an interval *Perfect Time Span (PTS)* and the reference time. Composed with Perfect, the Viewpoint aspects temporally situate the event time relative to the PTS. The adverbial modifies the PTS. Semantic features such as Present, Past, Perfect, etc. are specified at syntactic terminal nodes. In German, Present Perfect and Past are not scalarly ordered.

When Present Perfect is expressed as a value of finite T, its meaning is not restricted. As a result, the PTS may precede the speech time, and be modified by positional adverbials.

Under Pancheva & von Stechow's (2006) account there seems to be no room for accounting for the evidential-Present Perfect connection highlighted for Turkish.

3. Background on the existing literature on evidentiality

3.1 Izvorski (1997)

Izvorski uses the following examples for illustrating the connection between Present Perfect Aspect morphology and the Indirect Evidentiality:

(29) a. Gel-miş -im.

Come PERF-1SG

Turkish

b. Az sâm doşâl .

I be-1SG, PRES come-P.PART

Bulgarian

c. Jeg har kommet

I have-1SG, PRES come-P.PART

Norwegian

'I have come.' (PRESENT PERFECT) and/or 'I apparently came.' (PE)

((=1) Izvorski 1997)

The sentence in (29)a is used as an example for the historical connection between present perfect and evidential in Izvorski (1997). She notes that the inflected verb has the

morphology of the present perfect, yet the sentence is interpreted only as indirect evidential in Turkish. She claims that unlike (29)a, the sentences in (29)b and (29)c are ambiguous between *Present Perfect* and indirect evidentiality (i.e., *Perfect of Evidentiality* in Izvorski's terminology). Notice, however, that Izvorski overlooks the fact that the sentence from Turkish illustrated in (29)a has both the *inferential* and the *reportative* evidential interpretations, along with its temporal/aspectual interpretation. In its inferential interpretation it indicates a self-recognition of what has happened, in its reportative interpretation it refers to a third party's report about the speaker's situation in the past. The anomaly that leads to the above noted description that Izvorski uses results from the first person's report or inference about him/herself. Such an anomaly is averted when the sentence is not inflected for first person singular, an example of which is given below:

(30) Gel-miş.

Come-past-INDIR.EV-3SG

It was reported to the speaker that/speaker inferred that s/he came/has come.

Thus, despite the noted anomaly, the sentence in (29)a can be described as being ambiguous between *Present Perfect* and indirect evidentiality just like its counterparts in Norwegian and Bulgarian.

The Past Participle and the Aorist has to co-occur in Bulgarian in order to convey what the English Present Perfect Aspect conveys. While the sentence in (31)a, that consists the Past Participle and the Aorist morphology is incompatible with specific past

denoting adverbs such as *yesterday*, *last night*, *exactly at 3 o'clock*, the sentence in (31)b that lacks the Aorist morphology is compatible with such adverbs. Izvorski takes this to mean that the latter type of morphological marking only indicates indirect evidentiality (Perfect of Evidentiality in her terminology).

- (31) a. Te sa dosli ((?vcera)/(?snosti)/(?točno v 3 casa).
They ARE¹² come.P.PART yesterday/last night/exactly at 3 o'clock
'*They have come yesterday/last night/ exactly at 3 o'clock.'

((=20a) Izvorski 1997)

- b. Te dosli včera/ snosti/ točno v 3 casa.
They **come-PE** yesterday/last night/at exactly 3 o'clock
'They apparently came yesterday/last night/ exactly at 3 o'clock.'
(=20b) Izvorski 1997)

Given that only when the Past Participle and the Aorist co-occur does a sentence convey the English-like Present Perfect interpretation, (as in (31a)), and an indirect evidential interpretation otherwise, (as in (31b)), (due to the fact that it is compatible with specific time denoting adverbs), on its own, the indirect evidentiality morphology in Bulgarian must have an epistemic import rather than an English-like Present Perfect Aspect import. In Turkish, [-mIs] morpheme encodes an English-like Present Perfect Aspect

¹² Emphasis is mine.

interpretation and an evidential interpretation on its own as we noted before.¹³ The semantic composition of evidential statements in Turkish is different from the ones in Bulgarian in this respect. In Bulgarian the indirect evidential interpretation is linked to the perfect morphology that does not have a temporal/aspectual value of its own (i.e., receives its aspectual interpretation from the aorist), whereas in Turkish we observed that it is the evidential morphology on which both the information on evidentiality and temporality is encoded. Since the morphology of the perfect only contributes to the epistemic meaning in Bulgarian, Izvorski (1997) provides a semantic explanation for the evidentiality of the present perfect morphology. An analysis of the evidential morphology in Turkish, however, will have to include the temporal/aspectual meanings and the evidential meaning into the semantic composition.

3.2 Matthewson et al. (2007)

Matthewson et al. (2007) propose to analyze evidentials in St'át'imcets based on Kratzerian type modal analysis. Unlike Izvorski (1997) which does not provide a distinct semantics for the direct and indirect evidentiality, Matthewson et al. provide a semantics for both the *reportative* and the *inferential* evidentiality independently. The clitic **ku7** marks *reportative* evidence, while **an'** marks *inferential of result (perceived evidence)* and **k'a** marks *inferential (based on observable results or solely on mental reasoning)*. Each evidential form is interpreted as a separate modal under their account.¹⁴ The

¹³ More specifically when attached to verb stems on its own.

¹⁴ *Semantics of evidentials in St'át'imcets* as provided in Matthewson et al. (2007) is given below:

- (i) $[[k'a]]^{c,w}$ is only defined if c provides a modal base B such that for all worlds $w', w' \in B(w)$ iff the inferential evidence in w holds in w' .

analyses of *-an'* and *ku7* do parallel. The only difference between them resides in the definedness conditions. For *-an'* the modal base contains all those worlds in which the perceived evidence in *w* holds, and for *ku7* it contains all those worlds in which the reported evidence in *w* holds. Notice that since the evidential clitics in St'át'imcets lack temporal interpretation, the semantics provided in Matthewson et al. will be able to account only for the evidential interpretation. A mechanism that will derive the meaning of the evidential morphology in Turkish has to involve the evidential and the temporal/aspectual meanings. Any account that merely provides a semantics for the evidential and not the temporal meanings serves equally well for an analysis of evidentials in Turkish. They do not fully explain the temporal/aspectual and evidential make up, but the evidentiality. In that respect Matthewson et al.'s (2007) analysis is equally powerful as Izvorski's account, yet on its own it cannot capture the entire meaning contribution of the evidential markers in Turkish.¹⁵

If defined, $[[k'a]]^{c,w} = \langle s, t \rangle$. $p \langle s, t \rangle$. $\forall w' [w' \in f(B(w)) \rightarrow p(w')]$

- (ii) $[[an' p]]^c$ is only defined if *c* provides perceived evidence in w_0 which determines an accessibility relation R_c , such that for all worlds *w*, $R_c(w_0, w)$ iff the perceived evidence in w_0 holds in *w*

If defined, $[[an' p]]^c = 1$ iff $\exists W [R_c(w_0, W) \wedge \forall w [w \in W \rightarrow p(w)]]$

- (iii) $[[ku7 p]]^c$ is only defined if *c* provides reported evidence in w_0 which determines an accessibility relation R_c , such that for all worlds *w*, $R_c(w_0, w)$ iff the reported evidence in w_0 holds in *w*

If defined, $[[ku7 p]]^c = 1$ iff $\exists W [R_c(w_0, W) \wedge \forall w [w \in W \rightarrow p(w)]]$

¹⁵ In chapters 2 and 3, I show that a purely modal analysis of evidentials with the modal force in the assertion is not tenable for evidentials in Turkish.

3.3 Interim summary

The previous discussion showed that the evidential morphology comprises evidentiality and temporality (i.e., tense and aspect meanings) in Turkish, and that for presenting a semantics for the meaning of the evidential markers, these components have to be taken into consideration.

4. The semantic make-up of [-mİş]

The section below provides the semantic decomposition that I assume for the evidential marker [-mİş] in Turkish when it attaches to verb stems. I assume that tense and evidential are separate syntactic heads, and the temporal-evidential meanings are interpreted compositionally as follows:

(32) Usain Bolt koş-muş.

Usain Bolt run-past-INDIR.EV.3SG

It was reported to the speaker that/speaker inferred that Usain Bolt ran.

Reportative: ✓	Inferential: ✓
Anterior: ✓	Present Perfect: ✓

Since Turkish employs two distinct forms of [-mİş] (i.e., [-mİş] *inferential* and [-mİş] *reportative*), there are two distinct representations of these forms. Recall that the sentence in (32) has reportative-past or inferential-perfect interpretations depending on the context it is used in. Let us first consider the meaning of [-mİş] *reportative*. I assume that the meaning contribution of *anterior* can be represented by the run of the mill analysis of

Past (i.e., as in classical tense logic in which past is assumed to be quantificational (Prior 1967, a.o.)):¹⁶

$$(33) \quad [[\text{PAST}]]^{\mathbb{G},c} = \lambda p <i t> . \lambda t . [\exists t' : t' < t] p(t')$$

As for the interpretation of evidentials, I assume a presuppositional operator. Izvorski (1997) provides the following for the indirect evidential meaning:

- (34) The Interpretation of EVp:
- a. Assertion: p in view of the speaker's knowledge state
 - b. Presupposition: Speaker has indirect evidence for p

The existence of the necessity modal in the assertion part in Izvorski's semantics is criticized by Sauerland and Schenner (2007), who claimed that the modal in the assertion is counter intuitive (I suppose for Bulgarian), especially for those cases in which the speaker relies on a report from a source that is not entirely trustworthy, a problem that I further discuss in chapter 3, and due to that they claim it should not be assumed that evidentiality in Bulgarian is a presuppositional modal operator with its own modal force.

At this point, I apply the presuppositional operator analysis that Sauerland and Schenner propose, and justify my reason for this in chapter 3. Note for now that the only

¹⁶ Note that Partee's (1973) pronominal analysis of tenses could equally be implemented. The quantificational analysis is maintained for simplicity. Nothing hinges on this assumption.

difference between their semantics and Izvorski's semantics is that the latter includes the necessity modal in the assertion.

(35) $[[\text{REP}]](y,v)(p)$

Presupposition: y has in v reportative evidence for p

Assertion: p

Sauerland&Schenner (2007)

Roughly the LF for the sentence in (32) consisting the morpheme $[-mI\dot{s}]$ *reportative* repeated as (36) below looks like the one in (37):

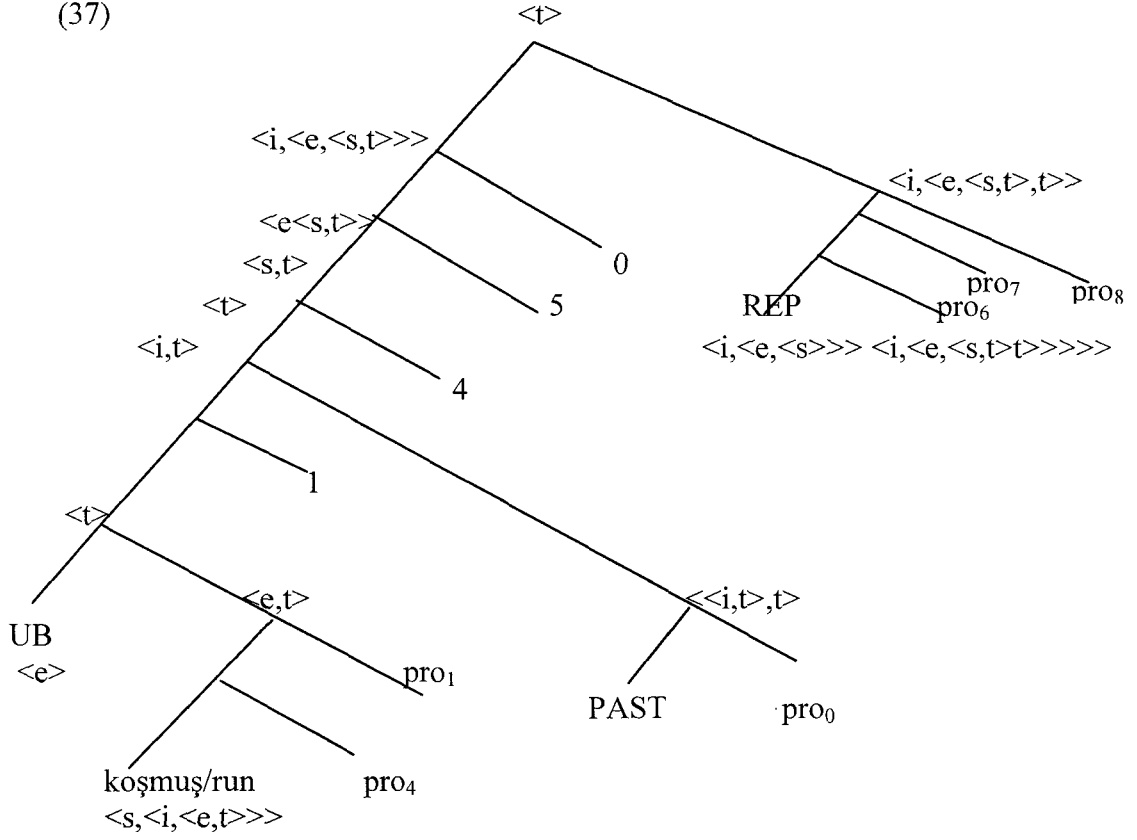
(36) Usain Bolt koş-muş.

Usain Bolt ran-past-IND-EV-3SG

Speaker has indirect evidence that Ussain Bolt ran.

I adapt the extensional treatment of possible worlds in which lambda operators are syntactically available heads as in Sauerland and Schenner (2007), whose assumptions follow from Cresswell (1990), Percus (2000), and Schlenker (1999). In the Heim and Kratzer (1997) tradition, the lambda operators are introduced to the left of the LF tree. This would work equally well for our purposes, yet as Turkish is a head final language assuming that the lambda operators appear to the right of the LF tree will be consistent with the syntactic positions of these operators as well. Thus, the LF for $[-mI\dot{s}]$ *reportative* I suggest is as follows:

(37)



(38)

$[[REP]] = [\lambda x \in D_e. \lambda w \in D_s. \lambda t \in D_i. \lambda p: x \text{ has in } w \text{ at } t \text{ reportative evidence for } p.$

$p(x, w, t) = I]$

$[[REP \text{ sp } w_0 t_0]] ([[UB \text{ run } pro_4 \text{ pro}_1 \text{ } 1 \text{ PAST } pro_0 \text{ } 4 \text{ } 5 \text{ } 0]])$

$[[REP \text{ sp } w_0 t_0]] ([[\lambda t \in D_i. [\lambda x \in D_e. [\lambda w \in D_s. \text{there is a } t' < t \text{ s.t. UB runs at } t' \text{ in } w]]]])$

is defined only if speaker has in the actual world at the actual time reportative evidence

for $([\lambda t \in D_i. [\lambda x \in D_e. [\lambda w \in D_s. \text{there is a } t' < t \text{ s.t. UB runs at } t' \text{ in } w]]])$

when defined $[[REP \text{ sp } w_0 t_0]] ([[\lambda t \in D_i. [\lambda x \in D_e. [\lambda w \in D_s. \text{there is a } t' < t \text{ s.t. UB runs at } t' \text{ in } w]]]]) = 1$ iff there is a t' before now, s.t. UB runs at t' in the actual world.

Consider now the interpretation of the *[-mIs]* inferential statement:

[-mIş] *inferential* morpheme is decomposed as inferential evidential and Perfect. Furthermore, perfect locates an eventuality (e.g., *UB's run* in (36)) relative to a time interval. I assume the extended now (XN) theory of perfect, in which perfect introduces an interval that extends back from the reference time, and affirms that the proposition that it takes in its scope is true at that interval (McCoard 1978, Dowty 1979, a.o.).

I use the model theoretic definition of Perfect proposed in Pancheva and Bhatt (2005) (due to Dowty 1979):

$$(39) \quad [[\text{PERFECT}]] = \lambda p_{i,t}. \lambda t_i. \exists t' [XN(t',t) \ \& \ p(t')] \quad (\text{after Dowty 1979})$$

where $XN(t',t)$ iff t is a final subinterval of t' .

