

## WHAT DETERMINES THE CHOICE OF NOMINALIZER IN TURKISH NOMINALIZED COMPLEMENT CLAUSES? \*

Eser Erguvanlı Taylan

*Boğaziçi Üniversitesi*

A syntactic property of Turkish is that most types of embedded sentences and, in particular, complement structures are in the form of a nominalizations. The two major types of nominalized complements have, so far, been analyzed as “factive nominals” and “action nominals” in accordance with the choice of the nominalizing affix.. This study will point to the inadequacies of the previous accounts and show that the selection of nominalizer is motivated by the modal notions of epistemic and deontic modality.

**Keywords:** nominalized complements, factive nominal, action nominal, factivity, epistemic modality, deontic modality, propositional attitude.

### 1. INTRODUCTION

A syntactic property of Turkish is that most types of embedded sentences and, in particular, complement structures are in the form of a nominalizations. Such nominalized complements may function as the subject clause, the object clause (direct or oblique object), the complement of a noun head or the main clause predicate. This study is an attempt to uncover the variety of factors \_ namely the semantic, syntactic and pragmatic \_ underlying the choice of the nominalizing morpheme in nominalized complement constructions.

#### *1.1 The structure of nominalized complements*

The verb of the embedded sentence is marked with a nominalizing morpheme, which is then followed by a nominal agreement morpheme. The subject of the embedded sentence, which

controls the agreement on the embedded verb, is in the genitive case. [ 1 ] The verb of complement clauses functioning as an object of the main sentence takes a case suffix assigned by the main verb, as the last type of morphological marking on these constructions. The set of nominalizing morphemes encountered in complement structures comprise the -DIK, -(y)EcEK, -mE, -mEK and -(y)Iş suffixes. [ 2 ] This paper is an inquiry into the principles and motivations behind the distribution of only the first three of these nominalizing affixes, namely the -DIK, -(y)EcEK and -mE forms. [ 3 ] The -DIK and -(y)EcEK forms have the same distribution, the main difference between the two morphemes being an aspecto-modal one, as can be observed in (2)a-b below. Thus the main issue here is to discover the factors which play a role in choice of the -DIK/ -(y)EcEK nominalizer vs. the -mE form in complement constructions. Examples (1)-(4) below illustrate the use of these nominalizers in subject complement, object complement, complement to a noun head and predicate complement constructions, respectively:

(1) a. [ O-nun gece çalış-tıg-i ] doğru değil ( subj. comp. )  
 s/he-gen evening work-NOM-poss3sg true not  
 'It is not true that (s)/he works in the evenings'

b. [ O-nun gece çalış-ma-sı ] doğru değil  
 s/he-gen evening work-NOM-poss3sg right not  
 'It is not right for him/her to work in the evenings'

(2) a. [ Toplantı-ya herkes-in gel-diğ-in-] i öğren-di-m ( DO comp. )  
 meeting-dat everyone-gen come-NOM-poss3sg-dat learn-pst-1sg  
 'I learnt that everyone came/is coming to the meeting'

b. [ Toplantı-ya herkes-in gel-eceğ-in-] i öğren-di-m  
 'I learnt that everyone would come to the meeting'

c. [ Toplantı-ya herkes-in gel-me-sin-] i iste-di-m  
 meeting-dat everyone-gen come-NOM-poss3sg-acc want-pst-1sg  
 'I wanted everyone to come to the meeting'

(3) [ O-nun gece çalış-tıg-i haber-i ] ben-i üz-dü ( comp. to noun )  
 s/he-gen evening work-NOM-3 sg news-poss3sg I- tacc upset-pst  
 'The news that s/he is working in the evenings upset me'

(4) Doğru ol-ma-yan [ o-nun gece çalış-ma-sı ] - ydi (pred. comp. )  
 right be-neg-rel. s/he-gen evening work-NOM-poss3sg- pst  
 'What wasn't right was his/her working in the evenings'

As these examples demonstrate the subjects of the embedded sentences are in the genitive case. The embedded verb, nominalized with one of the nominalizing morphemes at issue, is marked with a nominal agreement morpheme which is then followed by a case marking when the complement is an object of the main clause. Sentences (2)a-b illustrate that -DIK and -(y)EcEK occur in the the same syntactic environment but that the former seems to express non-future reference while the latter, future reference. ( The semantic properties of these affixes are discussed later in detail in section 2.2 ) The form - mE , exemplified in (1)b and (4) , is not observed to carry any particular temporal reference.

As a first step, the distributional patterns of -DIK /-(y)EcEK vs. -mE will be examined in order to uncover the principle(s) behind nominalizer choice in such complement constructions. Nominalized complement clauses fall into the following three categories: those constructed a) only by -DIK or -(y)EcEK, b) only by -mE, c) by either -DIK/-(y)EcEK or -mE. Sentences in (2) above are examples of type- (a) , where the nominalized complement can only be formed by -DIK or -(y)EcEK. The use of -mE in these kinds of constructions results in ungrammaticality, as seen in (5) below:

(5) \* [ Toplantı-ya herkes-in gel-**me**-sin-] i öğren-di-m

In type (b)-clauses , illustrated in (6)a below, this time we have complements that require the nominalizer -mE such that the substitution of -DIK or -(y)EcEK in place of -mE yields an ungrammatical sentence, as seen in (6) b.

(6) a.. O [ biz-im onu çağır-**ma**-mız-] i um-uyor-du  
s/he we-gen him/her invite-NOM-poss1pl-acc hope-impf-pst  
'S/he was hoping that we would invite him/her'

b. \*O [ biz-im onu çağır-**diğ**-mız-] i um-uyor-du

Examples in (7)a-c, illustrate the third category, namely complement clauses where both the -DIK/-(y)EcEK and -mE forms produce equally grammatical constructions.