(Pancheva&Bhatt 2005)

For avoiding the type mismatch that will arise when perfect is combined with inferential evidential, the description of perfect provided in (Pancheva & Bhatt 2005) can be modified as follows:

$$(40) \quad [[\text{PERFECT}]] = \lambda t_i. \lambda p_{i,t}. \exists t' [XN(t',t) \ \& \ p(t')]$$

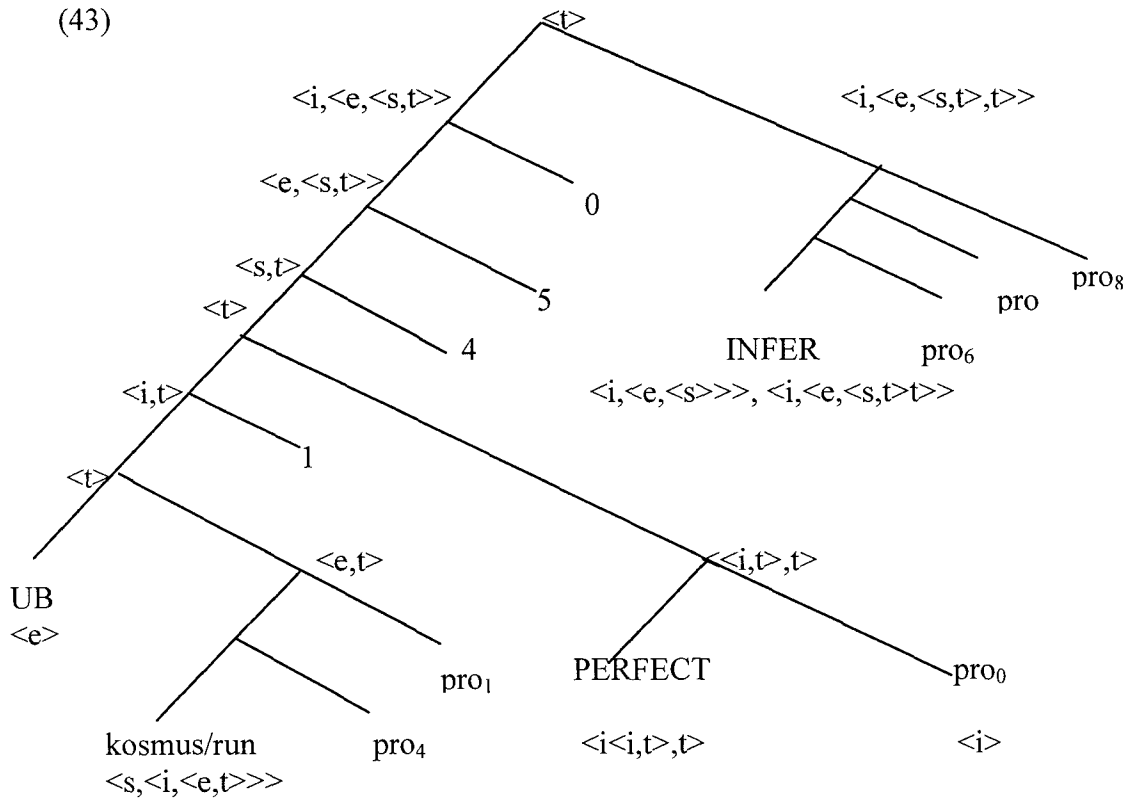
where $XN(t',t)$ iff t is a final subinterval of t' .

Even though it is possible to adopt Matthewson et. al's (2007) semantics for the interpretation of inferential evidentiality, for the reasons I provide in chapters 2 and 3, I adopt the semantics given in Sauerland and Schenner (2007).

- (41) $[[\text{INF}]] = [\lambda x \in D_e. \lambda w \in D_s. \lambda t \in D_i. \lambda p: x \text{ has in } w \text{ at } t \text{ inferential evidence for } p. p(x, w, t) = I]$

The LF in (43) below is the representation of the sentence with the inferential evidential in (42):

- (42) Usain Bolt koş-muş.
 Usain Bolt run- past-IND-EV-3SG
Speaker inferred that Usain Bolt ran.



(44)

$[[[INF]]] = [\lambda t \in D_i. \lambda x \in D_e. \lambda w \in D_s. \lambda p: x \text{ has in } w \text{ at } t \text{ inferential evidence for } p. p(x, w, t) = I]$

$[[[INF \text{ sp } w_0 t_0]]] ([[\text{UB run pro}_4 \text{ pro}_1 \text{ 1 PERF pro}_0 \text{ 4 5 0}]]])$

$[[[INF \text{ sp } w_0 t_0]]] ([\lambda t \in D_i. [\lambda x \in D_e. [\lambda w \in D_s. \exists t'_i [XN(t', t) \& p(t')] \& \text{UB runs at } t \text{ in } w]]])$

is defined only if the speaker has in the actual world at the actual time, inferential evidence for $([\lambda t \in D_i. [\lambda x \in D_e. [\lambda w \in D_s. \exists t'_i [XN(t', t) \& p(t')] \& \text{UB runs at } t' \text{ in } w]]])$

when defined $[[[INF \text{ sp } w_0 t_0]]] ([\lambda t \in D_i. [\lambda x \in D_e. [\lambda w \in D_s. \exists t'_i [XN(t', t) \& p(t')] \& \text{UB runs at } t' \text{ in } w]]]) = 1$ iff there is a t' s.t. t is a final subinterval of t' & UB runs at t' in the actual world.

Note importantly that although I am not providing any mechanisms for the connection between the *inferential* and the *Present Perfect Aspect*, or the *Past Tense* and the *reportative evidential*, I leave it at suggesting that it may be possible to assume this connection as a matter of agreement under c-command (Chomsky 2000, 2001). *Past Tense* and the *reportative evidential* merge in PF, and get spelled out as a single morphological unit, namely *[-mİş] reportative*. In the absence of inferential evidentiality, the English-like Present Perfect Aspect meaning does not arise.

5. Conclusion

In this chapter I discussed the semantic make up of evidentials in Turkish, and proposed that evidential morphology is semantically decomposed as encoding temporality/aspectuality and epistemicity. I have illustrated LFs for only the indirect

evidential forms, yet a similar semantics is trivially applicable to direct evidential as well. I claimed in particular, that the morpheme [-mİş] can be analyzed as encoding *reportative-past* and *inferential-present perfect*, and that the distribution of the meanings of the inferential [-mİş] and the Present Perfect Aspect in English are parallel, which also forms an argument for the existence of two [-mİş] forms in this language. I also assumed that since the evidential morphology is fused as temporality/aspectuality and evidentiality, various analyses can be applied for the interpretation of the epistemic component of the evidential markers, yet these analyses can capture only certain aspects of the meaning of evidential morphology in Turkish.

This chapter showed that in line with Izvorski's (1997) proposal which ties the indirect evidentiality and present perfect morphology, the interpretations of indirect evidentiality and Present Perfect Aspect can also be tied in Turkish. I leave the exact analysis of the present-perfect puzzle in Turkish and its comparison to English for future research.

CHAPTER 2

Evidentiality and *Herhangi Bir* in Turkish

1. Evidentiality and the free choice

In this chapter, I investigate the semantic-pragmatic effects of evidential forms in the quantificational domain. In particular, I focus on the interaction between evidentials and the free choice item *herhangi bir/any* in Turkish. First, I introduce the general characteristics of *any* in English and outline the previous literature on its interpretation. Next, I illustrate the behavior of the corresponding form *herhangi bir* in Turkish.

Descriptively *any* in English has a polarity sensitive and a free choice incarnation. Free choice *any* appears in generic as opposed to episodic sentences, while polarity *any* is shown to appear equally well in either, when licensed by downward entailingness. Free choice (henceforth: FC) *any* appears in generic sentences and modal statements.

I show in this chapter that despite the similarities at the outset, the conditions under which free choice *any* is used in English and the ones under which *Herhangi bir* phrases do in Turkish are not entirely identical.

1.1 Background on free choice *any* in English

The examples in (45) and (46) below illustrate the polarity sensitivity (PS) phenomenon. The realization of *any* in English in a non-negative environment results in

ungrammaticality.¹⁷ Ladusaw (1980) characterizes the environment in which a negative polarity item such as *any* appears and proposes that a negative polarity item must appear in a trigger's scope, where trigger is a downward entailing expression.

The examples below illustrate a quick comparison of *any* in English and *herhangi bir* in Turkish:

- (45) *I saw any owl(s).
- (46) a. I didn't see any owl(s).
 b. $\neg \exists x$ [x is an owl and I saw x]

The sentence in (47) below shows that *any* does not need negation in the presence of a modal:

- (47) a. Any mathematician can solve this problem.
 b. $\text{Gen } x$ [x is a mathematician] [CAN x solve this problem]

The Polarity Sensitive *any* in (46)a receives an existential interpretation with wide scope negation as shown in (46)b, while the Free Choice *any* receives the interpretation in (47)b with the universal meaning.

Turkish has two distinct items that correspond to English *any*. *Hiç (bir)* and *herhangi bir*. *Hiç (bir)* is strictly polarity sensitive, it cannot occur without negation.

¹⁷ I do not intend to discuss PS *any* in particular, hence I refer the reader to Ladusaw (1979), Lineberger (1987) and Kadmon and Landman (1993), a.o. for further information, and Kelepir (2001) for polarity sensitive items in Turkish.

Herhangi bir, however resembles *any* in English; it can also appear in environments the free choice *any* occurs in English.

Consider the following examples first:¹⁸

- (48) *Ben herhangi bir baykuş gör-dü-m.¹⁹

I any owl see-past-1SG.

I saw any owl(s).

- (49) Ben herhangi bir baykuş gör-me-di-m.

I any owl see-neg-past-1SG.

I didn't see any owl(s).

- (50) Herhangi bir çocuk bisiklet kullan-abil-ir.

any child bike ride-CAN-present-3 SG.

*Any child can ride a bike.*²⁰

¹⁸ The lexical item *herhangi bir* can be decomposed in the following way: *her*= every/each, *hangi*= which, *bir*= indefinite marker/ numeral.

¹⁹ Note that the ungrammaticality of (48) is independent of the *Herhangi bir* phrase occurring in an episodic environment. As (49) illustrates *herhangi bir* can occur in episodic statements when licensed under a trigger's scope. This clearly indicates that *herhangi bir* in (48) is the polarity sensitive one.

²⁰ Unlike English, subject PS items are licit in Turkish in negation contexts (see. Kornfilt (1984), Kural (1997) among others).

The contrast between (48) and (49) shows that *herhangi bir* in Turkish cannot appear without negation in simple declarative sentences. As (50) shows, however, it can appear without negation in the presence of a modal.

As noted above, characterizing statements and modal sentences are natural environments for free choice *any*, and the sentences below illustrate that:

Characterizing statements:

- (51) Any owl hunts mice.

Modal statements:

- (52) You may pick any flower.

Episodic statements:

- (53) a. *Any owl hunted mice yesterday.
b. Any owl that was healthy hunted mice yesterday.

Notice the contrast between (53)a and (53)b. Even though these sentences are episodic statements, only (53)b is a grammatical sentence of English, signaling that the grammaticality of free choice *any* in episodic sentences are subject to certain restrictions. I will discuss these conditions in the section to follow. Before doing that, however below I discuss the distribution and the characteristics of free choice *herhangi bir* in Turkish.

The affix [-Ar] marks simple present tense in Turkish. It is also employed for encoding characterization of the common noun as engaging in a characterizing activity;

such as for instance *owls* being characterized as *hunting mice*. Notice that unlike English *any*, *herhangi bir* in Turkish cannot occur in characterizing statements as shown by the ungrammaticality of (54) below:

Characterizing statements:

(54) a. *Herhangi bir baykuş fare avla-r.

any owl mice hunt-pres-3 SG.

Any owl hunts mice.

b. Sokak-ta dolaş-an herhangi bir kedi fare avla-r.

Street-loc wander-rel any cat mouse hunt-pres-3 SG.

Any cat that wanders around the street hunts mice.

When modified by a relative clause, whose relevance will become clear in the subsequent section, the sentence in (54)a becomes grammatical as illustrated in (54)b above.

Modal statements in Turkish also permit *herhangi bir* phrases and the modified sentences behave the same:

Modal statements:

(55) a. Herhangi bir çocuk bisiklet kullan-abil-ir.

any child bike ride-CAN-present-3 SG.

Any child can ride a bike.

b. Yeterince çalış-an herhangi bir çocuk bisiklet kullan-abil-ir.

Enough try-rel. any child bike ride-can-3 SG.

Any child who tries enough can ride a bike.

Episodic statements:

Recall that for past reference Turkish employs the morphemes [-mİş] and [-DI]. The following examples illustrate the behavior of *herhangi bir* in these types of statements.

(56) a. *Herhangi bir kedi fare avla-dı.

Any cat mice hunt-past-DIR.EV.-3 SG.

Any cat hunted mice.

b. *Sokak-ta dolaş-an herhangi bir kedi fare avla-dı.

Street-loc live-rel any cat mice hunt-past-DIR.EV.-3 SG.

Any cat that wandered around the street hunted mice.

Examine the sentences in (56)a and (56)b first. These sentences at first glance suggests that *herhangi bir* cannot occur in Past Tense sentences in Turkish, yet the examples in (57)a and (57)b challenge this:

(57) a. *Herhangi bir kedi fare avla-mış.

Any cat mice hunt-past-INDIR.EV.-3 SG.

Any cat hunted mice.

b. Sokak-ta yaşa-yan herhangi bir kedi fare avla- mış.

Street-loc live-rel any cat mice hunt-past-INDIR.EV.-3 SG.

Any cat who lived on the street hunted mice.

The contrast between (57)a and (57)b resembles the contrast observed in English exemplified above. Notice furthermore that sentences (56)a, (56)b and (57)a and (57)b form a contrast as pairs, in that while the former pair does not permit *herhangi bir* phrase at all, the latter does when the sentence is modified by a relative clause.²¹

1.1.1 Existing analyses of *Any* in English

Whether the quantificational force of English *any* is universal or existential (more precisely a *Heimian* indefinite, as a restricted variable) has been a topic of discussion in the related literature. In the subsequent section, I outline the general claims in the literature, and present my reasons for treating *herhangi bir* in Turkish in the lines of Dayal (1998).

²¹ The sentences reported to be ungrammatical in this chapter are ungrammatical regardless of whether the intended meaning is [-mİş]_{inferential} or [mİş]_{reportative}.

1.1.2 Kadmon & Landman (1993) ²²

Kadmon & Landman (1993) argue for a uniform analysis of polarity sensitive and free choice *any* in English. In their analysis *any* is a *Heimian* indefinite (i.e., it introduces a restricted variable that gets bound) even when it appears in its free choice guise, and that the pragmatic notion *widening* regulates the interpretation of noun phrases modified with *any*. They define the notion of *widening* as follows:

Widening: In an NP of the form *any* N, *any* widens the interpretation of N along a contextual dimension.

Kadmon & Landman suggest that when coupled with *widening*, an additional pragmatic notion, namely *strengthening*, accounts for the full distribution of *any* in English.

Strengthening: *Any* is licensed only if the widening it induces creates a stronger statement. That is, only if the statement with *any* common noun entails the corresponding statement with *a* common noun.

Consider the following contrast in this respect:

- (58) a. *There is any student.
 b. There isn't any student.

²² For Turkish *herhangi bir*, the only analysis, to the best of my knowledge, is Zidani-Eroğlu (1997). She suggests that *herhangi bir* in Turkish patterns with English FC *any* and Serbo-Croatian FCI *bilo* and argues that its natural licensing environment is modal environments.

Under Kadmon & Landman's account, in sentence (58)a, *any* makes it possible to widen the domain; however, widening the domain of an existential leads to a statement that is *weaker* (i.e., less informative) than what we would obtain with a plain indefinite. Thus licensing of *any* is not possible in (58)a because it does not create a stronger statement. Whereas in sentence (58)b, widening leads to a stronger statement, and sanctions *any*.

Dayal (1998) points out to certain problems with Kadmon & Landman's (1993) account. Below, I briefly go over her points:²³

The first problem she points to relates to the characterizing statements. Treating *any* in parallel with the indefinite *a* creates the expectation that they exhibit similar properties in their meanings, yet Dayal shows that this is not the case. While it is possible in characterizing statements to bind indefinites by adverbs of quantification rather than a GEN operator, an *any* statement cannot have such a binding. Consider the following:

- (59) a. A philosopher is sometimes wrong.
- b. Any philosopher is sometimes wrong

The sentences in (59)a and (59)b have different meanings. The sentence in (59)a allows a variable reading. While it is the fallibility of *an occasional* philosopher that is asserted in (59)a, the sentence in (59)b only has the frequency reading, and it asserts the fallibility of *every* philosopher. Unlike in (59)a, *any* in (59)b has the universal meaning. Treating *any* as a generic indefinite with a widened domain cannot account for the interpretation of *any* in (59)b.

²³ See also Krifka (1994) for the problems of this proposal.

The second problem arises with modal sentences. According to Kadmon & Landman, *any* is an indefinite that gets interpreted as a universal in the contexts where ordinary indefinites have generic interpretations. There are examples of free choice *any*, however in which the ordinary indefinite counterparts do not have the generic interpretations as the following contrast indicates:

- (60) a. Any pilot could be flying this plane.
 b. A pilot could be flying this plane.

In sentence (60)a *any* has a universal meaning. Despite the expectation, however, the ordinary indefinite in (60)b does not have a generic interpretation. This indicates that the parallel treatment of the generic interpretations of indefinites and the free choice *any* cannot obtain. The difference between modals of necessity and possibility such as the ones in the following examples also make the same point:

- (61) a. You may pick any flower.
 b. *You must pick any flower.

The last point Dayal (1998) brings forth as a problem for Kadmon & Landman (1993) style analysis involves the subtriggering cases.²⁴

²⁴ Menéndez-Benito (2005) also provides reasons for analyzing *any* as bearing universal force.

LeGrand (1975) observes that in certain sentences in English, a subordinate clause sanctions the otherwise ungrammatical *any* phrase. LeGrand dubs this phenomenon as *subtriggering*.

Dayal (1998) points out that subtriggered sentences like the ones in (62) are problematic for Kadmon & Landman's analysis because an indefinite in the same position does not have a universal force as shown in (63):

(62) John talked to any woman who came up to him.

(63) John talked to a woman who came up to him.

If *any* is a domain extender as Kadmon & Landman claim, it should, in principle, be possible for *any* to widen the domain in the following examples, and be licensed through strengthening; yet, this is not possible:

(64) John talked to any woman who came up to him.

(65) *John talked to any woman.

Dayal (1998) takes the problems outlined above to indicate that Kadmon & Landman style analysis of *any* in English is not tenable.²⁵

²⁵ The fact that free choice *any* receives a universal interpretation is argued to be due to the result of the indefinite being interpreted as a variable that is quantified over by a generic operator in other works by Lee and Horn (1994), Krifka (1995) among others. Also, Giannakidou (2001)

The idea that polarity sensitive and free choice *any* should be treated uniformly receives support from the cross-linguistic observations. In many languages *any* appears both in polarity sensitive and free choice uses. This general tendency points to a link between the meanings of the polarity sensitive and free choice *any*. In particular, Chierchia (2006) proposes that free choice items are indeed indefinites, but their universal meaning is derived from the interaction of domain widening, exhaustivity and the implicature computation. Chierchia suggests that an account that aims to capture the syntax and the semantics of polarity sensitive and free choice *any*, and their relationship to one another is favorable.

1.1.3 Aloni (2007)

Aloni (2007) argues, contrary to Dayal, that *any* in English is an indefinite, and that it induces sets of propositional alternatives. A hidden structure in which the universal, exhaustification, and the modal operator interact explains the subtriggering effects. For the unsubtriggered and modal cases of free choice *any*, the explanation is that exhaustification produces sets of mutually exclusive propositions because it applies at the IP level. In the subtriggered cases, however, exhaustification yields maximal sets of individuals because it can apply inside a DP boundary. These sets can then combine with the rest of the sentence to yield sets of mutually consistent propositions that can be bound by a universal without a contradiction. Subtriggering, whose relevance to our discussion will become clear in the discussion to follow, is crucial for the latter possibility, because it applies

maintains that free choice items are indefinites, and that their universality is a result of a presupposition on the alternatives in different worlds.

inside the DP boundary. Notice that Aloni's account seems to be able to capture the subtriggering effects, yet the involvement of evidentiality that is crucial for the analysis of episodic statements in Turkish cannot be trivially captured under such an approach.

1.1.4 Giannakidou (1997 et seq.)

Giannakidou (1997, 1998, and 1999) argue that the notion of (non)veridicality is central in explaining polarity items. According to her definition a linguistic expression is a polarity item iff:

- (i) the distribution of α is limited by sensitivity to some semantic property of the context of appearance; *and*
- (ii) is (non)veridical, or a subproperty thereof: $\beta \in \{\text{veridicality, nonveridicality, antiveridicality, modality, intensionality, extensionality, episodicity, downward entailingness}\}$

Furthermore, Giannakidou (2001) proposes that there are licensing and anti-licensing conditions for *any*:

Licensing by non-veridicality: A polarity item will be grammatical in a sentence S iff is in the scope of a nonveridical operator in S.

Anti-licensing by veridicality: A polarity item will not be grammatical in a sentence S if is in the scope of a veridical operator in S.

Veridicality and *non-veridicality* property of propositional operators are determined in terms of truth entailment. A propositional operator is veridical iff the truth of $Op\ p$ in c

requires p be true in some individual x 's epistemic model $M_E(x)$ in c . If the truth of $Op\ p$ in c does not require p to be true in some such model in c , Op is *non-veridical*. A *non-veridical* operator Op is furthermore anti-veridical iff the truth of $Op\ p$ in c requires p be false in some epistemic model $M_E(x)$ in c . Giannakidou (1997) and her subsequent work (1998, 1999, 2001) on *(non)veridicality* condition for the licensing of polarity items seem to fit well with the observation I make regarding the licensing condition of FC *herhangi bir* in Turkish, which I will become clear for the reader in the sections to follow. In fact, Anastassia Giannakidou (p.c.) points out to me that under the assumption that evidentials are operators, the effects of epistemicity parallel with the effects of veridicality operators she proposes in Giannakidou (1997 et. seq). It seems thus that the requirement of an appropriate evidential operator for the licensing of FC *herhangi bir* in Turkish supports the existence of (non-)veridicality operators for the (anti-)licensing of polarity items noted in Giannakidou (1997 et seq.). Nevertheless, the reason why I do not specifically implement the veridicality approach proposed in Giannakidou's work is that this approach seems to fall short in explaining the effect of subtriggering, which plays an important role in sentences involving FC *herhangi bir* phrases in Turkish. Rather, I assume that the semantics of free choice *any* in English is as proposed in Dayal (1998). I will not be concerned with the question of why there is a difference between the quantificational force of the polarity sensitive and the free choice *any* in English. I refer the reader to Chierchia (2006) and the references therein for a detailed discussion of these issues. Note also that Dayal's criticism of Kadmon & Landman's account of *any* does not target the insight that the free choice and the polarity sensitive *any* are semantically

related. Her main objection targets the treatment of free choice *any* as bearing an existential quantificational force.

Interestingly, Dayal (1998) notes that Free choice *any* is sensitive to the pragmatics of epistemic modality in English. I show below the speaker's knowledge state plays an important role in the interpretation of *herhangi bir* in Turkish as well. In the following section I outline Dayal's (1998) analysis of Free Choice *any* in English:

1.1.5 Dayal (1998)

Dayal (1998) treats free choice *any* as bearing universal quantificational force. Nevertheless, the quantificational domain of free choice *any* is different from regular quantifiers such as the universal quantifier *every*. *Any* involves quantification over possibilities (i.e., possible situations and individuals). It universally binds the free situation variable in its scope and yields a statement not about a particular set of individuals, but about all possible individuals with the relevant property.

Prior to developing a semantics for FC *any*, Dayal argues for the following semantics for regular indefinites:

(66) Owls hunt mice / An owl hunts mice.

$$\text{GEN } s, x [\text{owl}(x, s) \ \& \ C(s)] \ \exists y [\text{mice}(y) \ \& \ \text{hunt}(x, y, s)]$$

(Dayal 1998)

Dayal's analysis in (66) involves a *contextual restriction* $C(s)$ which is used for excluding the situations in which, for instance, for (66), *an owl that would not hunt*, in those

situations in which it is sick or sleeping, etc. What (66) says is that all (typical) situations s with an owl in it, extend to owl situations in which there are mice that the owl hunts. This is maintained by the semantics of the GEN operator which binds the situation and individual variables in its scope, and the subject provides the restriction on the situations, while the predicate is mapped into the nuclear scope.

In statements with *any*, Dayal proposes the *genericity* obtains via the combination of verbal tense/aspect and the *any* phrase itself. To illustrate:

(67) Any owl hunts mice.

$$\forall s, x \ [\text{owl}(x, s) \ \& \ C(s)] \ [\text{GEN } s' \ [s < s' \ \& \ C'(s')]] \ \exists y \ [\text{mice}(y, s') \ \& \ \text{hunt}(x, y, s')]]$$

Free choice *any* creates a tripartite structure in (67). The restriction on this quantifier is provided by the common noun in the syntactic scope of *any*, and the matrix predicate determines the nuclear scope. The situation variable of the matrix predicate is different from the common noun. *Any* quantifies over possible individuals by binding the situation index on the common noun. The nucleus asserts that these situations extend into situations that verify the matrix predicate. This analysis then requires that *any* is treated, unlike *every*, as involving a layered structure.

I will show in the following sections that sentences consisting Free Choice *herhangi bir* in Turkish can be treated in a similar fashion.

2. Subtriggering effects: the role of modification

Dayal (1998) proposes an account for the noted subtriggering effects in English (due to LeGrand 1975). The semantics given in (68) and (69) below show how the (un)grammaticality of the episodic statements with free choice *any* in them can be captured for under Dayal's approach:

(68) * Yesterday John talked to any woman.

$$\forall s, x [\text{woman}(x, s) \ \& \ C(s)] \ \exists s' [s < s' \ \& \ \text{yesterday}(s') \ \& \ \text{talk}(j, x, s')]$$

The tense of the predicate is episodic in (68), it cannot create the tripartite structure that is assumed in (67) above, since the matrix clause blocks genericity. The situation variable s' is existentially closed and temporally bound in (68). The situations in (68), in which there is a *woman* is universally quantified over by the free choice *any*. Thus, all the possible situations, in which there is a *woman*, extend into a situation that is located at a particular interval, namely *yesterday*. The use of free choice *any* in sentence (68) signals all possible situations; such as the ones in the *past*, *present* or the *future*. The predicate, however, restricts the set of situations to that of *yesterday*'s, namely the past situations in which there were *women*. Thus, the mapping between the quantificational domain of FC *any* and the episodicity of the predicate cannot obtain and this yields the ungrammaticality of the sentence in (68). This is due to the fact that a temporal/aspectual conflict arises between these the two distinct domains that are indexed by different situation indices.

The LF in (69) below illustrates how modification by a relative clause saves the sentences from ungrammaticality under Dayal's system:

(69) Yesterday John talked to any woman he saw.

$$\forall s, x [\text{woman}(x, s) \ \& \ C(s) \ \& \ \exists s'' [s < s'' \ \& \ \text{yesterday}(s'') \ \& \ \text{see}(j, x, s'')]]$$

$$\exists s' [s < s' \ \& \ \text{yesterday}(s') \ \& \ \text{talk}(j, x, s')]$$

As we noted above, for Dayal, in the absence of modification (by a relative clause) the set of situations quantified over by *any* is open ended, and are not compatible with the episodicity of the predicate as they denote temporally and locally bound situations.²⁶ In sentence (69), however, the predicate is also episodic, and the existence of a relative clause helps salvage the sentence in this case. The reason why the relative clause helps salvage the sentence in (69), according to Dayal, is that the relative clause restricts the set of situations quantified over. It creates the necessary transition from the possible *woman* situations to the *yesterday* situations (i.e., $s < s''$). Thus, it says that all the possible *woman* situations extend to *yesterday* situations in which John talked to them. The restricted *woman* situations now only involve those *women* who were present in the *yesterday* situations; hence the grammaticality of (69) is captured.

²⁶ See Farkas (2005) for suggestions such as a category mismatch for *any* phrases resulting in ungrammaticality in episodic statements.

3. Quantification over possibilities in the episodic contexts

In this section, I show that the effect observed for English, namely the modification by a relative clause helping salvage sentences with free choice *any* in episodic statements, is also attested in Turkish. Prior to the illustration of the Turkish facts I show below the two distinct forms of episodic statements and their interaction with free choice *herhangi bir* in Turkish. Recall from chapter 1 that Turkish employs two morphologically distinct forms to encode episodicity; namely the morphemes [-mİş] and [-DI] encoding *witnessed past* and *reported past*. The examples below show how *herhangi bir* behaves in statements involving these morphemes:

- (70) *Herhangi bir grup konser ver-di.
Any band concert gave-past-DIR.EV-3 SG.
Any band gave a concert.

- (71) *Herhangi bir grup konser ver-miş.
Any band concert gave-past-INDIR.EV-3 SG.
Any band apparently gave a concert.

As sentences (70) and (71) show neither of the episodic statements indicated by [-DI] or [-mİş] hosts free choice *herhangi bir*, similar to what we observed for English *any* in episodic sentences.

Consider now how the relative clause affects these sentences:

(72) *İstanbul'a gid-en herhangi bir grup konser ver-di.

Istanbul-acc go-rel any band concert gave-past-DIR.EV-3 SG.

Any band that went to Istanbul gave a concert.

(73) İstanbul'a gid-en herhangi bir grup konser ver-miş.

Istanbul-acc go-rel any band concert gave-past-INDIR.EV-3 SG.

It is reported to the speaker that Any band that went to Istanbul gave a concert.

The ungrammaticality of the sentence in (72) seems to suggest that the relative clause does not salvage the sentence with a *herhangi bir* phrase in it when the sentence consists of the direct evidential marker [-DI]. The sentence in (73), however shows that the *herhangi bir* phrase in an episodic sentence marked with [-mİş] is saved from ungrammaticality.

The fact that the sentence in (72) cannot be saved from ungrammaticality, but the one in (73) can casts doubt on the validity of the salvaging effect of the relative clause for Turkish. A closer look at the properties of the verbal suffixes [-mİş] and [-DI] that encode episodicity reveals that the problem relates not to the salvaging effect of the relative clause, but to the epistemic properties of these verbal suffixes. Recall that we showed in chapter 1 that the prominent property of these suffixal forms is that along with the property of encoding temporal information, they encode evidentiality. Since it is only (73), but not (72) that is grammatical in the presence of a relative clause, it must be that the relative clause functions the way it is described to function in English. It restricts the

domain of the common noun; otherwise we would not expect the episodic statement in (73) to be grammatical.

A further point that is important for our purposes is the property of Free choice *any* noted in Dayal. Dayal (1998, 2005) claims that free choice *any* in English is contextually vague. Similar effects are reported in the literature on free choice items, namely that *any* brings about an *ignorance* or *indifference* meaning (Von Stechow 2005 a.o.). The corresponding intuition is reported in Dayal (1995) and is described as contextual vagueness, which is given below:

Contextual vagueness: *any* is only appropriate in contexts where the speaker cannot identify the individual or individuals that verify p .²⁷

Dayal uses the following examples to illustrate the vagueness on free choice *any* in English:

- (74) a. You may pick any flower.
 b. * You must pick any flower.

The difference between (74)a and (74)b is that the set of flowers to be picked are not

²⁷ Dayal (1998) formulates the vagueness on FC *Any* in English as follows:

Vagueness Requirement: Any (A) (OP B) is felicitous iff $A \cap B$ is not contextually salient in any relevant world, where OP maybe \Box (necessity), \Diamond (possibility), $!$ (permission), and $!$ (command), or null.

contextually determined in (74)a, while the command is about a contextually determined set in (74)b. Dayal (1998) suggests that the ungrammaticality of the sentence in (74)b is due to the violation of the *vagueness requirement* noted above.

The examples below show that *herhangi bir* in Turkish is also only appropriate in contexts in which speakers cannot verify the individuals.

- (75) *Herhangi bir kitab-ı al-malı-sın.
Any book-acc buy-must-2nd SG
You must buy any book.

- (76) Herhangi bir kitab-ı al-abil-ir-sin.
Any book-acc buy-may-pres-2nd SG
You may buy any book.

Going back to the examples in (72) and (73), the contrast between (72) and (73), I suggest, arises because of the epistemic component of the evidential morphology. Evidentiality regulates the distribution of *herhangi bir* in episodic sentences in Turkish. In particular, I submit that what Dayal refers to as *vagueness requirement* on free choice *any* is manifested for *herhangi bir* in episodic statements in Turkish. While one of the forms of past facilitates *herhangi bir*, the other blocks it. I submit that it is the epistemic state of the speaker that is effective in the quantificational domain of *herhangi bir* in Turkish. The relative clause functions in Turkish, the way it is suggested for English, yet the type of evidentiality regulates the interpretation of sentences with *herhangi bir*

phrases in them.

The sentence in (72) is not a grammatical sentence of Turkish because the vagueness requirement on free choice *herhangi bir* is violated in a direct evidential statement. If the problem were merely related to evidentiality, we would expect to observe a grammatical contrast between the sentences in (70) and (71) as well; yet we do not. Therefore, it must be that just like in English, episodic sentences do not permit *herhangi bir* phrases in them because of the genericity, and they are permitted when the sentence they occur in is modified by a relative clause (in line with Dayal's 1998 suggestion). In Turkish as well the relative clause restricts the domain of quantification.

Examine below the effects of subtriggering in English. It saves the sentence in (77)a from ungrammaticality as illustrated in (77)b.

- (77) a. * You must pick any flower in this bed.
 b. You must pick any flower you see.

While the vagueness requirement is violated in (77)a, it is not in (77)b because in sentence in (77)b the command is about an undetermined set of flowers (i.e., it could be any flower). In (77)a, the set of flowers are determined. They are the ones *in this bed*. The statement in (77)a does not create a vague environment that free choice *any* in English is happy with.

The following section discusses how the epistemic restriction on free choice *herhangi bir* can be captured.

4. Epistemic restriction of FC *herhangi bir* in Turkish

The distribution of free choice *herhangi bir* in episodic statements is regulated by evidentiality in Turkish. A *herhangi bir* phrase exhibits the following properties: (i) it requires contextual vagueness on its quantificational domain, (i) its domain must be restricted in episodic statements.

In what follows I show how Dayal's account can capture the facts in Turkish, when further assumptions relating to evidentiality is introduced.

4.1 *Herhangi bir* phrases in episodic environments

Recall once again Izvorski's (1997) semantics for evidential statements:

(78) [[EV_p]]

Presupposition: speaker has indirect evidence for p.

Assertion: p in view of speaker's knowledge state.

I assume in line with the semantics provided in Izvorski (1997) that evidentials are propositional operators, yet follow Sauerland and Schenner's (2007) in not assuming the modal force in the assertion of evidential statements.

In line with Dayal's (1998) suggestion for the interpretation of the free choice *any* in English, I assume that *herhangi bir* is represented by a universal quantifier that quantifies over possible situations and individuals. I propose the following for the interpretation of episodic statements with the free choice *herhangi bir* in them in Turkish. The sentence in (79) below repeats the episodic sentence under discussion:

- (79) Istanbul'a gid-en herhangi bir grup konser ver-miş.
 Istanbul-dat go-rel. any band concert give-indirect ev.3 SG
 Any band that went to Istanbul gave a concert.

The interpretation of (79):

- (80)
 IEV $[\lambda w. \forall_{s,x} [s \leq w \ \& \ \text{group}(x,s) \ \& \ C(s) \ \& \ \exists s' [s < s' \ \& \ \text{past}(s') \ \& \ \text{come}(\text{Ist}, x, s')]] \ \exists s'' [s < s'' \ \& \ \text{Past}(s'') \ \& \ \text{give}(c, x, s'')]]]$

IEV takes a proposition. For every world in the domain of IEV, that proposition is true. That is to say, for every world w in the domain of IEV, every situation s that is part of w and every individual x such that x is a group in s and there is an extended situation s' such that s' is in the past and x came to Istanbul in s' : there is an extended situation s'' such that s'' is in the past and x gave a concert in s'' .