(7 ) a. [ Ali-nin toplantı-ya gel-**me**-sin-]e çok sevin-di-m  
Ali- gen meeting-dat come-NOM-poss3sg-dat very pleased-pst-1sg  
'I'm very pleased the Ali came to the meeting'

b. [ Ali-nin toplantı-ya gel-**diğ**-in-]e çok sevin-di-m  
'I'm very pleased the Ali came to the meeting'

c. [ Ali-nin toplantı-ya gel-**eceğ**-in-]e çok sevin-di-m  
'I'm very pleased the Ali will come to the meeting'

The use of -mE in (7)a and -DIK in (7)b appear to have produced structures with the same semantic interpretations, while the use of these two affixes resulted in sentences with different semantic interpretations in (1)a-b. This observation raises the question of what semantic properties are associated with the nominalizing affixes and how much they contribute to the overall meaning of the sentence.

Before presenting my analysis which aims at defining the role of the main verb/predicate and that of the inherent semantics of the nominalizer in this much discussed syntactic problem of nominalizer choice in complement constructions in Turkish, a brief overview of the previous accounts will be presented.

### 1. 2 Previous accounts of the problem

The morpheme -mE has been analyzed as an 'action nominal' and -DIK/-(y)EcEK as a 'factive nominal' marker (Underhill, 1976; Kornfilt, 1985, 1987; van Schaik, to appear) ,

such that -DIK/(y)EcEK produces nominalized complement clauses that express a fact, while -mE produces clauses that express an act. In addition, the nominalizers are viewed as reflecting tense oppositions, with -DIK expressing non-future reference, -(y)EcEK future reference and -mE, which is treated as some form of the infinitive marker, having no temporal value (Underhill, 1976; Kornfilt, 1985, 1987; Özsoy, 1996). For Kural (1993), -DIK is the past tense morpheme in embedded sentences and -(y)EcEK, the future tense morpheme. Though Kenelly (1990) states that -DIK indicates non-future and hence is in complementary distribution with the future morpheme -(y)EcEK, she claims that -DIK is an aspect rather than tense marker. Csato (1990), on the other hand, argues that the opposition between the choice of -DIK/(y)EcEK and -mE is basically an aspecto-temporal one but carrying modal contrasts, too. She states that -DIK has an indicative value and an assertive/factive modal content while -mE has a non-indicative value, being neutral in modal content. Csato analyzes -(y)EcEK as having a deontic value. Furthermore, the role of the main verb /predicate in the choice of nominalizer to be used in the complement clause has also been claimed to be crucial (Csato, 1990; Taylan, 1993; Özsoy, 1996). van Schaik (to appear) has established correspondences between main verb type and illocution, i.e. fact or act/event, which is reflected in the subcategorization of the verbs.

In short, previous analyses have appealed to the temporal properties of the different nominalizing morphemes and the verb class of the main clause in their claim that 'factive nominal' complements in Turkish require one of the -DIK/-(y)EcEK forms, whereas 'action nominal' complements require the -mE nominalizer. It is, no doubt, true that whether the complement clause is to be constructed with the -DIK/-(y)EcEK or -mE nominalizer is determined to a great extent by the main clause verb/ predicate, and that these nominalizing morphemes also have some inherent semantic value. But the notions 'factive nominal' and 'action nominal' (or fact vs. act) claimed to account for the dichotomy between -DIK/-(y)EcEK vs. -mE clauses fall short in instances like (7)a-b, where the complement is interpreted as factive (presupposed to have taken place) in both cases. Assuming that the term 'factive' is used in the sense of Kiparsky and Kiparsky (1971), predicates which presuppose the truth of the proposition expressed in their complement clause would then be factive predicates, as opposed to non-factive predicates where no such presupposition exists. If the nominalizers -DIK/-(y)EcEK construct 'factive nominal' complements in Turkish as has been claimed, then we would expect such complement constructions to have factive main verbs/predicates. However, not only have we already noted that certain factive predicates may take -mE complements as well, but as can be seen in (8) below, certain non-factive predicates like 'suppose, assume, claim, believe' etc. require their complement clauses to be nominalized with -DIK/-(y)EcEK and not with the expected -mE.

(8) a. [ Bu mektub-u Ali-nin yaz-**diğ-in-**] a inani-yor-um  
 this letter-acc -gen write-NOM-poss3sg-dat believe-impf-1sg  
 'I believe that Ali wrote this letter'

b. \*[ Bu mektub-u Ali-nin yaz-**ma-sın-**] a inani-yor-um

Though the proposition expressed in the complement of (8) is not presupposed to be true, it, nevertheless, has to be constructed with the -DIK morpheme, which has been analyzed as the 'factive nominal' marker. Thus, the semantic notion of fact/factivity is not adequate to

account for the syntactic facts of Turkish in this case, too. Therefore, the semantic distinctions between the two types of nominal complements need to be further investigated. Having shown some of the weaknesses of the earlier accounts, the analysis presented in this study will consider a) main verb/predicate type and propositional attitude, b) semantic content of the nominalizers and c) interaction of main verb/predicate with the semantics of the nominalizers, as the main factors underlying the principle behind nominalizer choice.