The relative clause restricts the set of possible individuals quantified over in (80). The semantic content of *herhangi bir* which requires a *contextually vague* domain is compatible with the presupposition yielded by the indirect evidential operator (i.e., the presupposition that the speaker has indirect evidence for p). Thus, through the interaction of indirect evidential operator and the *herhangi bir* phrase the grammaticality in (79) is predicted; the presupposition is that the speaker has indirect evidential, and this is compatible with contextual vagueness requirement on the quantification domain of *herhangi bir*.

In the case of sentences involving the direct evidential, the modification by a relative clause does not yield grammaticality because the *contextual vagueness* is violated. In particular, the direct evidential operator blocks the legitimate use of *herhangi bir* as it induces a presupposition in which speaker has direct evidence. This is incompatible with the contextual vagueness requirement on FC *herhangi bir*. Formally, the sentence in (72) is ruled out as follows:

I assume that Turkish employs also a direct evidential operator DEV (i.e., the Direct Evidential operator), which functions at the propositional level, and induces a presupposition:

(81) [[DEV_p]]

presupposition: speaker has *direct* evidence for *p*.

assertion: *p* in view of speaker's knowledge state.

Herhangi bir quantifies over individuals by binding the situation and the individual indices on the common noun.

The interpretation of the sentence in (72) is then as follows:

(82)

DEV [$\lambda w. \forall_{s,x} [s \leq w \ \& \ \text{band}(x,s) \ \& \ C(s) \ \& \ \exists s' [s < s' \ \& \ \text{past}(s') \ \& \ \text{come}(\text{Ist}, x, s')]] \ \exists s'' [s < s'' \ \& \ \text{Past}(s'') \ \& \ \text{give}(c, x, s'')]]$]

DEV binds the situation and the individual indices and induces the presupposition that

the speaker has direct evidence for *p*. Since all the situations and individuals are bound by DEV in the scope of the direct evidential operator, and the quantification of *herhangi bir* is vague, an incompatibility arises. The sentence involves those *band situations*, which the speaker has direct evidence for, yet *herhangi bir* phrase is about individuals that cannot be identified, hence the sentence in (72) results in ungrammaticality.

4.2 Interim summary

Subtrigging helps save sentences with free choice items in episodic sentences as it restricts the set of situations quantified over, making the domain of quantification compatible with the episodic nature of the matrix predicate. Contextual vagueness requirement on *herhangi bir* reveals itself in episodic evidential statements in Turkish.

In the next section I consider a possible approach for explaining the behavior of the *herhangi bir* phrases in characterizing statements in Turkish.

5. Free choice *herhangi bir* and characterizing statements

Characterizing sentences expressing generalizations are formed through the Simple Present Tense marker [-Ar] in Turkish. Interestingly, *herhangi bir* phrases are ungrammatical in such sentences in Turkish as noted before.: ²⁸

²⁸ Blaszcak (1999) reports that the Polish FC item *kolwiek* is not allowed in characterizing statements either, just like Turkish *herhangi bir* (i.e., ungrammatical both with the individual and stage level predicates in the present tense):

- (i) * *Jakikolwiek kot owi myszy.*
 any cat hunt-3.sing.-pres. mice
 Any cat hunts mice.

Blaszcak (1999)

- (83) * Herhangi bir kedi fare avla-r.
 Any cat mice hunt-pres-3 SG.
Any cat hunts mice.

The ungrammaticality of the sentence in (83) is not expected if in fact Simple Present Tense in Turkish suffices for forming characterizing statements. The sentence in (84), however illustrates that [-Ar] is used for creating statements of general characterizations.

- (84) Kedi-ler fare avla-r.
 Cat-pl mouse hunt-pres-3 SG.
Cats hunt mice.

As (85) shows, the presence of a relative clause saves the otherwise ungrammatical sentence with a *herhangi bir* phrase in it:

- (85) Sokakta dolaş-an herhangi bir kedi fare av-lar.
 Street-loc wandering around-rel any cat mice hunt-pres-3 SG
Any cat that wanders around in the street hunts mice.

I suggest that the ungrammaticality of (83) is due to the lexical semantics of *herhangi bir* in Turkish, which is slightly different from the lexical semantics of *any* in English. The domain restriction of *any* in English is maintained by an implicit contextual restriction c(s) as assumed in Dayal (1998). In Turkish, the restriction is satisfied via the overt

contextual restriction. In episodic statements subtriggering creates the transition between all the possible situations and individuals, and the episodicity of the predicate. In characterizing sentences, the domain restriction ensures that all the possible situations and individuals are restricted to those of the relevant ones. The sentence in (83) is ruled out since it does not involve an overt contextual restriction:

$$(86) \quad \forall_{s,x} [\text{cat}(x,s) \ \& \ C(s)] \ [\text{GEN } s' [s < s' \ \& \ C'(s')] \ \exists y [\text{mice}(y,s') \ \& \ \text{hunt}(x,y,s')]]]$$

In sentence in (85), however the domain of quantification is contextually restricted via the overt restriction provided by the relative clause.

$$(87) \quad \forall_{s,x} [s \leq w \ \& \ \text{cat}(x,s) \ \& \ C(s) \ \& \ \exists s' [s < s' \ \& \ \text{present}(s') \ \& \ \text{wander}(\text{on the street}, x, s')]]] \ \exists s'' [s < s'' \ \& \ \text{mice}(y,s) \ \text{present}(s'') \ \& \ \text{hunt}(y,x,s'')]]$$

The recovery strategy for characterizing statements and the episodic statements in Turkish seem to converge in that a presence of a relative clause salvages the otherwise ungrammatical sentences. The function of the relative clause in these statement types differ, however, in that while in the former it maintains the exclusion of exceptions, in the latter it restricts the domain of quantification.

6. Conclusion

In this chapter I showed that the epistemic component of the evidential morphology affects the legitimate use of FC *herhangi bir* phrases in Turkish. I suggested that evidentials are presuppositional operators in Turkish. Moreover, I showed that only through the marking of an appropriate evidential can a free choice phrase get permitted in an episodic sentence in Turkish, and this argues for the validity of the contextual vagueness requirement of free choice phrases described in Dayal (1998). A relative clause has a salvaging effect in an otherwise ungrammatical sentence with an FC *herhangi bir* phrase. In episodic statements evidentiality induces presuppositions, and depending on the form of the evidentiality involved contextual vagueness is satisfied and *herhangi bir* phrase is authorized. For both the episodic and the characterizing statements, an account that incorporates Dayal's (1998) analysis of FC *any* bearing a universal quantificational force and a treatment of evidentials as presuppositional operators captures the interaction of direct and indirect evidentials with FC *herhangi bir* in Turkish.

CHAPTER 3

Embedded Evidentiality

1. Embedded clauses and evidentiality

In this chapter I investigate the phenomenon of embedded evidentiality. Evidential marking is obligatory in root clauses in Turkish and their appearance in the embedded clause is important especially because embeddability of evidentials indicates whether or not a language makes use of evidentiality at the speech act level or the truth conditional level. Unlike Cuzco Quechua, a language whose evidentiality system is analyzed at the speech act level (Faller 2002), Turkish permits embedding of evidentials in finite complement clauses, which argue for the truth conditional effects of evidentials in this language. Recall that in chapter 2 we showed that evidentiality regulates the use of Free Choice *herhangi bir* in Turkish, a fact we would not be able to account for if evidentials were to operate at the speech act level. In this chapter, primarily I lay out the embeddability conditions of evidentials, and further examine the effects of the evidential origo (the perspective from which an evidential statement is evaluated). To this end I appeal to certain tests from Sauerland and Schenner (2007), and show that in Turkish evidential origo exhibits flexibility in shifting. The behavior of evidentials in embedded clauses in Turkish is different from the behavior of evidentials in the embedded clauses in other evidential marking languages. A proposal for accounting for the interpretation of evidentials in embedded clauses is made in Sauerland and Schenner (2007). In this

chapter, I modify Sauerland and Schenner's (2007) analysis to provide an account for the facts relating to embedded evidentials in Turkish.

Recall that in chapter 1, we discussed the components of the evidential morphology and showed that the evidential forms encode information source (through the epistemic component), temporality/aspectuality, and induce presuppositions. Not all of these properties are observed concurrently in other evidential marking languages that we considered so far. In this chapter I further my investigation of the complex semantics of the evidential morphology and tackle with the issue of encoding of the evidential origo. I show that when we examine the subtypes of evidentials, and the morphology that is used to reflect these evidential subtypes carefully, we observe that the reportative, inferential and the direct evidential differ in the pragmatic conditions under which they are interpreted.

1.1 Embedded clauses and the evidential origo

Not all languages that employ evidentiality are described for whether or not they permit evidential forms in embedded clauses. Within the languages that have a grammaticalized system of evidentiality, Garrett (2001) reports for Tibetan and Sauerland and Schenner (2007) report for Bulgarian that evidentials can appear in embedded clauses. Below, I show what the facts are relating to the embeddability of evidentials in Turkish.

For understanding the semantic-pragmatic characterization of evidentials in embedded environments, let us initially identify the types of complement clauses in Turkish.

Turkish makes use of two types of complement clauses. The fundamental type of

complementation is formed by the nominalization of the embedded verb, which is generally referred to as the Nominalized Complement Clause. Verbs of nominalized complement clauses bear nominal agreement morphology controlled by the embedded subject (Kornfilt 1984, Kural 1993, a.o.). The example in (88) below illustrates this type of complementation:

- (88) Seda Sinan-in bisiklet-e bin-diğ-i-ni duy-du.
 Seda Sinan-gen bike-dat ride-noml-3SG.poss-acc hear-past-DIR.EV-3SG
Seda heard that Sinan rode a bike.

A more restricted type of complement clause is formed as the complement of the selected verbs of *belief* such as *san-* ‘believe, think, consider’ as illustrated in (89) below, where the predicate of the complement clause is finite, which is generally dubbed as the Finite Complement Clause in the literature on Turkish:

- (89) Seda Sinan bisiklet-e bin-di san-ıyor.
 Seda Sinan bike-dat ride-past-2SG believe-pres-3SG
Seda believes that Sinan rode a bike.

Note that, while an evidential morphology cannot appear on the nominalized form in (88), it can appear on the embedded verb in (89). Since it is the finite complement clauses that permit evidential morphology attached to the embedded verb, in the following

section I focus on this type of complementation to detect the behavior of the evidential origo in Turkish.

1.2 Embedded evidentiality and related phenomena

Recall that we established in chapter 1 that an evidential form, regardless of whether it is direct or indirect, involves both an epistemic and a temporal/aspectual component. Accordingly, I assumed that an evidential statement is interpreted relative to two operators: tense or aspect operator on the one hand that scope below the evidential operator, and the evidential operator itself on the other. I have not yet discussed, however, how the perspective from which an evidential statement is viewed must be treated. In root clauses when the evidential appears attached to the main verb, the perspective from which the evidential statement is interpreted is always the speaker. The embedded examples below show that in Turkish, an evidential statement can be interpreted either from the perspective of the speaker or from the perspective of the subject depending on the source of information that is available. In what follows, I illustrate this variability in the interpretation of the *evidential origo* in Turkish.

Garrett dubs the person from whose perspective a given evidential statement is evaluated as the *evidential origo*. The following Tibetan examples that illustrate the evidential origo are from Garrett (2000):

- (90) Yang.chen dge.rgan red
 Yanchen teacher ind. Cop.
 Yangchen is a teacher. (Speaker's source: hearsay/inference)

- (91) Bkra.shis kho dge.rgan red bsam-gi-dug
 Tashi he teacher ind.cop. think-[dir imp]
 Tashi_i thinks he_k is a teacher. (Tashi's source: hearsay/inference)

In sentence (90), where there is no embedding of the evidential, the *evidential origo* of the indirect evidential statement is the speaker, whereas in sentence (91), the *evidential origo* is the subject (Tashi). This effect, namely the *evidential origo* being interpreted as not the speaker, is dubbed as *shifting* (Sauerland and Schenner 2007), mainly because it is reminiscent of indexical shifting in embedded clauses.

Indexicals are context-dependent deictic elements such as the pronoun *I* that receives its semantic value from the context of utterance. The 1st person pronoun *I* in English, for instance, refers to *John* if it is uttered by *John*, and refers to *Mary* if it is uttered by *Mary*. There is a cross-linguistic variation, however, in the way deictic expressions receive their semantic value. In English, a deictic expression such as *I* receives its semantic value from the context in which it is uttered, yet in other languages the semantic value of some indexicals may depend on the context of the *reported* speech act. Unlike the indexical *I* in English, which only refers to the speaker of the utterance context, *I* in the embedded clause in languages such as Amharic can either refer to the speaker of the actual speech act or to the speaker of the reported speech act (i.e., the subject of the embedded clause), hence it exhibits an optionality in receiving its semantic value as the speaker or the subject (see Schlenker 2003 for detailed information). The example from Amharic below illustrates this shiftability (due to Leslau 1995, cited in Schlenker 2003).

- (92) jɔn jəɡna nə-ññ yɪl-all
John hero be.PF-1stO 3rdM.say-AUX.3rdM
'John says that he is a hero' I=Speaker/ Subject

The pronoun *I* in the embedded clause in (92) can get its semantic value either from the context of the utterance yielding the interpretation *John says that I (the speaker) am a hero*, or from the context of the reported speech act, yielding the interpretation *John says that he, John, is a hero*. In the latter interpretation the indexical is *shifted*, because it is evaluated with respect to not the speaker but the subject of the embedded clause. Following Garrett (2001) who treats *evidential origo* on a par with shifty indexicals, Sauerland and Schenner (2007) treat *evidential origo* as *shifty indexicals*. They note that shifted interpretation of the *evidential origo* is not possible in Bulgarian, whose examples I illustrate in the following section.

Just like Tibetan, Bulgarian is a language that permits embedded evidentiality. Sauerland and Schenner (2007) use the following examples from Bulgarian to show this:

As we showed in sentence (89), Turkish also permits embedding of evidentials. Note importantly that it is not only the direct evidential that can be embedded in Turkish, but

also the indirect evidential. The following examples illustrate evidentials in finite complement clauses:

- (94) Seda Bilge yönetmen okulu-na git-ti
 Seda Bilge-NOM director's school-DAT go-past-DIR.EV.
 de-di.
 say-past-DIR.EV-3SG
Seda said that Bilge attended the director's school.

- (95) Seda Bilge yönetmen okulu-na git-miş
 Seda Bilge -NOM director's school-DAT go-past-IND.EV.
 de-di.
 say- past-DIR.EV-3SG
Seda said that it is reported to the speaker that Bilge attended the director's school.

Sauerland and Schenner (2007) use constructed scenarios for testing the evidential origo in embedded clauses in Bulgarian. The relevant criteria they use are the Speaker, and the Subject, as these determine from whose perspective the evaluation is made, and the type of the information source that is specified as Direct or Reportative. Below, I show Sauerland and Schenner's (2007) examples and apply these tests to Turkish.

In this scenario the sentence in (96)a is interpreted with a single question mark, while (96)b is a grammatical sentence. The compatibility of (96)b in a scenario in which the speaker has a reportative evidence, such as the *scenario 1* above, indicates that the evidential in the embedded clause can be interpreted from the perspective of the speaker, as it is only the speaker who has the reportative evidence, not the subject of the embedded clause. This indicates that the evidential origo is not shifted from the speaker to the subject in sentence (96) in Bulgarian.

Consider now the scenario in which the speaker has direct evidence, while the subject has reportative evidence:

Scenario 2: Speaker-DIR Subject-REP

Milena told Maria that Todor has red hair and Maria believes her. Maria says: ‘Todor imal červena kosa’. I (speaker) saw Todor’s red hair with my own eyes.

(97) a. Maria kaza če Todor ima červena kosa.

Maria said that Todor has-DIR red hair

b. * Maria kaza če Todor imal červena kosa.

Maria said that Todor has-REP red hair

Since the embedded reportative marker REP is incompatible with a context like the one in scenario 2 in which the speaker has direct evidence, as illustrated by the ungrammaticality of the sentence in (97)b, the natural conclusion according to Sauerland

and Schenner is that the embedded reportative marker REP requires a speaker oriented interpretation.

The grammaticality of (96)b and the ungrammaticality of (97)b shows that the evidential origo does not shift at all in embedded clauses in Bulgarian, and it is always interpreted from the perspective of the speaker.³¹ Thus, despite the fact that the evidential

³¹ There are 4 scenario types in Sauerland and Schenner (2007):

- a) Dir(Sp) / Dir(Sub)
- b) Rep (Sp) / Rep (Sub)
- c) Dir (Sp) / Rep (Sub)
- d) Rep (Sp) / Dir (Sub)

Sauerland and Schenner note that the scenarios in (a) and (b) are uninteresting as they do not enforce shifting of the evidential origo, since both the speaker and the subject share the same type of evidence (i.e., direct in (a), and indirect in (b)). Nevertheless, I illustrate these scenarios below as they show that the evidential origo is not in free variation in all embedded environments.