## 2. ANALYSIS OF NOMINALIZER CHOICE

Turkish verbal morphology in main clauses as well as embedded sentences reflect a number of tense/aspect/ modality distinctions. But there is nothing quite comparable to the subjunctive mood of the Romance languages in Turkish embedded sentences. Modal notions in Turkish may get expressed lexically (in verbs like *iste-* 'wish', *gerek-* 'be necessary', etc or adverbs like *belki* 'maybe', etc) or in the form of affixes.

In this analysis of nominalized complement constructions, I will try to show how the main verb/predicate and the choice of nominalizer both contribute to the propositional attitude of the sentence. Stated in another way, the morpho-syntactic aspects of nominalized complements will be shown to be closely bound by semantic and pragmatic factors. Therefore, I will first investigate the correlation between the distribution patterns given for the -DIK/-(y)EcEK vs. -mE nominalizers and their main verb/predicate type and try to establish a link between propositional attitude and main verb type. Then, the semantic content of the two types of nominalizing affixes will be investigated in order to sort out which temporal, aspectual and/or modal notions are expressed by these morphemes. Finally, the interaction of main verb/predicate type with the semantic properties of the nominalizers will be considered.

### 2.1 Main verb/predicate type and propositional attitude

As noted, lists of main verb types have been given for each of the two nominalizing suffixes in some of the above mentioned studies. To establish clearly the close bond between the semantic properties of the main verb/predicate and the type of nominalized complement that it can take, we present the following correlations between the distributional patterns of the two types of nominalizing suffixes and the main verb/predicate. [ 4 ]

a) Main verbs/ predicates such as *san- /zannet-* 'to suppose' ; *öğren-* 'to learn' ; *fark et- / farkına var-* 'to notice' ; *inan-* 'to believe' ; *reddet-* 'to deny' ; *itiraf et-* 'to confess' ; *iddia et-* 'to claim' , *emin ol-* 'to be sure' , *pişman ol-* 'to regret' etc. take nominalized complement clauses constructed only with -DIK.

b) Main verbs/ predicates such as

- i) *emret-* 'to order' ; *iste-* 'to ask for' ; *talep et-* 'to request' ; *arzu et- / dile-* 'to wish' ; *umut et-* 'to hope' ; *bekle-* 'to expect' etc. , which express modal notions extending from command, request, wish, desire, hope to expectation
- ii ) *lazim/gerek* 'necessary' ; *sart* 'obligatory' ; *mecbur ( ol- / kal- )* 'to be obliged to' ; *izin ver- / müsaade et-* 'to permit' ; *yasakla-* 'to forbid' ; *engelle- / önle-* 'to prevent' ; *mümkin/olası* 'possible' , etc. which express modal notions that fall into the span of obligation, necessity, permission , and possibility

iii) *beğen-/bayıl-/sev-/hoşlan-* ‘to like/love/be fond of’ ; *kız-* ‘to get angry’ ; *nefret et-* ‘to hate’ ; *kork-* ‘to be scared’ ; *alm-* ‘to be offended’ ; *eleştir-* ‘to criticize’ ; *utan-* ‘to be ashamed’ ; *canı sıkal-* ‘to be upset’ ; *öv-* ‘to praise’ ; *affet-* ‘to forgive’ ; *öğütle-* ‘to advise’ ; *yararlan-* ‘to benefit’ ; *sıkayet et-* ‘to complain’ ; *katlan-* ‘to bear’ ; etc. which reflect the speaker’s emotional reaction or personal attitude/evaluation with respect to the event or state of affairs expressed in the complement, all take nominalized complement clauses constructed only with -mE.

c) *sevin-/memnun ol-* ‘to be pleased ; *şas(ir)-* ‘to be surprised’ ; *bozul-/içerle-* ‘to resent’ ; *anla-* ‘to understand’ ; *bil-* ‘to know’ ; *hatırla-* ‘to remember’ ; *israr et-* ‘to insist’ ; *kabul et-* ‘to accept’ etc. take nominalized complement clauses constructed with either -DIK/-(y)EcEK or -mE.

This classification seems to suggest that main verbs/ predicates like ‘to suppose, to think, to notice, to deny, to confess, to be certain, etc. ‘ that require -DIK/-(y)EcEK complements express some mental or cognitive activity/state of the individual in relation to the event or state expressed in the complement clause. Given that epistemic modality reflects “the status of the speaker’s understanding or knowledge”, that is, it reflects the proposition “in terms of the speaker’s commitment to it” (Palmer, 1986 ; 51- 52 ), these main verbs/predicates then all carry an epistemic value. The main verbs/predicates relate the individual/speaker to the proposition expressed in the complement; thus , they reflect the attitude of the speaker with respect to the proposition. The main verbs/predicates that take complements nominalized with -DIK/-(y)EcEK, then, express the speaker’s epistemic attitude, which is the degree of her/his commitment to truth of the event/state expressed in the complement clause. For instance, in a sentence like (9) :

(9) a. Ali [ ben-im on-u takip et-**tıg**-im-] e inan-iyor  
           I-gen he-acc follow-NOM-poss1sg-dat believe-impf.  
           ‘Ali believes that I am following him’

b. \*Ali [ ben-im on-u takip et-**me**-m-] e inan-iyor

it is the speaker’s epistemic propositional attitude that is reflected by the main verb *inan-* ‘to believe’. We are presented the situation as true from the point of view of the speaker; that is, for the speaker ‘ Ali’s belief about his being followed by him ‘ is true. But in fact, Ali may possess no such belief , and the speaker may be mistaken in his belief.