Scenario a)

Dir(Sp) / Dir(Sub):

Seda saw Ayşe's hair and I (the speaker) was with her and saw it too. Seda tells me: "Ayşe has red hair"

- (i) Seda Ayşe'nin saç-ı kızıl-dı de-di.
Seda Ayşe-gen hair-poss. red-past-DIR. Ev. say-past-DIR.EV
- (ii) * Seda Ayşe'nin saç-ı kızıl-mış de-di.
Seda Ayşe-gen hair-poss. red-past-INDIR. Ev. say-past-DIR.EV

Scenario b)

Dir(Sp) / Dir(Sub):

Seda heard from Leyla that Ayşe has red hair. I (speaker) haven't seen it. Seda tells me: "I heard that Ayşe has red hair".

origo potentially can get a shifted interpretation in Bulgarian, since the examples above suggest that it is not interpreted relative to the subject's perspective, the *evidential origo* in Bulgarian can be taken to have a fixed interpretation (i.e., it gets its value always as the speaker of the utterance context).

Let us now examine the perspective from which an evidential morpheme in the embedded clauses is interpreted in Turkish:

Scenario 3: Speaker-REP evidence Subject-DIR evidence

Seda saw Ayşe's hair, and tells me 'Ayşe has red hair'.

- (98) a. Seda Ayşe'nin saç-ı kızıl-dı de-di.

Seda Ayşe-gen hair-poss. red-DIR. Ev. say-past-DIR.EV

- b. Seda Ayşe'nin saç-ı kızıl-mış de-di.

Seda Ayşe-gen hair-poss. red-INDIR. Ev. say-past-DIR.EV

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- (iii) * Seda Ayşe'nin saç-ı kızıl-dı de-di.

Seda Ayşe-gen hair-poss. red-past-DIR. Ev. say-past-DIR.EV

- (iv) Seda Ayşe'nin saç-ı kızıl-mış de-di.

Seda Ayşe-gen hair-poss. red-past-INDIR. Ev. say-past-DIR.EV

The ungrammatical examples in scenario (a) and (b) above indicate that evidentials are not in free variation in embedded clauses: when both the speaker and the subject have direct evidence, the embedded clause cannot be marked with indirect evidential morphology. Likewise, when both the speaker and the subject have indirect evidence, the embedded evidential cannot receive direct evidential marking.

In this scenario, the expectation is that since the speaker has indirect evidence, in a situation where the evidential origo in the embedded evidential receives its value as the speaker, the sentence in (98)a should be ungrammatical, yet it is not. This grammaticality then suggests that evidential origo of the evidential morpheme in the embedded clause can be interpreted from the perspective of the embedded subject, and this is supported by the compatibility of the sentence in (98)b in Turkish. The compatibility of (98)b with the scenario 3 above shows that it is also possible to interpret the embedded clause from the perspective of the speaker (since the reportative evidential marking of the embedded clause is compatible with speaker's evidence, which is a report in scenario 3). This indicates that the *evidential origo* exhibits optionality in shifting in Turkish.³²

The following scenario is used to show that the shifting flexibility is not peculiar to the evidential origo of the reportative marker, and that the direct evidential marker DIR in the embedded clause also displays shifting flexibility.³³

³² This optionality is consistent with the behavior of null pronominal subjects in embedded clauses, which are noted to exhibit shifting possibilities in Turkish (see Gültekin-Şener and Şener 2010).

³³ It may seem that because the examples above involve the verb *de-say*, it does not clearly show that [-mİş]*reportative* can be interpreted as being linked to the subject only, and not to the speaker herself, since the speaker always has reportative evidence in such a case, namely the content of the saying. In scenario 4 used for the sentences in (99)a and (99)b the subject has reportative evidence that Ayşe has red hair. The speaker has direct evidence that Ayşe has red hair, but she also has *reportative* evidence that Ayşe has red hair from the very fact that Seda said so. When the evidence source is such that the speaker has direct evidence, and also because of the verb *say*, she has indirect evidence, there appears to be two relevant evidence sources for the speaker, and this makes Sauerland and Schenner's test problematic. Nevertheless, the fact that the speaker chooses direct evidence over the indirect evidence in the presence of both types of

Scenario 4: Speaker –DIR evidence Subject-REP evidence

Berna told Seda that Ayşe has red hair and Seda believes her. Seda says: *Ayşe has red hair*. I (speaker) saw Ayşe’s red hair with my own eyes.

(99) a. Seda Ayşe’nin saç-1 kızıl-dı de-di.

Seda Ayşe-gen hair-poss. red-DIR.EV. say-past-DIR.EV

b. Seda Ayşe’nin saç-1 kızıl-mış de-di.

Seda Ayşe-gen hair-poss. red-INDIR.Ev. say-past-DIR.EV

The grammaticality of (99)a shows that the evidential origo can get interpreted as the speaker, since the evidential marking in the embedded clause, namely the direct evidence, is compatible with the information source of the speaker (i.e., direct evidence). Furthermore, the grammaticality of (99)b shows that it is possible to interpret the evidential origo as shifted, since even though the speaker has direct evidence, a sentence with indirect evidential marking in the embedded clause is possible.

The examples in the constructed scenarios above thus show that it is possible to interpret an evidential statement in the embedded clause as reflecting the speaker’s perspective or the embedded subjects’ perspective depending on the available evidence.

evidence would still argue for the validity of this type of test. When a speaker has both direct and indirect evidence, she must use the direct evidential marker as it is a way to indicate her strongest evidence, which in this case, is the direct evidence. Recall also that evidentials are not in free variation in embedded clauses as we illustrated in fn.31.

As noted before, Turkish differs from Cuzco Quechua and Bulgarian with respect to the shifting possibilities attested on the interpretation of the evidential origo: In Cuzco Quechua embedding is not attested, and in Bulgarian embedding of evidentials is a possibility, yet the *evidential origo* does not shift. In Tibetan evidential origo shift is also permitted, yet the shift is obligatory. This suggests that individual languages may make use of different pragmatic strategies in encoding the value of the evidential origo.

1.4 Perspective shift in Turkish vs. Bulgarian

In this section, I discuss in what other ways Turkish differs from Bulgarian. This is necessary, because Bulgarian is one of the languages for which a detailed description and a formal analysis of the embedded evidentiality in root clauses and embedded clauses is provided (cf. Izvorski 1997, and Sauerland and Schenner 2007). Also the approach that I appeal to in analyzing the evidentials in Turkish relies on this language.

Recall once again that Izvroksi (1997) analyzes an evidential statement in the following way:

(100) EV(p):

Presupposition: speaker has indirect evidence for p

Assertion: p in view of speaker's knowledge state

Sauerland and Schenner (2007), however, propose the following for the interpretation of an evidential statement in Bulgarian:

(101) [[REP]](*y,v*)(*p*)

Presupposition: *y* has in *v* reportative evidence for *p*

Assertion: *p*

As we noted in chapter 1, the main distinction between Sauerland and Schenner's (2007) and Izvorski's (1997) analysis is that while Izvorski treats evidentials as epistemic modals inducing presuppositions, and analyzes them in the lines of Kratzerian modal system, Sauerland and Schenner assume Bulgarian evidentials are presuppositional operators. Sauerland and Schenner (2007) object Izvorski's analysis of evidentials in Bulgarian for the following two reasons: (i) they claim that the necessity modal in the assertion is counterintuitive as they claim that it makes wrong predictions for the cases in which the speaker relies on a report from a source that is not trustworthy, and that (ii) the modal analysis makes wrong predictions in the embedded cases, as treatment of evidentials as epistemic modals would require the shifting of the evidential origo if in fact they are similar to true epistemic modals.

Noting that I will maintain Sauerland and Schenner's (2007) analysis in my approach, below I present two reasons to challenge their specific reasoning for rejecting Izvorski's (1997) analysis:

(i) In the Kratzerian modal analysis of evidentials adopted in Izvorski (1997), the interpretation of a modal is relative to two conversational backgrounds: modal base and an ordering source. The modal base determines for any world a set of worlds which are accessible from it in a particular way. In the case of evidentials an epistemic modal base (*what we know*) determines a set of worlds which are epistemically accessible from *w*.

What the epistemic agent knows in w can be different in different contexts, hence the worlds that the modal quantifies over are ordered according to how close they are to w . Depending on the modal restriction the trustworthiness would not create a problem in general contrary to what Sauerland and Schenner argue for.

(ii) Despite the prominent aspects of the meaning they share, the meaning of evidentials and epistemic modals do not always entirely converge (cf. Portner 2009). In addition to their semantic properties, their pragmatic properties may differ. Sauerland and Schenner (2007) rely on English facts reported in Stephenson (2005) and Hacquard (2006) who show that the perspective from which an embedded epistemic modal is interpreted is always shifted in English:

- (102) a. It must be raining.
 b. John thinks it must be raining.

Unlike in (102)a which refers to the belief worlds of the speaker, in the sentence in (102)b it is not the belief worlds of the *speaker*, but the belief worlds of *John's* that are claimed to entail that it is raining. Sauerland and Schenner do not illustrate the facts regarding the interpretation of the perspective in the embedded clauses with epistemic modals in Bulgarian, but notice that shifting properties of the evidential origo for evidentials are different from language to language. It may, in fact, be possible that while epistemic modals do permit shifting of the perspective from which the modal is interpreted, the evidentials do not permit such shifting, or vice versa, as epistemic modals and evidentials do not entirely converge in their semantic contribution to a given

statement. Therefore, it cannot be said that due to the fact that the perspective from which an embedded epistemic modal always shifts, the perspective from which an embedded evidential will also shift does follow. Merely relying on the shifting properties of evidentials in the embedded clause cannot be taken as an argument for removing the modal force from the assertion. Evidentials and epistemic modals can differ in their shifting possibilities.

In order to strengthen their argumentation that evidentials lack a modal force Sauerland and Schenner assume the following; if the assertion of an evidential statement is strong, then the evidential does not involve a modal force. They suggest this can be shown to be the case through simple contradiction tests.

Note that a modal statement is different from a declarative statement, in that while a declarative statement is a strong assertion, a modal statement is not. This is illustrated with the following examples:

(103) John is the murderer.

(104) John must be the murderer.

The modal statement in (104) is a weak assertion. The sentence does not assert that John is the murderer. *Epistemic* modality expresses possibilities and necessities given what is known. The sentence in (104) only says that in all the worlds compatible with the speaker's knowledge John must be the murderer. The test that Sauerland and Schenner (2007) use is intended to show that an evidential statement in Bulgarian is not a modal-like; weak assertion; because it leads to a contradiction when the proposition is denied.

According to their reasoning, if evidentials had weak assertions, it would be acceptable to deny the proposition.

Consider their example below in this respect:

- (105) * Todor imal červena kosa no všaštnost kosata mu e černa
 Todor has-rep red hair but in fact hair.the his is black
(Attempted:) 'I was told that Todor has red hair – but in fact his hair is black.' (=26b S&S, 07)

The ungrammaticality of (105) suggests that the assertion of p -REP and $\neg p$ is not possible in Bulgarian as it yields a contradiction. Accordingly, Sauerland and Schenner conclude that the reportative in Bulgarian asserts p , and that a reportative statement is a strong assertion. Notice, however that despite the fact that for instance the modal *must* in English is a true epistemic modal, it does also yield a contradiction as illustrated in (106) below. Notice importantly that this does not imply that *must* statements are strong assertions.

- (106) #John must be the murderer, but he is not.

Even though the epistemic modal *must*, by virtue of being an epistemic modal, is a weak assertion, as illustrated in (104), a continuation of a negated proposition leads to a contradiction in (106). This suggests that it cannot be trivially argued that leading to a contradiction when the proposition is denied is an indication that a statement lacks a

modal force. Nevertheless, the assertability facts may uncover the pragmatic properties of evidential statements. The assertability conditions may indicate whether or not the speaker is committed to the truth of the proposition, which by definition, evidentials are described to encode (c.f. Chafe and Nichols' 1986 description). Therefore, I use this test to uncover the encoding of speaker's commitment to the truth of the proposition in all three subtypes of evidentiality in Turkish. I modify this test, however to target the evidential assertion itself, not the propositional content. In Sauerland and Schenner's (2007) test only the first conjunct involves an evidential, and it does not necessarily target the asserted content of the evidential as it is. In particular, notice that the sentence in (105) is a sentence with the reportative marking (i.e., *p-Rep* sentence), whereas the second conjunct that follows it does not involve an evidential marking (i.e., it is not a *p-Rep* sentence). The negated, evidential marked second conjunct tests whether the evidential marked unnegated first conjunct can be asserted in the presence of a negated proposition. In the examples from Turkish I use evidential marking in both of the conjuncts (i.e., *p-EV* and $\neg p$ -EV). Before I get to those examples, let us first examine the assertability of *p-Rep* and $\neg p$ in Turkish.

Recall that there are two distinct forms of [- mIŞ] in Turkish. In the following scenario, the reportative interpretation of [-mIŞ] is enforced:

(107) *Seda tells Ayşe (the speaker) that Sinan fell off the bike:*

Sinan bisiklet-ten düş-müş, ama gerçekte öyle birşey yok.

Sinan bike-abl. fall-IND EV.-REP but actually like nothing exists

It is reported to the speaker that Sinan fell off the bike, but in fact nothing like that happened.

Note that in this scenario, the assertion of *p-Rep* and $\neg p$ is possible in Turkish, unlike what Sauerland and Schenner (2007) observe for Bulgarian in which this is not possible at all. The contrast between Bulgarian and Turkish is important, in that the impossibility of asserting *p-Rep* and $\neg p$ implies that the speaker is committed to the truth of the proposition, whereas in Turkish the speaker is not committed to the truth of the proposition.

Furthermore, I check below the assertability of the inferential evidential, which was not tested for Bulgarian. The following scenario enforces the inferential interpretation of the proposition in the first conjunct.

(108) *Seda sees Sinan getting up from the ground with his bike and his backpack spread around. Although Seda hasn't seen Sinan fall, she infers that he has fallen off the bike:*

Sinan bisiklet-ten düş-müş, ama gerçekte öyle birşey yok.

Sinan bike-abl. fall-IND EV.-INF but actually like nothing exists
Speaker infers that Sinan fell off his bike, but in fact nothing like that happened.

Thus, when [-mİş] is used in its inferential meaning, it is not possible to assert *p-Inf* and $\neg p$ without a contradiction. This suggests that the inferential evidential marked sentence implies that the speaker is committed to the truth of the proposition expressed.

Now, I consider the examples which consist of propositions in which both the proposition under discussion and the denied proposition are evidential marked. As noted before, epistemically equal assertions in both conjuncts make it possible to target the evidential interpretation per se. Thus in the sentence in (109) below both conjuncts are indirect evidential marked:

(109) Sinan bisiklet-ten düş-müş, ama düş-me-miş.

Sinan bike-abl. fall- past-INDIR EV. but fall-neg-past-INDIR.EV

It is reported to the speaker that Sinan fell off the bike, but (the speaker infers that/the speaker gathered that he did not fall).

When a sentence bears the indirect evidential marker [-mİş], due to the presence of two distinct [-mİş] forms in Turkish that we argued for in chapter 1, there are two possible contexts in which such sentences can be used, namely the contexts that enforce the *reportative* or the *inferential* interpretations. Furthermore, a reportative statement can be used in the presence of different evidential sources in each conjunct. Potential scenarios are given below:

- a) The report in each conjunct are from a different source (indicated by different indices):

Sinan fell off the bike $mI\mathfrak{S}\text{--}REP_j$, and Sinan did not fall off the bike $mI\mathfrak{S}\text{--}REP_k$

Assertability: $p\text{--}mI\mathfrak{S}Rep_j$ and $\neg p\text{--}mI\mathfrak{S}Rep_k$ **No contradiction**

- b) The report in each conjunct are from the same source:

Sinan fell of the bike $mI\mathfrak{S}\text{--}REP_j$, and Sinan did not fall off the bike $mI\mathfrak{S}\text{--}REP_j$

Assertability: $p\text{--}mI\mathfrak{S}Rep_j$ and $\neg p\text{--}mI\mathfrak{S}Rep_j$ **Contradiction**

Note that when the reports are from the same source, it is the speaker of the original statement (namely the epistemic agent of the evidential source) who makes contradictory statements.

- c) Evidential forms in each conjunct are different (i.e., $mI\mathfrak{S}_{\text{reportative}}$ in the first conjunct and $mI\mathfrak{S}_{\text{inferential}}$ in the second)

Sinan fell of the bike $mI\mathfrak{S}\text{--}REP$, and Sinan did not fall off the bike $mI\mathfrak{S}\text{--}INF$

Assertability: $p\text{--}mI\mathfrak{S}Rep$ and $\neg p\text{--}mI\mathfrak{S}Inf$ **No contradiction**³⁴

Moreover, the scenario below looks for the assertability facts of the direct evidential form.

³⁴ Note that it does not matter which evidential is the negated one. Even if we negate the inferential in the first conjunct, namely that if the statement is in the following form: $p\text{--}mI\mathfrak{S}Inf$ and $\neg p\text{--}mI\mathfrak{S}Rep$, the assertion does not yield a contradiction.

Seda sees that Sinan fell off his bike, and in the evening she tells Ayşe that Sinan fell off the bike:

P-DIR and \neg P

- (110) # Sinan bisiklet-ten düş-tü, ama gerçekte öyle birşey yok.
Sinan bicycle-abl. fall-past-DIR EV. but actually like nothing exists
Speaker has direct evidence that Sinan fell off his bike, but in fact nothing like that happened. **Contradiction**

P-DIR and \neg P-DIR

- (111) # Sinan bisiklet-ten düş-tü, ama düş-me-di.
Sinan bicycle-abl. fall-DIR EV.-INF but fall-not-past-DIR.EV
Speaker has direct evidence that Sinan fell off his bike, but in he did not fall. **Contradiction**

The sentences in (110) and (111) indicate that the assertion of *p-DIR* \neg *p-DIR* is not possible in Turkish. This is consistent with the behavior of the reportative in Bulgarian. Nevertheless, as we observed, while the speakers are committed to the truth of the proposition in Bulgarian, the assertion of *P-rep* and \neg *pREP* in Turkish shows that speakers are not committed to the truth of the proposition in reportative evidential statements in Turkish.