The main verbs/ predicates that require clausal complements nominalized with -mE were observed ,for the most part, to express different types of modalities, like obligation , necessity, permission, requests , wishes, etc. While there are different views on the categorization of modality, Bybee (1995; 166) draws a major distinction between epistemic and agent-oriented modality, the latter expressing conditions on the agent, like ability, obligation, permission, etc.. Bybee’s agent-oriented modality includes Palmer’s deontic modality, defined as performative in the sense that it “initiates an action by others or by the speaker” (1986 , 97) and , thus , is naturally related to the future. Therefore, directives, which include obligation, and volitives constitute typical cases of deontic modality in Palmer’s classification. Evaluative verbs like ‘be afraid of, be fond of, be bored from, hate, admire, make fun of, praise, etc’ were also observed to require complement clauses nominalized with -mE . Such verbs reflect the speaker or the subject’s personal

feelings/emotions towards the proposition expressed in the complement or her/his evaluation of it. Therefore, they must also be modal and since they do not express any commitment to the truth of the proposition they must belong to deontic modality (Palmer, 1986; 121). In example (10):

(10) a. Ali [ ben-im Fransizca ögren-me-m-] i      bekli-yor  
           I-gen French learn-NOM-poss1sg-acc expect-impf.  
           'Ali expects that I learn French'

b. \*Ali [ ben-im Fransizca ögren-diğ-im-] i      bekli-yor

the main verb *bekle-* 'to expect' expresses an obligation (that of learning English) on the part of the agent of the complement clause. Therefore, it is deontic or agent-oriented modality that is reflected by the main verb type here.

Those main verbs/predicates which can take complement clauses with either type of nominalizing morphemes, fall into two classes: (i) those that belong to the set of cognitive/perceptual verbs like 'to know, to understand, to hear, to remember, etc.' and which would be expected to form their complement constructions with -DIK/-(y)EcEK, given the typical distribution of this set of morphemes, and

(ii) those that belong to the set of verbs which reflect the speakers personal reaction towards an event, like 'to be pleased/ surprised/ sorry/ upset, etc.', which would be expected to take complements constructed with the -mE form. The use of -mE in place of -DIK/-(y)EcEK in the complement clause of a main verb that can take either type, often results in a meaning difference, as illustrated in (11) below:

(11) a. [ Ali-nin o toplanti-da bulun-ma-sin]-da      israr et-ti-k  
           -gen that meeting-loc be present-NOM-poss3sg-loc insist-pst-1pl  
           'We insisted that Ali be present at that meeting'

b. [ Ali-nin o toplanti-da bulun-diğ-un]-da      israr et-ti-k  
           'We insisted that Ali was present at that meeting'

The propositional attitude expressed in (11)a is agent oriented modality, since an obligation is indicated on the part of Ali to be present in a meeting that is yet to take place; while, in (11)b the speaker expresses his epistemic judgement of certainty with respect to the issue of Ali's presence in some past meeting. This example provides evidence that the nominalizing morphemes of complement clauses may also contribute to the propositional attitude of a sentence. However, with main verbs/predicates like 'be pleased; be upset etc.', as noted in (7)a-b, the meaning difference (if any) triggered by the two different nominalizers was not so obvious. Thus, the question of how and to what extent -DIK/-(y)EcEK vs. -mE effect the modal nature of the main verb will become clarified when the semantic properties of the two sets of nominalizing morphemes are investigated in more detail.

## 2.2 Semantic properties of the nominalizing morphemes

Most earlier analyses agree on -DIK being the morpheme for past or non-future tense and -(y)EcEK the morpheme for future tense in embedded sentences. This means that

complement clauses nominalized with -DIK or -(y)EcEK can have independent time reference and thus retain some of their verbal nature. Since -mE lacks any tense value, complements formed with -mE receive their tense interpretation from that of the main clause verb. However, there are instances where the complement nominalized with -DIK expresses a future event, as examples (12) - (14) illustrate below.

(12) [Yarın Ankara-ya git-tiğ-im-]i Ali-ye söyle-me  
 tomorrow Ank.-dat go-NOM-poss1sg-acc Ali-dat tell-neg  
 'Don't tell Ali that I am going to Ankara tomorrow'

(13) [ Bu iş-te çok para kazan-dığ-ımız-]ı bir düşün  
 this business-loc much money earn-NOM-poss1pl-acc just think  
 'Just imagine we make a lot of money in this business'

(14) [ Bu ilaç-in baş ağrı-n-a iyi gel-dığ-in-]i gör-ecek-sin  
 this medicine headache-poss2sg-dat well come-NOM-poss3sg-acc see-fut-2sg  
 'You will see that this medicine cures your headache'

In all three sentences above, the event expressed in the complement clause nominalized with -DIK is to take place in some future time. In (12) 'going to Ankara' is planned, scheduled to take place the next day as indicated by the adverb *yarın* 'tomorrow'. In fact if the adverb were lacking in (12), the temporal reference of the complement clause would be ambiguous between present, past and future:

(12') a. [ Ankara-ya git-tiğ-im-]i Ali-ye söyle-me  
 'Don't tell Ali that I go/went/am going to Ankara'

b. [ Bugün Ankara-ya git-tiğ-im-]i Ali-ye söyle-me  
 'Don't tell Ali that I go to Ankara today'

c. [ Dün Ankara-ya git-tiğ-im-]i Ali-ye söyle-me  
 'Don't tell Ali that I went to Ankara yesterday'