Our overall findings regarding the assertability facts are reported in the table below:

Table 3

Assertability	Contradiction
$p\text{-REP} \neg p$	*
$p\text{-INF} \neg p$	\sqrt
$p\text{-REP}_j \neg p\text{REP}_k$	*
$p\text{-REP}_j \neg p\text{REP}_j$	\sqrt
$p\text{-REP} \neg p\text{INF}$	*
$p\text{-DIR} \neg p$	\sqrt
$p\text{-DIR} \neg p\text{DIR}$	\sqrt

The assertability facts listed above in table 3 suggest that each evidential subtype, namely the inferential, reportative and the direct evidential have distinct pragmatic properties.

Going back to our discussion relating to Sauerland and Schenner's (2007) reasoning that modal analysis makes wrong predictions in the embedded cases and that this is supported by the assertability tests does not seem to follow due to the reasons we provided above. We were, however, able to show through the assertability facts that subtypes of evidentials have distinct pragmatic properties.

To sum up, in this section I showed that assuming whether an evidential sentence consists of a modal force or not cannot be dependent on the assertability of p and $\neg p$. The assertability facts do not make the modal analysis proposed in Izvroksi (1997) any weaker. Yet, one should acknowledge that there is no independent evidence for the existence of a modal force in the assertion of evidential statements. Evidentials do not indicate necessity or possibility like the regular epistemic modals do. Thus, it is

reasonable to assume that evidential statements do not carry their own modal force, but simply assert propositions. This then suggests that evidentials are operators that induce presuppositions. This assumption is in line with our analysis of evidentials in chapters 1 and 2, in which we did not assume the existence of a modal force in the assertion of evidentials.

1.5 The epistemic component of evidentials

In the previous section we investigated the properties of the epistemic component of evidentials in Turkish. In this section I briefly go back to further support why I pursue the presuppositional analysis of evidentials in line with Izvorski (1997).

One motivation for why Izvorski proposes a presuppositional analysis of evidentials in Bulgarian is that the indirect evidence requirement of the perfect of evidentiality survives under negation. The example below is from Izvorski (1997):

(112) *Ivan ne izkaral izpita*

Ivan not passed-PE the-exam

= “Ivan didn’t pass the exam (it is said/I infer).”

≠ “It is not the case that {it is said/I infer} that Ivan passed the exam.”

(Izvorski 1997:228)

Because the sentence is infelicitous with the reading in which the available evidence is negated, Izvorski suggests that the available evidence must be a presupposition. Note importantly that, even though Izvorski (1997) uses the example in (112) to indicate that

the available evidence cannot be negated, hence it is presuppositional, at the outset this example may seem to argue for the wide scope reading of evidentials, and if so, this could go against the presuppositional analysis of evidentials in general. If we take a closer look at the assertive content of evidential statements, however, we observe that the assertive content scopes under negation, and that it is not the indirect status of the evidential that is negated. This is shown in examples in Matthewson et. al (2007) that I illustrate below. The asserted content (i.e., *Ivan passed the exam*) in (113)b scopes under negation.

- (113) a. It is not the case that *in all accessible worlds*, Ivan passed the exam.
[allows Ivan to pass in some accessible worlds]
[presupposes speaker has indirect evidence for the modal claim]
- b. *In all accessible worlds*, it is not the case that Ivan passed the exam.
[Ivan fails in all accessible worlds]
[presupposes speaker has indirect evidence for the modal claim]
- c. It is not the case that I have indirect evidence that *in all accessible worlds*, Ivan passed the exam.
[can be understood as denying that speaker's evidence is indirect]

Among the potential readings noted in (113) a-c above, Matthewson et.al (2007) report that the Bulgarian sentence in (112) has the reading in (113)b. They assume that the

availability of the meaning in (113)b is enough to show that it is the asserted content that scopes under negation, and that negation does not negate the indirect status of the evidence.³⁵ Thus, consistent with Izvorski's reasoning, Matthewson et. al (2007) pursue a presuppositional analysis of evidentials in St'át'imcets as well. Below I illustrate that the same facts obtain in Turkish.

- (114) Seda bisiklet-ten düş-me-miş.
 Seda bike-abl fall-neg- past-IND.EV 3SG

In Turkish, just like in Bulgarian, only the (b) reading obtains:

- (115) *In all accessible worlds*, it is not the case that Seda fell off the bike.
 [Seda manages the bike in all accessible worlds]
 [presupposes speaker has indirect evidence for the modal claim]

The facts noted above show that the requirement for indirect evidence is not blocked by negation in Turkish either. Therefore, evidentials in Turkish can be treated as evidentials in Bulgarian and St'át'imcets whose evidential systems are reported to induce

³⁵ If it did, that would indicate that the indirect evidence interpretation is not a presupposition that can survive under negation, but probably a conversational implicature that can be cancelled. Matthewson et.al (2007) note that an explanation is necessary as for why the reading in (113)a is absent in Bulgarian, yet they also note that such restrictions on available scope relations between modals and negation are well known in English and other languages.

presuppositions. Notice also that this finding is consistent with Izvorksi's (1997) assumption about Turkish.

Another diagnostics used in the literature for detecting presuppositionality is testing the survival of the presupposition in conditional statements. If the consequent of a conditional statement contains a presupposition trigger, and the triggered presupposition can be explicitly stated in the antecedent of the conditional, then the presupposition that an element reflects is expected to get blocked. The following example illustrates that:

(116) If I have a cat, then my cat is white.

The presupposition that *I have a cat* is blocked in (116), because it can appear in the antecedent of the conditional whose consequent consists of the trigger *my cat*. Thus (116) does not say that *I have a cat*. If the presupposition cannot be stated in the antecedent, it is allowed to project. For instance the sentence below says that *I have a cat*.

(117) If it is noon time, then my cat is hungry.

These examples suggest that conditional sentences act as filters for presuppositions that are triggered by expressions in their consequent.

Faller appeals to the conditional test illustrated above for detecting the presuppositionality of evidential statements in Cuzco Quechua. The presupposition of the reportative evidential *-si* will be blocked if the presupposition trigger appears in the consequent of a conditional whose antecedent explicitly contains that presupposition. Faller shows that the evidential meaning of the reportative *-si* in the consequent is not

(119) # Eger John gel-ecek diye duy-uy-sam John gel-ecek-miş.

If John come-FUTComp. hear-past-Cond.1 SG John come-FUT-Past-

IND.EV.3SG

As controversial as it is, I take the test illustrated above to be suggestive in understanding the presuppositionality of evidentials, and I interpret the oddity of the sentence in (119) to be indicating the presuppositional nature of evidentials in Turkish. If the indirect evidential meaning in Turkish were not presuppositional, we would not expect this oddity. The assumption that evidentials are presuppositional is consistent with Matthewson et al.'s (2007) conclusion about the presuppositional nature of evidentials in St'át'imcets, a language whose facts resemble those of Turkish, and also with Izvorski's proposal about the presuppositional nature of evidentials in Bulgarian and Turkish.

2. The semantic import of the evidential origo

2.1 Semantics of the epistemic component of reportative, inferential and the direct evidential in Turkish

Provided with the facts presented so far, I assume that the evidential component of evidential morphemes [mİş] *inferential*, [mİş] *reportative*, and the direct evidential [-DI] are uniform, yet their pragmatic distribution is not. Recall that I assumed that the temporal and the evidential meaning of [mİş] are represented by different operators in the semantics. Once again I spell out the semantics I suggest for evidentials in Turkish below. I claim that each evidential form induces presuppositions and are represented as

presuppositional operators. Thus, the semantics I propose for the epistemic component of each evidential subtype is as follows:

[- mI§] reportative:

$$(120) \quad [[- mI\text{§}_{\text{reportative}}] = [\lambda x \in D_e. \lambda w \in D_s. \lambda t \in D_t. \lambda p: x \text{ has in } w \text{ at } t \text{ reportative evidence for } p. p(x, w, t) = I]$$

[- mI§] inferential:

$$(121) \quad [[- mI\text{§}_{\text{inferential}}] = [\lambda x \in D_e. \lambda w \in D_s. \lambda t \in D_t. \lambda p: x \text{ has in } w \text{ at } t \text{ inferential evidence for } p. p(x, w, t) = I]$$

[-DI]:

$$(122) \quad [[-DI]] = [\lambda x \in D_e. \lambda w \in D_s. \lambda t \in D_t. \lambda p: x \text{ has in } w \text{ at } t \text{ direct evidence for } p. p(x, w, t) = I]$$

Through the semantics of the epistemic component of *[-mI§] reportative*, *[-mI§] inferential* and the direct evidential morpheme presented above, an evidential statement receives a presuppositional meaning, and each evidential form exhibits distinct assertability facts as noted above due to each statement indicating distinct commitment degrees. Thus, the semantic mechanisms evidentials are interpreted under are uniform, whereas their pragmatics differ.

2.1.2 Against illocutionary operator analysis

Various tests for truth-conditionality of evidentials have been proposed in the literature. Among these tests for diagnosing the status of evidentials are the embeddability of evidentials in the antecedent of conditionals or under factive verbs, challengeability and scope interaction with propositional-level operators such as negation. In the previous sections we observed that evidentials appear in embedded clauses in Turkish. We also exemplified the interaction of evidentials with negation and showed that evidentials cannot appear in the antecedent of conditionals when the consequent includes the trigger, all of which can be taken to suggest that evidentials in Turkish operate at the propositional level, and not at the speech act level. One of the remaining tests for diagnosing the status of evidentials is the challengeability test. The so called challengeability test (also known as assent/dissent test) is adopted from Faller (2002). This test examines the truth conditionality of evidentials. Faller notes that if an element can be questioned, doubted, rejected or disagreed with, it contributes to the truth conditions of the proposition expressed. She argues that the Quechua direct and reportative evidentials fail the assent/dissent test, and therefore they must be assumed as being interpreted at the speech act level. In what follows I show that evidentials in Turkish pass the challengeability test noted in Faller (2002), which indicates that they operate at the propositional level. Note that the requirement that the challenge take the form of “That is (not) true” ensures that the test distinguishes presuppositional material from the material which contributes to the truth conditions of the utterance. Consider the discourse given below:

(123) Speaker A:

Ayşe ara-mış.

Ayşe call-past-IND. EV 3SG

It was reported to the speaker that Ayşe called.

(124) Speaker B:

a. Sen nere-den duy-du-n?

you where-abl. hear-past.DIR.EV.2SG.

Where did you hear that from?

b. Bence yanlış-ıyor-sun.

I think mistaken-pres.cont.2SG

I think you are mistaken.

c. Hey bi dakika! Ayşe'nin ara-dığ-ı-nı gör-dü-m

Hey, one minute, Ayşe-gen call-nomlz.-acc see-past-DIR.EV.1SG

de-me-din mi sen?

say-neg-past-DIR.EV-2SG Q you?

Hey, wait a minute! Didn't you say you saw Ayşe giving a call?

(124)a shows that the indirect evidential meaning can be doubted and questioned, while (124)b shows that it can also be rejected. The example in (124)c involves the so-called *wait a minute test*, which is in this case used to challenge the indirect evidential

information. In (124)a the speaker is not questioning whether Ayşe called or not, but questioning the evidential information. In (124)b, however, the speaker can be disagreeing with either the propositional content that *Ayşe called* or that the information is indirect. The sentence in (124)b can be followed by a statement such as the following, and when so, the disagreement is about the indirectness of the evidence: *Sen kimseden öyle birşey duymadın ki. You did not hear anything like that from anyone.* These examples thus show that the indirect evidential interpretation can be questioned, doubted, rejected or disagreed with in Turkish. Taking the validity of this test for granted and its consistency of its result with other facts that we noted before that argue for the truth conditional effects of evidentials in Turkish, I submit that the evidential information contributes to the truth conditions of the propositions expressed in Turkish.³⁶

2.1.3 On the interpretation of the evidential origo

In this section I illustrate how the facts regarding the evidential origo in Turkish can be captured. In Sauerland and Schenner's (2007) account, the reportative statement carries a presupposition, and the evidential origo is represented as a variable which gets bound by the context operator that yields the interpretation of the evidential origo to be the speaker of the utterance context. The condition stated in (125) below ensures the unshifted reading of the evidential origo in Bulgarian:


³⁶ The ability of the challengeability test to show the truth conditional effects is criticized by Papafragou (2000). In particular, Papafragou shows that epistemic *must* in English fails to pass the challengeability test.

(125) **Binding condition**

The arguments of REP y and v must be bound by the context operators of the matrix clause

The context operator in the matrix clause binds the individual and the world arguments through which the evidential proposition is evaluated. The LF for the Bulgarian sentence in (126) below illustrates this:

- (126) Maria kaza Todor ima červena kosa
 Maria said Todor has-DIR red hair

- (127) $\lambda x_0 \lambda w_0$ Maria kaza $\lambda x \lambda w$ EVID (__, __) Todor ima červena kosa.
- 

The way it is stated, the binding condition in (125) cannot predict the flexibility of the evidential origo shift in Turkish. Nevertheless, the operator theoretic account Sauerland and Schenner (2007) provide can still capture the flexibility, if we assume that the world and the individual variables can be bound either by the matrix, or the embedded lambda operators in Turkish. When the evidential origo is the speaker, the individual and the world variables are bound by the operators in the matrix clause (x_0 or w_0); when the evidential origo is the subject of the embedded clause, the variables (x or w) are bound by the embedded lambda operators. This condition trivially regulates the optionality of the evidential origo shift in Turkish.

2.2 Interpretation of evidentiality in embedded clauses

In complex sentences there are two verbal suffixes, namely the one attached to the main verb and the one attached to the embedded verb. Since our assumption is that evidentials are operators, aside from the tense and the individual operators that we assumed there are two evidential operators in such sentences. The sentence in (128) temporally encodes past meaning, and the evidential origo in embedded clauses marked with evidentiality can either get interpreted as the speaker or as the subject:

- (128) Bilge Usain Bolt koş-muş de-miş.
 Bilge UB run- past-INDIR.EV say-past-INDIR.EV3SG
It is reported to the speaker that Bilge said that it is reported that UB ran.

For ease of exposition, below I use a sentence in which the matrix verb and the embedded verb are marked with indirect evidentiality. I assume that the meaning of the matrix verb *-de/say* is as in (129), and the interpretation of REP is once again as in (130):

- (129) $[[\text{say}]](w)(P)(s) = 1$ iff $\forall (x, w') : (x, w')$ fulfills all assertions made by s in $w \rightarrow P(x, w')$
- (130) $[[\text{REP}]](y, v, t)(p) : [\lambda t. \lambda w. \lambda p : x \text{ has in } w \text{ reportative evidence for } p. p(x, w, t) = I]$

[illegible]

Note that **P** indicates the matrix clause, **Q** represents the embedded clause that involves an indirect evidential, and **R** represents the tensed embedded clause itself.

(132)

$[[\mathbf{R}]] = \lambda t. \lambda x. \lambda w. \exists t' < t \text{ s.t. UB runs at } t' \text{ in } w.$

$[[\mathbf{Q}]] = \lambda t''. \lambda y. \lambda w'. Y \text{ has in } w' \text{ at } t'' \text{ reportative evidence for R.}$

$[[\mathbf{P}]] = \lambda t'''. \lambda z. \lambda w''. \exists t'''' \text{ s.t. } \exists t'''' < t''' \text{ and } \forall \langle w''', z', s \rangle \text{ that fulfills}$
 assertions by Bilge in w'' at t'''' : $q(w''')(z')(s)=1$

$[[\mathbf{U}]](\text{UT})(\text{SP})(@)=$

$[\lambda t'''''. \lambda n. \lambda w''''': n \text{ has at } t'''''' \text{ in } w'''''' \text{ reportative evidence for } p. p(x, w, t)=1]$

$(\text{UT})(\text{SP})(@)$

Recall that the value of the individual variable in the denotation of the reportative evidential is determined by the context. For the root clause it is invariably the speaker. The individual variable in the embedded clause, however, can be bound either by the matrix or the embedded lambda operators. When bound by the matrix operator, the presupposition is that speaker has indirect evidence, when bound by the embedded lambda operator the presupposition is that subject has indirect evidence.

It is important at this point to make sure which $[-mI\dot{s}]$ morpheme is used in the embedded clause. In what follows I show that it is the $[-mI\dot{s}]$ *reportative*, not $[-mI\dot{s}]$ *inferential* that appears in the embedded clause. This can be verified by the compatibility of $[-mI\dot{s}]$ with the temporal adverb *dün/yesterday* that I used for detecting the availability

of the reportative interpretation. Before I illustrate these examples, an important point that calls for attention is the modificational properties of the adverb *dün/yesterday* when they appear in embedded clauses in Turkish.

Turkish is a language that allows variation in word order (see Şener 2010 for a recent analysis, among others). The adverb can appear in two positions in the matrix clause as shown in the examples below:

- (133) Bilge dün gel-miş.
 Bilge yesterday come-past-INDIR.EV3SG
Speaker is reported that Bilge came by yesterday.

- (134) Dün Bilge gel-miş.
 Yesterday Bilge come-past-INDIR.EV3SG
Speaker is reported that Bilge came by yesterday.