The fact that any one of the time adverbs *bugün* 'today', *dün* 'yesterday', *yarın* 'tomorrow' can occur in the embedded complement clause setting its time reference illustrates that -DIK cannot, primarily, be a tense marker. I claim that -DIK is expressing a planned activity and thus the modal notion of 'certainty' here; it is solely the time adverbs that give the temporal reference of the event. [5] The complement clause in (12) could also have been nominalized with -(y)EcEK instead of -DIK (*Yarın Ankara-ya gideceğimi Aliye söyleme* 'Don't tell Ali that I will go to Ankara tomorrow'), but this time the event will have an intentional rather than scheduled reading. In (13), the event expressed in the complement clause is to be imagined as actualized and it is the form -DIK that conveys this actualization/realization sense. The complement clause of (14) expresses a state which is viewed as certain to come about (due to repeated past experience), as a result of taking the medicine. These examples then illustrate that the nominalizer -DIK does not express past or non-future temporal reference as has been claimed, but reflects the modal notion of 'certainty'. However, this basic modal notion may give way to temporal (that of aspect or tense) interpretations, influenced by the lexical semantics of both the complement verb and/or the main verb/predicate and adverbials (if any) in the complement. For example,

-DIK, as in (13), may express a realized state, namely completed aspect, which naturally follows from the certainty sense of this morpheme, in the context of a main verb like *düşün-* 'imagine'. On the other hand, this very morpheme may appear to reflect 'imperfective' aspect in (15), where the complement clause contains the adverbial *iki yıldır* 'for two years':

(15) [ Ali-nin iki yıl-dir İstanbul-da otur-**düğ**-un-Ju yeni öğren-di-m  
 -gen two year-for -loc live-NOM-poss3sg recently learn-pst-1sg  
 ' I just learned that Ali has been living in Istanbul for two years'

It is the adverbial 'for two years', a time expression typically used with imperfective aspect, and the complement verb *otur-* 'to live' which is a stative verb, that express the ongoing (hence imperfective) nature of the event. -DIK in such cases too, expresses the 'certainty' or "actualness" of the event/state expressed in the complement clause, receiving the temporal/aspectual readings associated with it from the lexical semantics of adverbials and /or verbs.

It should be recalled that in earlier accounts, complement clauses nominalized with -DIK were claimed to be 'factive nominals', where the proposition expressed in the complement clause was to be interpreted as a fact. This view is not much different from the claim made here that -DIK is basically the marker of 'certainty' modality, since facts by definition have the semantic property of certainty. Furthermore, certainty is a feature of epistemic modality, which reflects the individual's knowledge and understanding with respect to the truth of a proposition. Thus, -DIK as a marker of epistemic modality in embedded sentences expresses events/states that certainly hold true and, in this sense, can be seen as reflecting a 'fact'. The temporal and aspectual readings associated with the -DIK nominalizer, derive from its basic modal semantics in accordance with the larger context it is part of. This larger context includes the lexical semantics of both the main verb/predicate and the complement verb, the presence of adverbials in the complement clause, and the tense of the main verb, as the above examples (i.e. (15), (12), (12')b-c, (2) a) demonstrate. [ 6 ]

Previous analyses share the view that -mE, which is a particular form of the infinitive morpheme, constructs 'action nominal' complement clauses with a modal value. If the basic meaning meaning of -DIK is, indeed, a modal one as argued here, the choice between -DIK/-(y)EcEK vs. -mE then rests on a modal opposition. It is the semantic properties of the modal notion that -mE represents which now have to be stated explicitly. It is typically main verbs/predicates which express modal notions like obligation, necessity, permission, etc. or those which reflect the individual's personal reaction or evaluation with respect to the proposition of the complement, that take complement clauses constructed with as was demonstrated in 2.1. For example :

(16) a. [ Ali-nin o toplanti-ya git-**me**-sin-Ji iste-di-m  
 -gen that meeting-dat go-NOM-poss3sg-dat want-pst-1sg  
 ' I wanted Ali to go to that meeting'

b.\* [ Ali-nin o toplanti-ya git-**tiğ**-in-Ji iste-di-m

(17) a. [ Ali-nin o toplantı-ya git-**me**-sin-Je izin ver-di-m  
 -gen that meeting-dat go-NOM-poss3sg-dat permission give-pst-1sg

‘ I gave permission to Ali to go to that meeting’

b. \* [ Ali-nin o toplanti-ya git-tiğ-in-]e izin ver-di-m

(18) a. Biz [ Ali-nin san-a kaba davran-ma-sın-]dan utan-di-k  
 we -gen you-dat rude behave-NOM-poss3sg-abl be ashame-pst-1pl  
 ‘We were ashamed of Ali behaving rudely to you’

b. \* Biz [ Ali-nin san-a kaba davran-diğ-in-]dan utan-di-k

In all three sentences above it is only -mE complements that are grammatical with main verbs like ‘to want, to give permission, to be ashamed’, which do not express an epistemic propositional attitude but rather the speaker’s personal reaction with respect to some behaviour or action of the agent. As discussed in section 2.1 deontic modality initiates an action which then makes it naturally related to the future; it is this sense of deontic modality that the morpheme -mE seems to express in (16)a-(17)a above. The fact that has been called the ‘action nominal’ marker ties in neatly with its deontic reading or its agent-oriented sense in Bybee’s terms. In (18)a, the future reading is lacking but the proposition refers to a certain behaviour/action of the agent rather than its truth value, and hence falls into the domain of deontic rather than epistemic modality.

As we have seen in (7)a-b, repeated below, in sentences with main verbs/predicates that can take either type of complement clause, those constructed with -mE can be factive like those constructed with -DIK. But we will observe in (7’)-b that changing the tense of the main verb will reveal certain differences among the two types of complement contructions.

(7) a. [ Ali-nin toplanti-ya gel-me-sin-]e çok sevin-di-m  
 - gen meeting-dat come-NOM-poss3sg-dat very pleased-pst-1sg  
 ‘I’m very pleased the Ali came to the meeting’

b. [ Ali-nin toplanti-ya gel-diğ-in-]e çok sevin-di-m  
 ‘I’m very pleased the Ali came to the meeting’

(7’) a. [ Ali-nin toplanti-ya gel-me-sin-]e çok sevin-ir-im  
 - gen meeting-dat come-NOM-poss3sg-dat very pleased-aor-1sg  
 ‘I will be very pleased that Ali will to the meeting’

b. \*[ Ali-nin toplanti-ya gel-diğ-in-]e çok sevin-ir-im

c. \*[ Ali-nin toplanti-ya gel-eceğ-in-]e çok sevin-ir-im.

In (7’) a, with the main verb *sevin-* ‘to be pleased’ in the aorist, the speaker is expressing what her/his reaction would be, if Ali were to come to some meeting which is to take place in the future. In this case, the complement clause can only be constructed with -mE, as expected since -mE is an indicator typically of actions yet to be performed by the agent. [ 7 ] The nominalizer -DIK, which was shown to express ‘certainty /actuality’, naturally is not compatible with an event that may possibly take place sometime in the future; hence (7’)b is ungrammatical. The fact that (7’)b is grammatical can be explained by the fact that the

main verb is inflected with the past tense morpheme which then allows for the certain/actualized reading of -DIK. [ 8 ] The presence of the past tense inflection on the main verb in (7)a , which has a complement clause nominalized with -mE , takes away the immediate future reading of the proposition in the complement , rendering it factive. Thus in (7)a ,the event expressed in the complement clause is interpreted as having taken place , which brings the semantic interpretations of (7)a and (7)b very close to one another. When the main verb is in the past tense in such cases, the modal opposition expressed by -DIK vs. -mE between the complement types seems to be neutralized. However, it should be remembered that since the two nominalizing morphemes are functionally noun deriving suffixes, the question of whether there are semantic differences in terms of the ‘nounness ‘ of the derived nominals can be raised as a valid question here.

### *2.3 The interaction between main verb /predicate type and the semantics of the nominalizing morphemes*

The analyses presented in 2.1. and 2.2. now enable us to answer the question of why main verbs/predicates reflecting an epistemic propositional attitude choose complements constructed with -DIK/ -(y)EcEK as opposed to -mE , and why those reflecting deontic or agent-oriented modality select complements constructed with -mE and not -DIK/ -(y)EcEK. It is precisely because these affixes carry the same modal notions and that it is only natural for semantically parallel forms to co-occur. A good way of testing whether the two nominalizing morphemes indeed reflect these modal properties would be to embed the two sentences in (19)a-(20)a , where (19)a reflects an epistemic propositional attitude and (20)b an agent oriented modality , under the main verb *söyle*- ‘to tell’ .

(19) a. Ali git-ti

go-past  
‘Ali went’

b. [ Ali-nin git-**ti**-in-] i ben söyle-di-m  
-gen go-NOM-poss3sg-acc I say-pst-1sg  
‘I said that Ali left/was leaving’

(20) a. Ali git-meli

go-necess.

‘Ali must/should go’

b. [ Ali-nin git-**me**-sin-] i ben söyle-di-m  
-gen go-NOM-poss3sg-acc I say-pst-1sg  
‘I said that Ali should leave’

What is noteworthy here is that when a sentence like (19)a with an epistemic propositional attitude , becomes the complement clause of ‘to tell’ , it is nominalized with -DIK , keeping the same modal value. In contrast to this, (20)a does not express an assertion but an obligation to be carried out by the agent , in which case its nominalization in (20)b is realized with the morpheme -mE , as the analysis predicts. Thus for a main verb like *söyle*- ‘to tell; say’ , which may express either an epistemic or agent -oriented modality , it is through

the nominalizing morpheme of the complement clause that the intended propositional attitude gets reflected.

The generalization that nominalizing suffixes of complement clauses will be in harmony with the main verb/predicate in terms of their modal properties may be too strong a claim. There are predicates like *mümkün/olası* '(be) possible', which inherently express epistemic modality, and yet take a complement clause nominalized with -mE, which we defined as basically an indicator of deontic modality in complement clauses. Examples (21)a-c, illustrate this point.

(21) a. [ O-nun yakında gel-**me**-si ]      mümkün  
           s/he    soon come-NOM-poss3sg possible  
           'S/he may come soon' (Lit. It is possible that s/he comes soon )

b. \* [ O-nun yakında gel-**diğ**-i ]      mümkün

c. \* [ O-nun yakında gel-**eceğ**-i ]      mümkün

The main predicate *mümkün* 'be possible' in (21), expresses the modal notion of possibility, one of the endpoints of the certainty scale in epistemic modality. The expected nominalizer of the complement clause of 'be possible' would be -DIK/-(y)EcEK since they are indicators of epistemic modality in complements. The ungrammaticality of (21)b-c, however, clearly demonstrates that the choice of the nominalizer in this case does not follow the general principle. There is, in fact, nothing contradictory in this situation; if the event/state expressed in the complement is to be viewed as a possible one, then it cannot have the property of certainty. In fact, it would be semantically contradictory to express an event/state that may possibly get realized in the future with a marker of actuality or certainty of actualization. Thus, what we find in Turkish is a complement clause nominalized with -mE since this form does not have an epistemic value and may express an activity/performance /state, that the main predicate views as possible to take place.