In both sentences in (133) and (134), the adverb modifies the verb phrase, regardless of its syntactic position. Interestingly, however when the adverb appears in the embedded clause, it can associate with either the matrix or the embedded verb depending on its syntactic position in the sentence as shown in the examples below:

- (135) Seda dün Bilge gel-miş de-di.
 Seda yesterday Bilge come by- past-DIR.EV say-past-DIR.EV3SG
Speaker has direct evidence that Seda said yesterday that Bilge came by.

In sentence (132) the adverb is necessarily associated with the matrix verb. The sentence says that *Seda said yesterday that Bilge came by*. The semantic value of the time adverbial *dün/yesterday* is determined by the actual world and the actual time relative to speaker's utterance time.

Consider now the sentence in (136):

(136) Seda, Bilge dün gel-miş de-di.

Seda Bilge yesterday come-ind.ev.-past say-past-DIR.EV 3SG

Speaker has direct evidence that Seda said that Bilge came by yesterday.

In sentence (136) the adverb is associated with the embedded verb. The sentence says that *Bilge's arrival took place yesterday*. Recall from chapter 1 that the assertion of *dün/yesterday* is not possible when the intended meaning is *[-mİş] inferential*. Provided with the fact that the sentence in (136) is grammatical, it is not possible that the *[-mİş]* morpheme in the embedded clause is the *[-mİş] inferential* morpheme, since *[-mİş] inferential* morpheme is always incompatible with the adverb *dün/yesterday*. Furthermore, we can verify by the compatibility in the following discourse that the *[-mİş]* morpheme that appears in sentence (136) above is the *[-mİş] reportative*:

(137) Reportative discourse:

Seda heard that Bilge arrived yesterday. She tells it to Nalan and Nalan reports this to Sinan.

Nalan:

Seda Bilge dün gel-miş de-di.

Seda Bilge yesterday come- past-INDIR.EV say-past-DIR.EV 3SG

Seda said that (she has reportative evidence that) Bilge arrived yesterday.

The grammaticality of the sentence in (137) shows that the embedded clause is temporally interpreted as *Past Tense*, and epistemically as the reportative evidential. This then suggests that the embedded evidential [-mİş] is the reportative evidential, and essentially not the inferential evidential.

This discussion suggests that [-mİş] in the embedded clause gets interpreted as the reportative evidential and the evidential origo encoded by the [-mİş] *reportative* can either be the speaker or the subject, while the evidential origo in root clauses is always interpreted as the subject.

3. Conclusion

This chapter examined the behavior of the evidential origo in root and embedded clauses in Turkish. We showed that Turkish differ from Bulgarian with respect to the shifting optionality of the evidential origo. One of the major arguments against the speech act level operators is the very presence of evidentials in embedded clauses. Turkish permits both the direct and the indirect evidentials to appear in finite complement clauses. We further showed that it is the [-mİş] *reportative*, not [-mİş] *inferential* that appears in finite complement clauses. This suggests that since [-mİş] *inferential* interpretation only arises in root clauses, and the evidential origo of the [-mİş] *inferential* morpheme is always the speaker.

We also discussed in this chapter that along with other aspects of its meaning, evidentials have distinct assertability properties not only language internally, but also cross-linguistically. In particular, the subtypes of evidentials namely the *inferential* and the *reportative* carry distinct assertability strengths both language internally and cross-linguistically. The fact that there is a variation in the assertability of distinct subtypes of evidentials also brings support to the treatment of [-mIş] morpheme as two semantically distinct entities as [-mIş] *inferential* and [-mIş] *reportative* in Turkish.

CHAPTER 4

Reduplication of [-mIş]

1. The semantic aspects of reduplication of the evidential morphology

In this chapter I investigate the meaning contribution of reduplication. My goal is to establish an approach that characterizes the semantics of the reduplicated evidential morphology in Turkish. In particular, I discuss what meaning a reduplicated statement conveys and what mechanism is employed for that purpose.

Reduplication is a morphological process that leads to specific semantic-pragmatic effects. I will not discuss the morpho-syntactic process of reduplication per se, but mainly analyze the semantic and pragmatic aspects of this process. I refer the reader to Inkelas and Zoll's (2005) work for a detailed understanding of the morphological process of reduplication.

From a semantic and pragmatic point of view, languages employ reduplication as a way to express various meanings. Ghomeshi et al. (2004) for instance, suggest that in English morphological reduplication applies to a contentful structure. They observe that while reduplication cannot target functional elements, it can target other categories in this language. An example of reduplication noted in Inkelas and Zoll (2005) is given below:

(138) *Are you sick, or ARE-are you sick?

(139) Are you SICK, sick?

While (138) shows that the auxiliary verb *be* cannot undergo reduplication, the adjectival predicate *sick* can. In Turkish reduplication is used as a prevalent strategy. In particular, the evidential morphemes [-mİş] and [-DI] can be reduplicated.³⁷ An important question, however is what semantic component of the evidential morphology undergoes reduplication? The examples below suggest that just like in English, a purely temporal functional category cannot undergo reduplication in Turkish either. Yet, the evidential-tense marker [-mİş] can.

(140) *Ali koş-u-yor-yor.

Ali come-cop.-pres.cont.-pres.cont.

(141) Ali koş-muş-muş.

Ali run-Past-INDIR.EV. 3SG

The speaker is reported that Ali ran, but s/he doesn't believe it.

The contrast between (140) and (141) indicates that it must be that the reduplication targets the epistemic component of evidentials in Turkish.

Inkelas and Zoll (2005) suggest that the general function of reduplication is to express emphasis as in reduplicated forms such as *coke-coke* with the meaning *real coke* in English, or as in other languages such as Japanese in which it expresses diversity of referents *kami* god > *kami-gami* with the meaning various gods, etc.. Despite this diversity on the meaning contribution, cross-linguistic similarities have also been

³⁷ The reduplication of [-DI] is observed only in some dialects of Turkish.

attested. Uspensky (1972), for instance, observes that in reduplicative constructions, increase of quantity (Augmentation) and increase of degree (Intensification) are universally preferred over decrease of quantity (Diminution) and decrease of degree (Attenuation) (cited in Inkelas and Zoll 2005). Among its other properties, Ghomeshi et al. (2004) and Wierzbicka (1991) characterize reduplicated forms in Italian as representing *intensification*. In Turkish, the reduplication of, for instance, the nominal categories lead to what can be described as increase of quantity (Augmentation). The following example illustrates that:

- (142) Seda tabak tabak yemek yedi.
 Seda plate plate food eat-past-DIR.EV
 Seda ate too much food.

In sentence (142) the reduplicated noun *plate* adds up to the meaning so as to convey that the amount of food Seda ate was too much. I should acknowledge at this point that providing a semantic analysis for the entire process of reduplication is very difficult and beyond the limits of this dissertation, especially given the attested language internal and cross-linguistic diversity of the meaning of reduplicated forms. Therefore, I limit my discussion and focus on only the semantic interpretation of the reduplicated evidential form [-mİş] in Turkish.

1.1 General description

To the best of my knowledge, no formal analysis of the meaning contribution of the evidential morphology is given for Turkish. To this end, I start out by outlining the characteristics of the environments in which reduplication is used. An example of a [-mİş -mİş] sentence is given in (143) below:

(143) Bilge konuş-muş-muş.

Bilge speak-past-IND.EV.-IND.EV 3SG

The speaker has indirect evidence that Bilge spoke, but she doesn't believe that Bilge spoke.

Interestingly, the reduplication of [-mİş] is only possible if the discourse involves a previously established information. In particular, the sentence in (143) can be used only if there is an established context in which Bilge's speaking has been provided in the common ground. In other words, the sentence in (143) cannot be uttered out of the blue. If uttered, it results in infelicity (or invoke the question in addressee's mind whose statement the speaker is disagreeing with). This indicates that a [-mİş-mİş] statement takes a proposition that is already in the common ground.

Let us examine more closely the pragmatics of the sentence in (143). The conversation between the speaker and the addressee for the sentence in (143) can be as follows:

Context: *Bilge was asked by her neighbors to attend the town hall meeting, and bring up her neighbors' concerns about their neighborhood. Knowing Bilge, Ayşe thought Bilge would not speak up in public.*

The conversation:

(144) Nalan to Seda: Bilge konuş-tu.

Bilge speak-past-DIR.EV

The speaker has direct evidence that Bilge spoke.

(145) Seda to Ayşe: Bilge konuş-muş.

Bilge speak- past-INDIR.EV

The speaker has indirect evidence that Bilge spoke.

(146) Ayşe to Sinan (over a phone call):

Bilge konuş-muş-muş.

Bilge speak-ind.ev.-ind.ev.

The speaker has indirect evidence that Bilge spoke, but she doesn't believe that Bilge spoke.

Notice that the sentence in (146) can be used either after Bilge's utterance (i.e., 144) or Seda's utterance (i.e., 145). In other words, (146) can be uttered when the preceding discourse involves the sentence in (144), in which there is direct evidential marking, or when the preceding discourse involves the sentence in (145), in which there is indirect

evidential marking. The speaker's (i.e., Ayşe in (146)) use of [-mIş-mIş] in either discourse indicates that the speaker does not believe the content of the previous utterance. This suggests that a [-mIş-mIş] sentence can be used regardless of the evidential morphology involved in the preceding statement, namely regardless of [-DI] as in (144) or [-mIş] as in (145). Thus a [-mIş-mIş] statement does not necessarily derive from a [-mIş] sentence.

In what follows I show that the meaning that the reduplicated evidential form [-mIş-mIş] contributes to is not an implicature.

Observe the following contrast:

(147) Ayşe to Sinan (over a phone call):

Bilge konuş-muş-muş. ...Seda şaka mı yapıyor?

Bilge speak-ind.ev.-ind.ev. ... Is Seda kidding me?

The speaker has indirect evidence that Bilge spoke, but she doesn't believe that Bilge spoke. She asks: Is Seda joking? ³⁸

(148) #Bilge konuş-muş-muş. ...valla, ben inanıyorum.

Bilge speak-past-IND.EV- past-IND.EV ... well, I believe that.

The speaker has indirect evidence that Bilge spoke, but she doesn't believe this.

³⁸ Same results obtain with:

(i) Bilge konuş-muş-muş. ... ben inanmıyorum.

Bilge speak-past-IND.EV-past-IND. EV. ...I don't believe it.

The felicity of the sentence in (147) in which a [-mİş-mİş] sentence is followed by a statement that encodes the speaker's doubt or disbelief, and the infelicity of the sentence in (148) in which a [-mİş-mİş] sentence is followed by a statement that conveys the speaker's belief shows that the encoding of disbelief is not simply a conversational implicature, but part of the meaning of a [-mİş-mİş] statement. Furthermore, a reduplicated [-mİş] statement is a weaker assertion than a [-mİş] statement itself. The examples in (149) and (150) below indicate that:

(149) Ali kitap oku-muş.

Ali book read- past-INDIR.EV3SG

It was reported to the speaker that *Ali read a book*.

(150) Ali kitap oku-muş-muş.

Ali book read-IND. EV-IND EV3SG

It was reported to the speaker that Ali read a book, but the speaker does not believe that Ali read a book.

The cases in which (150) is true do not converge with the cases in which (149) is true. Thus the sentence in (150) does not entail the sentence in (149) above, which suggests that a [-mİş-mİş] statement is a weaker assertion than a [-mİş] statement. This finding is consistent with our observation reported in (144) to (146), which is that a [-mİş-mİş] statement can be uttered following a [-mİş] or a [-DI] statement. If it were the case that a [-mİş-mİş] sentence had to necessarily build on a [-mİş] sentence, we would expect it to

be infelicitous when uttered following a [-DI] sentence, yet the example illustrated above shows that it is not. Similarly, if a [-mIş-mIş] sentence consisted of a [-mIş] sentence, we would expect the sentence in (150) to entail (149). These examples suggest that there must be a separate form in the semantics that encodes the meaning a [-mIş-mIş] statement yields.

Furthermore, the fact that the adjacency between two [-mIş] forms cannot be broken in [-mIş-mIş] sentences support that [-mIş-mIş] is a morphological unit of its own. Examine the examples below in this respect. While it is possible to form the sequence of [-mIş] and [-DI] as in (151), and [-mIş] and [-mIş] as in (152), it is not possible to break the morphological sequence of [-mIş-mIş] as illustrated in (153).

(151) Ali oku-muş-tu.

Ali read- past-INDIR.EV - past-DIR.EV

*The speaker has indirect evidence that Ali had read.*³⁹

(152) Ali oku-muş-muş.

Ali read- past-INDIR.EV - past-INDIR.EV3SG

The speaker has indirect evidence that Ali read, but s/he doesn't believe it.

(153) * Ali oku-muş-tu-muş.

Ali read- past-INDIR.EV - past-DIR.EV-past-INDIR.EV3SG⁴⁰

³⁹ Note independently that the combination of [-mIş] and [-DI] yields a pluperfect meaning.

The examples illustrated above show that reduplication is a morphological process in Turkish that requires a morphological adjacency, namely that [-mİş-mİş] cannot be split.

Kornfilt (1997) describes [-mİş] as a form indicating *reported past* and points out that the use of a [-mİş] sentence indicates that the speaker does not know whether the statement is true or not. Yavaş (1980) notes that [-mİş] merely indicates that the speaker is not willing to commit herself to the truth of the proposition. As we illustrated in the examples above, however, a [-mİş-mİş] statement indicates that the speaker does not believe to the truth of the proposition described. Interestingly, the disbelief is not about the reportative evidence, but about the proposition itself. This is, again, consistent with our observation that a [-mİş-mİş] sentence is a unit of its own, and does not necessarily build on an existing [-mİş] statement.

1.2 On the semantics of reduplication

Provided with the observations in the previous section, I propose, keeping aside the internal morphological make up of a [-mİş-mİş] form at this point, that [-mİş-mİş] is a unit that operates at the propositional level.

One of the recent works that focuses on the meaning of reduplicated evidential forms is Sauerland and Schenner (2007). They discuss the evidential marker *-I* in this language, and propose to analyze it as a dubitative mood marker. Let us briefly illustrate their analysis below to understand how much of their proposed semantics of reduplication is applicable to Turkish.

⁴⁰ Note that while a sequence of the morphemes [-mİş] and [-DI] is possible as illustrated in (151), a sequence of [-mİş-mİş-DI] is not.

1.3 The dubitative and reduplication

Citing Radeva (2003) and Friedman (1986), Sauerland and Schenner (2007) note that there exists a third evidential form in Bulgarian, which is dubbed as the *dubitative*. Dubitative is an epistemic mood which signals speaker's reservation about the accuracy of his or her statement. Examine the example from Bulgarian below:

(154) Todor bi/ ima/ cervena kosa

Todor be-REP have-DUB red hair

'I have reportative evidence that Todor has red hair, but I doubt that it's true'

(=27, Sauerland and Schenner (2007))

Radeva (2003) and Friedman (1986) (cited in Sauerland and Schenner 2007) suggest that the dubitative in Bulgarian conveys the meaning that the speaker is doubtful about the proposition described. What counts as the dubitative marker in their account is the co-occurrence of the morpheme *-l* in a sentence as the one in (154) above. Recall from chapter 3 that the evidential marker *-l* otherwise conveys the meaning that the speaker is committed to the truth of the proposition in Bulgarian. Interestingly, both the dubitative marker (i.e., the co-occurrence of two *-l* morphemes) in Bulgarian and the reduplicated *[-mIş]* (i.e., the co-occurrence of two *[-mIş]* morphemes) in Turkish employ reiterated morphology, yet the interpretations they convey seem to differ. While the DUB marker (i.e., the reduplicated *-l* form in Bulgarian) conveys the meaning that the speaker is doubtful about the truth of the proposition, a *[-mIş -mIş]* statement indicates that the

speaker does not believe in the truth of the proposition expressed. Recall that the evidential marker [-mİş] on its own conveys speaker's non-commitment to the truth of a proposition. When reduplicated, however, a [-mİş-mİş] statement encodes that the speaker does not believe in the truth of the proposition expressed, (i.e., an intensified meaning).

Noting the encoding of doubt vs. disbelief as being the major difference between Turkish and Bulgarian, below I introduce what the existing literature reports about the semantics of reduplication and discuss Sauerland and Schenner's analysis of the dubitative in Bulgarian in more detail.

1.4 On the interpretation of reduplicated forms

Inkelas and Zoll (2005) mainly discuss the morphological aspects of the process of reduplication, yet they make certain remarks regarding the semantic contribution of reduplication in general. They suggest that even though many examples seem to call for the assumption that the meaning of a reduplicated construction has purely an iconic function of the meaning of its parts (examples such as reduplicated nouns yielding pluralization, reduplication of verbs yielding iterativity, pluractionality, or adjectives and adverbs yielding intensity in different languages), the iconic semantics is not the general rule in the formation of reduplication. They illustrate various empirical evidence that show that certain reduplication forms display non-iconic semantics. They claim that it is reasonable to analyze the meaning of reduplication through the existence of a semantically relevant abstract REDUPLICATION morpheme. This way, an overall semantics for each distinct form of reduplication is maintainable.

I review below how Sauerland and Schenner's (2007) analysis of *dubitative* is formulated.