There also exists the category of main verbs/predicates which allow for their complement clauses to be constructed with either type of nominalizing suffix. In this group, a number of cognitive or perceptual verbs take complements nominalized with the expected -DIK/-(y)EcEK forms, as well as -mE complements. Two such examples are given below:

(22) a. [ On-un iyi yemek pişir-**me**-sin-ji      bil-iyor-um  
           s/he-gen well food cook-NOM-poss3sg-acc know-impf.-1sg  
           'I know his/her cooking well (i.e. how well s/he cooks )'

b. [ On-un iyi yemek pişir-**diğ**-in-ji      bil-impf.-um  
           s/he-gen well food cook-NOM-poss3sg-acc know-prog-1sg  
           'I know that s/he cooks well'

(23) a. On-a [ \_ yemek pişir-**me**-sin-ji      hatırlat-tı-m  
           s/he-dat food cook-NOM-poss3sg-acc remind-pst-1sg  
           'I reminded him/her to cook food '

b. On-a [ \_ yemek pişir-diğ-in-]i hatırlat-tı-m  
 s/he-dat food cook-NOM-poss3sg-acc remind-pst-1sg  
 'I reminded him/her that he/she was cooking food '

The complement clauses constructed with -mE express an ability of the agent in (22)a and an obligation to be carried out by the agent in (23)a. [ 9 ] The corresponding (b) examples have complement clauses constructed with -DIK where the complements express an assertion, about which the speaker makes known his commitment to its truth. Thus, it is the nominalizing morphemes which signal the different propositional attitudes in these cases.

Though most main verbs/predicates taking nominalized complements in Turkish are observed to reflect modal attitudes like epistemic or deontic , there are also main verbs , such as *izle-* ‘ to watch’ , *devam et-* ‘to continue’ , etc. which may not reflect a modal notion. In such cases it is the lexical semantics of the verb which will help select the appropriate nominalizing morpheme. Since it is only possible to watch a happening and not something that is already actualized or planned to take place later, the main verb *izle-* ‘ to watch’ will require a complement clause nominalized with -mE, and not -DIK/-y)EcEK.

(24) a. Onlar [ biz- im top oyna-ma-mız-] i izli-yor-lar  
 they we-gen ball play-NOM-poss1pl-acc watch-impf.-3pl  
 ' They are watching us play ball'

b. \* Onlar [ biz- im top oyna-diğ-imız-] i izli-yor-lar

As final evidence for the distinction between the distribution of the two types of complement structures , subject complements of causative verbs which nominalize only with -mE will be given. For example, *itiraf et-* ‘to confess’ is a main verb expressing an epistemic propositional attitude and takes an object complement clause nominalized with -DIK . [10] However, when this verb is made causative its subject complement has to be nominalized with - mE, as (25)a-b illustrate.

(25) a. [ Polis-ler-in silah-ı bul-ma-lar-]i Ali-ye suç-un-u itiraf et-tir-di  
 police-pl-gen gun-acc find-NOM-3pl-acc A.-dat guilt-poss3sg-acc confess-  
 caus-pst  
 'The policemen's finding the gun made Ali confess his guilt'

b. \* [ Polis-ler-in silah-ı bul-duk-lar-]i Ali-ye suç-un-u itiraf et-tir-di

The subject in such constructions is an agent or a an event that brings about a new state of affairs . The semantic principle behind this syntactic phenomenon is that an event which induces a change is basically deontic in the sense that it expresses an obligating activity , and thus, the nominalizer -mE would be the natural choice.

### 3. CONCLUDING REMARKS

A close investigation of the semantic properties of main verbs/predicates as well as the nominalizing affixes has pointed to the dimension of modality as the underlying principle in the choice of nominalizer. The two major modal distinctions, namely epistemic and deontic

modalities, reflected by the main verb/predicate were noted to be expressed in the proposition of the complement clause as well, through the selection of the appropriate nominalizing morpheme. This pragmatic approach to the morpho-syntactic problem analyzed here was observed to handle the problematic cases, not accounted for satisfactorily in previous analyses. The earlier concepts of 'factive nominal' and 'action nominal', in fact, belong to the two different types of modalities claimed to underlie the selection of -DIK /-(y)EcEK or the -mE nominalizer. The complements termed as 'factive nominal' express that the event/state is actual; that is, it holds a place on the certainty scale or is certain/scheduled to hold at some later time. In other words, a complement constructed with -DIK /-(y)EcEK expresses an event/state about which the speaker reflects his /her own commitment to the truth/certainty of it. These properties all characterize epistemic modality. Complements referred to as 'action nominal' express a particular performance, action or behaviour of the subject/agent of the complement; these properties indicate the deontic or agent oriented nature of these structures. Thus, main verbs/ predicates expressing an epistemic propositional attitude were paired with 'factive nominal' complements and those expressing deontic modality with 'action nominal' complements. In case the main verb had no modal property, the semantic features of the verb were seen to come into play in selecting the compatible nominalizer for its complement.

Now if we go back to our first examples (1)a-b, repeated below, we will see that the choice of the nominalizer in the subject complement clauses, is now predictable according to the principles claimed in this analysis.