1.5 Sauerland and Schenner (2007)

Sauerland and Schenner suggest that the *dubitative* is a presuppositional operator. As far as I can see, this is consistent with Inkelas and Zoll's (2005) proposal that there exists an abstract REDUPLICATION morpheme in the semantics of reduplicated structures. Their lexical entry for the *dubitative* morpheme DUB is illustrated below. The *dubitative* (DUB) is decomposed in the semantics. It consists of two separate components, namely DUB and REP. The DUB component has the semantics in (155), while REP has the semantics in (156):

(155) [[DUB]] (y,v) (p)

Presupposition: $p \not\subseteq \text{Dox}(y,v)$

Assertion: p

(156) [[REP]](y,v)(p)

Presupposition: ____

Assertion: *y has in v indirect evidence for p*

Notice that in their semantics DUB induces a presupposition, which says that the proposition expressed is not a proper subset of the doxastic alternatives of *y* at *v*, whereas REP does not induce a presupposition in a *dubitative* construction as illustrated in (156)

above. Note importantly that the semantics of the *reportative* marker REP that is part of the *dubitative* construction is inconsistent with Sauerland and Schenner's proposal of the semantics of the *reportative* marker *-l* in root clauses in Bulgarian that we discussed before, in which the *reportative* marker *-l* was assumed to induce a presupposition in Bulgarian. The semantics in (156) makes it necessary for Sauerland and Schenner to suggest two distinct lexical entries for the reportative evidential in Bulgarian, one of which involves a presupposition, whose lexical entry I illustrate once again in (157) below, and the other one as in (156) above, which does not have this presupposition:

(157) [[REP]](y,v)(p)

Presupposition: *y has in v indirect evidence for p*

Assertion: *p*

The question to pose at this point is what motivates these distinct lexical entries? Sauerland and Schenner do not provide any empirical evidence for motivating such an assumption except for noting that their reasoning for a new lexical entry comes from the following: If the reportative had the presuppositional meaning in the decomposition of *dubitative* as well, the meaning predicted would consist of a *presupposition* and an *assertion*. The presupposition would be that the speaker has indirect evidence for *p*, and that the speaker does not believe that *p*, while the assertion would be *p*. In such a case, the assertion would contradict the presupposition, in that the speaker would be asserting something he doesn't believe.

Examine the semantics Sauerland and Schenner (2007) propose in (155) and (156) once again. They propose a decomposition of DUB as REP and DUB, the latter of which is non-presuppositional. Nevertheless, this cannot avert the problem they note either. Namely that even though they assume a non-presuppositional lexical entry for REP, the overall semantics of DUB says that: *assertion*: y has indirect evidence for p , *presupposition*: y does not believe that p , yet asserts that p (i.e., the assertion of DUB).⁴¹ Thus, under their account as well, the same contradiction that they describe arises. Furthermore, whether or not the presupposition of REP would create a problem is further dependent on the assumptions on how the presupposition of Reportative is to be projected in the environment of the dubitative. Since they assume DUB to scope over REP, REP's presupposition should project.

Given these problems, we cannot straightforwardly apply the semantics proposed in Sauerland and Schenner in analyzing the [-mİş-mİş] statements in Turkish. Furthermore, assuming that there is yet one more lexical entry for [-mİş] in addition to [-mİş] *inferential* and [-mİş] *reportative* will be problematic for Turkish. Therefore, in analyzing the semantic contribution of reduplication in Turkish, I assume that [-mİş-mİş] statements consist of an abstract REDUP morpheme and a proposition. REDUP is decomposed as REDUP and REP. The reduplication morpheme REDUP encodes speaker's disbelief as part of its meaning.⁴² The semantics I propose for REDUP in

⁴¹ In their semantics for Bulgarian, DUB takes scope over REP, and the same holds for Turkish as well.

⁴² Importantly, even when the original statement is direct evidential [-DI] marked, a [-mİş-mİş] statement builds on a report, hence conveys that the speaker of a [-mİş-mİş] sentence has a report that p , and she does not believe that p . This suggests that [-mİş-mİş] has a meaning of its own, which consists of a report and a disbelief meaning.

Turkish that is slightly different from the semantics that Sauerland and Schenner (2007) suggest for DUB in Bulgarian. I submit that the meaning of REDUP in Turkish is as follows:

- (158) [[REDUP]]: [$\lambda p:\exists w'$ compatible with what speaker believes in w at t :
 $p(w')=0$]

The entry in (158) requires that a [-mİş-mİş] sentence conveys that the speaker does not believe p . Thus, the REP in REDUP has the semantics of *past* and *reportative evidential* and the *reduplication* morpheme REDUP encodes speaker's disbelief to the truth of the proposition expressed.⁴³ Thus, I assume the meaning of a [-mİş-mİş] statement can be paraphrased as follows: It presupposes that the speaker has indirect evidence for p , and that she does not believe to the truth of p . It is important to justify why it is the REP not INF in the decomposition of REDUP. The context below suggests that it is not possible to utter a [-mİş-mİş] statement in an inferential context:

(159) **Inferential Context:**

Seda is preparing for her stage performance. Ayşe, who is Seda's roommate comes home and sees the room full of different costumes and readings for the play she is getting prepared for. Ayşe utters:

⁴³ I do not have a specific proposal for the spell out conditions of reduplication. Nevertheless, what seems reasonable is to assume that REDUP involves a [-mİş] form. Thus it is possible that the [-mİş] and the abstract REDUP morpheme undergo agreement and get spelled out as [-mİş-mİş].

(160) #Seda çalış-mış-mış.

Seda work-past-INDIR.EV3SG

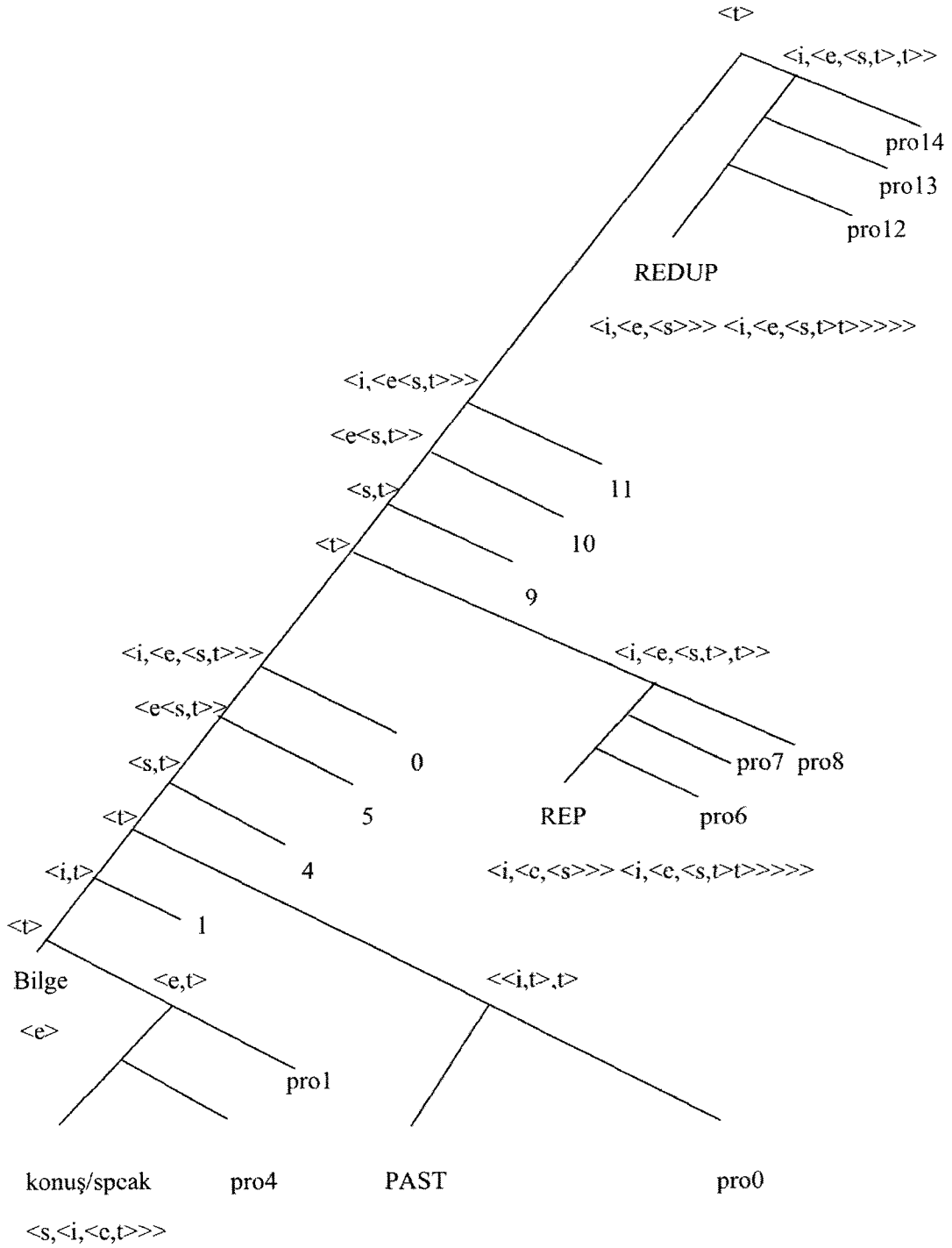
Speaker has indirect evidence that Seda worked, and she doesn't believe it.

As (159) indicates, a [-mİş-mİş] statement is infelicitous in a context enforcing the inferential interpretation. Thus, the abstract REDUP involves a [-mİş] *reportative* morpheme whose semantics is as the regular semantics of [-mİş] *reportative* we maintained in chapter 3.⁴⁴ The semantics of the sentence in (143) is as follows:

⁴⁴ The fact that [-mİş] *reportative* can appear under the REDUP can also be taken as an argument in favor of the non-speech act status of the [-mİş] *reportative* morpheme that we argued for in chapter 3. Also, our assumption of a presuppositional operator is justified by the compatibility of our semantics of [-mİş] *reportative*, in that if we assumed the modal analysis of [-mİş] *reportative*, we would not be able to predict the meaning of a [-mİş-mİş] sentence, namely that the following complication would arise:

p-[-mİş] *reportative* would presuppose that speaker has reportative evidence for *p*, and would assert that in *all worlds compatible with some report*, *p* is true, and that a [-mİş-mİş] sentence would presuppose that the speaker does not believe that in *all worlds compatible with some report*, *p* is true. As we described above, this is not the interpretation of a [-mİş-mİş] claim: the speaker doesn't doubt that *according to the report*, it must be the case that *p*; the speaker doubts *p* itself. When (146) is used following (145), the speaker's disbelief is about the content of Bilge's speaking, not Seda's evidence, which is indicated by the use of [-mİş]). Therefore, assuming that [-mİş] provides quantification over worlds as part of the assertion would be problematic in this case.

(161)



$[[REP]] = [\lambda x \in D_e. \lambda w \in D_s. \lambda t \in D_i. \lambda p: x \text{ has in } w \text{ at } t \text{ reportative evidence for } p. p(x, w, t) = 1]$

$[[REP \text{ sp } w_0 t_0]] ([[Bilge \text{ speak } pro_4 \text{ pro}_1 \text{ 1 PAST } pro_0 \text{ 4 5 0}]])$

$[[REP \text{ sp } w_0 t_0]] ([\lambda t \in D_i. [\lambda x \in D_e. [\lambda w \in D_s. \text{there is a } t' < t \text{ s.t. Bilge speaks at } t' \text{ in } w]]])$

$[[REDUP]] = [\lambda p: \exists w' \text{ compatible with what speaker believes in } w \text{ at } t: p(w') = 0]$

$[[REDUP \text{ sp } w_0 t_0]] ([[REP \text{ sp } w_0 t_0]]) ([\lambda t \in D_i. [\lambda x \in D_e. [\lambda w \in D_s. \text{there is a } t' < t \text{ s.t. Bilge speaks at } t' \text{ in } w]]])$

is defined only if speaker has in the actual world at the actual time reportative evidence for $([\lambda t \in D_i. [\lambda x \in D_e. [\lambda w \in D_s. \text{there is a } t' < t \text{ s.t. Bilge speaks at } t' \text{ in } w]]])$ and $[\lambda p: \exists w' \text{ compatible with what speaker believes in } w \text{ at } t: p(w') = 0]$

when defined $[[REDUP \text{ sp } w_0 t_0]] ([[REP \text{ sp } w_0 t_0]]) ([\lambda t \in D_i. [\lambda x \in D_e. [\lambda w \in D_s. \text{there is a } t' < t \text{ s.t. Bilge speaks at } t' \text{ in } w]]]) = 1$ iff there is a t' before now, s.t. Bilge speaks at t' in the actual world and $[\lambda p: \exists w' \text{ compatible with what speaker believes in } w \text{ at } t: p(w') = 0]$

The proposal above captures the basic intuition about the semantic properties of reduplicated [-mİş] sentences in Turkish. In a nutshell, it says that speaker has reportative evidence that p and that she does not believe p .

2. Conclusion

As we discussed, reduplication introduces distinct semantic imports in various environments. In this chapter I described the semantic make up of sentences involving the reduplication of the indirect evidential marker [-mİş] in Turkish. I proposed that there exists an abstract reduplication morpheme REDUP that encodes speaker's disbelief to the

truth of the proposition described. I suggested that a [-mİş-mİş] statement involves the abstract REDUP morpheme and a proposition, and REDUP is decomposed as REDUP and REP. I also showed that the reduplication of the evidential-perfect morphology *-l* in Bulgarian and [-mİş] in Turkish lead to slightly different meanings. The interpretation of the reduplication of [-mİş] results in an intensified meaning of *non-commitment*, which I assumed to be the disbelief meaning and this is encoded by the REDUP morpheme, and the reduplication of *-l* in Bulgarian simply marks speaker's doubt about the truth of a proposition. The fact that REDUP is decomposed as REDUP and REP brings support to the claim that [-mİş] *reportative* cannot be assumed to be a speech act operator in Turkish.

CHAPTER 5

Conclusion

I have outlined in this dissertation the semantic make up of the existing types of evidential markers in Turkish language. Our findings mainly point to the fact that the evidential forms in Turkish have truth conditional effects. They are employed at the propositional level and the presuppositions they induce regulate the conditions under which they are used. These suggest that the evidential forms are subject to different pragmatic restrictions.

The main observation in chapter 1 was that evidential morphology comprises both an epistemic and a temporal/aspectual component, which seems to be different from what was observed, for instance, in Bulgarian, a language for which a formal analysis has been proposed. Considering the distributional properties of evidentials in the presence of a specific past denoting adverb, I argued in chapter 1 that indirect evidentiality in Turkish exhibits two subtypes of evidentiality through a single morphological exponent, namely *[-mİş]*. I dubbed these two distinct forms as *[-mİş]* *reportative* and *[-mİş]* *inferential*. The indirect morphology *[-mİş]* *reportative* conveys the anteriority meaning on the temporal end, and reportative meaning on the epistemic end. Pragmatically *[-mİş]* *reportative* asserts speaker's *non-commitment* to the proposition expressed. On its temporal/aspectual meaning, *[-mİş]* *inferential* conveys post-terminality meaning which I described as English-like Present Perfect Aspect meaning, and on the epistemic end speaker's inference (drawing conclusions from considering logical steps). The pragmatics of *[-mİş]* *inferential* indicates that speakers assert their *commitment* to the truth of the proposition

expressed by using this marker. The main proposal in chapter 1 was that the distributional parallel between *[-mİş]* *inferential* and the Present Perfect Aspect in English shows that in Turkish Present Perfect-like meaning is contingent on inferential contexts. Therefore, Present Perfect meaning reveals itself only when it is possible to use *[-mİş]* *inferential*. In this respect, under the *[-mİş]* *inferential* meaning, Turkish can be grouped with those languages that exhibit the Present Perfect Puzzle.

The discussion in chapter 2 revealed that FC *herhangi bir* in Turkish is sensitive to evidentiality, and its presence in a sentence is regulated by the relevant evidential operator. I showed that the relative clause serves as a domain restrictor both in episodic and generic sentences in Turkish, yet this restriction has different consequences in these environments. I proposed to analyze the restrictive effects of evidential morphology on the use of Free Choice items by assuming that evidentials are presuppositional operators. Even though indirectly, this chapter provides support for the truth conditional effects of evidentials forms in Turkish.

In chapter 3, I focused on embedded evidentiality, which was taken as the main argument for the truth conditional analysis of evidentials, and showed that Turkish permits the use of evidentials in embedded contexts. Through a comparison of Turkish and Bulgarian, I showed that the reportative evidential in Turkish exhibits different pragmatic properties (i.e., assertability properties) from its counterpart in Bulgarian in permitting a continuation with a denied proposition. Also, in embedded clauses in Turkish, the perspective from which the evidential is interpreted exhibits flexibility unlike its Bulgarian counterpart. An analysis of evidentials as presuppositional operators

is consistent with the decomposition of evidential morphology as tense/aspect and evidential.

Chapter 4 presented a brief investigation of sentences with reduplicated [-mİş] forms, and argued for a possible approach to provide a semantics for them. I argued that Sauerland and Schenner's (2007) analysis of *dubitative* in Bulgarian can be applied to data from Turkish with some modifications. To be precise, the semantics of a [-mİş-mİş] sentence conveys speakers' disbelief to the truth of a proposition.

Evidentials differ from true epistemic modals in their *presuppositionality*, with respect to from whose perspective they are interpreted, as well as their pragmatic properties of assertability (possibly among other properties). While epistemic modals bear quantificational force in their assertions, the assertions of evidential statements do not have a quantificational force. The conclusion, then, is that evidentials in Turkish cannot be treated as pure epistemic modals.

In a nutshell, this dissertation shows that evidentials exhibit variation in their pragmatic assertability conditions, and the perspective from which they are interpreted, hence they do not form a semantically-pragmatically homogeneous category in Turkish, a result welcomed under the current assumptions of the semantic and pragmatics of evidentials in the related literature.

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