(1) a. [ O-nun gece çalış-**tıg-ı** ] doğru değil  
 s/he-gen evening work-NOM-pdss3sg true not  
 'It is not true that (s)/he works in the evenings'

b. [ O-nun gece çalış-**ma-sı** ] doğru değil  
 s/he-gen evening work-NOM-poss3sg right not  
 'It is not right for him/her to work in the evenings'

The adjective *doğru* is ambiguous in Turkish; it may mean 'true' or 'right'. If the speaker intends to use it as a predicate meaning 'true', then this carries an epistemic value reflecting the speakers commitment to the truth of the proposition. The complement construction would, in this case, be expected to be nominalized with -DIK, expressing that the event is actualized or holds true, as in (1) a. If the speaker intends to use it as a predicate meaning 'right', then it is an commentative predicate reflecting the speaker's subjective evaluation towards the event expressed in the complement. In this case, the expected complement structure would be one constructed with -mE as in (1)b, where a certain act/behaviour of the subject is expressed, which the speaker is critical of. As noted in the beginning of the study, such complement clauses can be headed by nouns, in which case the semantic properties of the head noun would now play a crucial role in the nominalizer choice. If we were to have the noun *haber* 'news' as the head of the complement clause in example (1), we'll see in (1') below that the grammatical structure is formed with -DIK and not -mE.

(1')a. [ O-nun gece çalış-**tıg-ı** ] *haber-i* doğru değil  
 s/he-gen evening work-NOM-3 sg news-poss3sg true not  
 'The news that (s)/he works in the evenings is not true'

b. \* [ O-nun gece çalış-**ma-sı** ] haber-i doğru değil

For an event to be classified as ‘news’ it has to be either actualized or scheduled to take place, which carries the epistemic notion of certainty and thus requires the -DIK/-(y)EcEK nominalizer when it is made the complement to ‘news’ as its head.

The two sets of nominalizing morphemes at issue here are, from a strictly morphological point of view, noun deriving suffixes. Thus, the structures that result from the affixation of these morphemes are genitive constructions, which is a clear proof of their nominal character. As Comrie and Thompson (1985) illustrate lexical nominalizations are varied in languages but the question here is whether the morphemes -DIK/-(y)EcEK vs. -mE produce different noun-like entities. Having argued for the modal properties associated with -DIK, complements constructed with it then express an actual event, which is located in time as taking place or scheduled to take place. This type of derived nominals are, in a sense, an instantiation of concrete events. Nominals derived by -mE, on the other hand, to express the possibility of an event or the way/manner of happening and thus reflect a more abstract level of “nounness”

## Notes

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1. The subject of certain nominalized complements may not take the genitive case. For a discussion of when genitive marking is used or may be omitted in such embedded structures, see E. Taylan (1994).

2. The use of capitals in giving the lexical forms of morphemes signals the segments (vowels or consonants) that undergo alternation due to phonological rules like vowel and consonant harmony. The Turkish examples are given in regular Turkish orthography, with ‘ş’ standing for voiceless alveopalatal fricative, ‘ç’ for voiceless alveopalatal affricate, ‘c’ for voiced alveopalatal affricate and ‘ğ’ for a null segment or vowel length. ‘i’ is a high back unrounded vowel.

The following abbreviations have been used:

abl.- ablative ; acc.- accusative ; aor.- aorist ; dat.- dative ; gen.- genitive ; fut.- future ; loc.- locative ; imprf. - imperfective ; neg.- negative ; pl.- plural ; poss.- possessive ; pst.- past ; sg.- singular

3. Of the two nominalizing suffixes not included into the analysis here, -mEK forms infinitival complements:

Ben [ Fransızca öğren-mek] ist-iyor-um  
 I French -infin. want-inf. want-impf.-1sg.  
 'I want to learn French'

-(y)I § on the other hand, does not seem to contrast with the distribution of -DIK and -mE, and hence raises other kinds of questions.

4. Naturally the verbs enumerated for each type of complement should not be taken as constituting the whole set, but rather as representative of the set. It is worth noting here that the number of main verbs/predicates requiring a complement nominalized with -mE by far outnumbers those that take -DIK/(y)EcEK nominalizations or those that can take both type of complements.
5. The point that -DIK is basically not a tense marker was first made in Taylan (1993) where not only complement clauses but also different types of adverbial clauses constructed with -DIK were analysed. The affixes -DIK and -(y)EcEK form complement clauses, adverbial clauses as well as relative clauses in Turkish.
6. The fact that a single morpheme in embedded clauses may be associated with different semantic notions like tense, aspect and modality should not be surprising for Turkish, where inflections on the main verb behave in the same way and reflect a number of different semantic categories at the same time. This situation is of particular importance in signalling how these three semantic categories are closely interrelated in Turkish.
7. The so-called aorist morpheme is one of the numerous inflections that main verbs may take. This morpheme may express the modal notion of probability /prediction , as in (7') , or the aspectual notion of habituality. For a thorough discussion of this multi-functioned verbal inflection, see Yavaş (1982).
8. The so-called past tense morpheme -DI in this example actually denotes aspect rather than past tense. For the multi semantic function of this main verb inflection, see Taylan (1997).
9. The ability reading reflected on to the agent through -mE, may lead into an adverbial sense, as welcome by the main verb. For instance:  
 [ On-un para harca-ma-sın-]ı bil-iyor-uz  
 s/he-gen money spend-NOM-poss3sg-acc know-impf.-1pl  
 ' We know how s/he spends money ( Lit. We know his/her spending money )'
10. Below is an example of *itiraf et-* 'to confess' as a main verb with an object complement clause:
  - a. Ali [ \_ suç-u işle-dig-in]-i itiraf et-ti  
 crime-acc commit-NOM-poss3sg-acc confess-pst  
 ' Ali confessed that he committed the crime'
  - b. \* Ali [ \_ suç-u işle-me-sin]-i itiraf et-ti

As a verb expressing an epistemic propositional attitude, 'to confess' takes complements nominalized only with -DIK.

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