

# Typology of Nominalizations Formed with {-DIK}, {-mA}, {-(y)Iş}, and {-Im} in Turkish

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## 1 Introduction

In Turkish, nominalization is a common strategy for subordination. These nominalized clauses generally have Genitive case-marked subjects with Possessive agreement-bearing predicates, as in (1).

- (1) Ben [Ali-**nin** git-tiğ-**in**]-i duy-du-m.  
I-NOM Ali-GEN leave-DIK-POSS.3.SG-ACC hear-PST-1.SG  
'I heard that Ali left.'

Kornfilt (2001) describes these forms as degreed nominalizations with various functional verbal layers embedded under one or more nominal layers. In her description, some of the verbal layers are missing and are replaced instead by nominal ones. Accordingly, it could be hypothesized that the number of functional verbal layers present could change depending on the size of the clause that each nominalizer forms. This paper aims to investigate the clause sizes of the nominalizations formed by the nominalizers {-DIK}, {-mA}, {-(y)Iş}, and {-Im}.

In section 2, we will test their DP status by looking at:

- i) Which argument positions they can appear in,
- ii) Whether they can function as adjuncts, and
- iii) Whether they play a role in dependent case assignment.

Firstly, a regular DP can appear in any argument position as long as the c-selection and s-selection restrictions of the predicate are met; thus, it is expected that these nominalizations can appear in at least most of the available argument positions.

Secondly, given that functioning as an adjunct requires more of a verbal nature than a nominal one (Baker, 2011), they are not expected to function as an adjunct. However, we will see that when they receive lexical case, Turkish nominalized clauses can function as adjuncts. Lastly, a DP would play a role in dependent case assignment and so a nominalized clause should be able to do so if it is a DP in the outer-most layer.

In section 3, to test the clause size of each nominalization we will make use of Cinque's (1999) analysis of adverbs targeting specific functional layers. We will assume this cartographic system, shown in (2), as an inventory of the functional layers that can(not) be present in a clause. Accordingly, adverb(s) that a clause can(not) take will be used as a diagnosis to show which functional layers are present.

- (2) [frankly Mood<sub>speech act</sub> [fortunately Mood<sub>evaluative</sub> [allegedly Mood<sub>evidential</sub>  
 [probably Mod<sub>epistemic</sub> [once T(past) [then T(future) [perhaps Mood<sub>irrealis</sub>  
 [necessarily Mod<sub>necessity</sub> / [possibly Mod<sub>possibility</sub> [usually Asp<sub>habitual</sub>  
 [again Asp<sub>repetitive(I)</sub> [often Asp<sub>frequentative(I)</sub> [intentionally Mod<sub>volitional</sub>  
 [quickly Asp<sub>celerative(I)</sub> [already T(anterior) [no longer Asp<sub>terminative</sub>  
 [still Asp<sub>continuative</sub> [always Asp<sub>perfect(?)</sub> [just Asp<sub>retrospective</sub> [soon Asp<sub>proximative</sub>  
 [briefly Asp<sub>durative</sub> [characteristically(?) Asp<sub>generic/progressive</sub> [almost Asp<sub>prospective</sub>  
 [completely Asp<sub>SgCompletive(I)</sub> [tutto Asp<sub>PICompletive</sub> [well Voice [fast/early Asp<sub>celerative(II)</sub>  
 [again Asp<sub>repetitive(II)</sub> [often Asp<sub>frequentative(II)</sub> [completely Asp<sub>SgCompletive(II)</sub>... V

In section 4, we summarize the analysis and conclude.

## 2 DP Status of the Nominalized Clauses

The syntactic positions to be tested are:

- i. Subject of a transitive verb,
- ii. Direct object of a transitive verb,
- iii. Object of a postposition, and
- iv. Subject of an unaccusative verb.

In addition to the above, we will see whether our nominalizations can be adjuncts as well, and whether they trigger dative case on the second DP and receive accusative case when the matrix predicate is in causative voice.

## 2.1 As the Subject of a Transitive Verb

As can be seen in (3), all of these subordinations can appear in the subject position when the predicate is a transitive verb such as *etkile-* ‘to affect’.

- (3) a. [Ev-in yık-**ım**-ı]-Ø herkes-i etkile-di-Ø  
house-GEN destroy-Im-POSS.3.SG-NOM everyone-ACC affect-PST-3.SG  
‘The destruction of the house affected everyone.’
- b. [Ali-nin gid-**iş**-i]-Ø herkes-i etkile-di-Ø  
Ali-GEN leave-Iş-POSS.3.SG-NOM everyone-ACC affect-PST-3.SG  
‘Ali’s leaving affected everyone.’
- c. [Ali-nin git-**me**-si]-Ø herkes-i etkile-di-Ø  
Ali-GEN leave-mA-POSS.3.SG-NOM everyone-ACC affect-PST-3.SG  
‘That Ali left affected everyone.’
- d. [Ali-nin git-**tiğ**-i \*(gerçeğ-i)<sup>1</sup>]-Ø herkes-i etkile-di  
Ali-GEN leave-DIK-POSS.3.SG fact-CM-NOM everyone-ACC affect-PST  
‘The fact that Ali left affected everyone.’

## 2.2 As the Direct Object of a Transitive Verb

As shown in (4), these subordinations can appear in the direct object position of a transitive verb.

- (4) a. Herkes-Ø [ev-in yık-**ım**-ın]-ı izle-di-Ø  
Everyone-NOM house-GEN destroy-Im-POSS.3.SG-ACC watch-PST.3.SG  
‘Everyone watched the destruction of the house.’
- b. Herkes-Ø [Ali-nin gid-**iş**-in]-i kutla-dı-Ø  
Everyone-NOM Ali-GEN leave-Iş-POSS.3.SG-ACC celebrate-PST.3.SG  
‘Everyone celebrated Ali’s leaving.’

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<sup>1</sup> {-DIK} nominalizations require an overt noun like *gerçeği* ‘fact that’ unless the matrix

c. Herkes-Ø [Ali-nin git-**me**-sin]-i iste-di-Ø  
 Everyone-NOM Ali-GEN leave-mA-POSS.3.SG-ACC want-PST.3.SG  
 ‘Everyone wanted Ali to leave.’

d. Herkes-Ø [Ali-nin git-**tiğ**-in-i] duy-du-Ø  
 Everyone-NOM Ali-GEN leave-DIK-POSS.3.SG-ACC hear-PST.3.SG  
 ‘Everyone heard that Ali left.’

### 2.3 As the Object of a Postposition

As a postposition, it seems *sonra* ‘after’ can take all of these nominalized clauses as the complement, as in (5). Differently than the rest, {-DIK} clauses do not take Genitive- but rather Nominative-marked subjects, and there is no Possessive agreement on the embedded verb. This structural difference requires additional study but is irrelevant for our purposes. For the focus of this study, that they can appear in this position is enough.

(5) a. [Ev-in yık-**ım**-ın]-dan sonra bina-ya başla-dı-lar.  
 house-GEN destroy-Im-POSS.3.SG-ABL after building-DAT start-PST-3.PL  
 ‘They started (to build) the building after the destruction of the house.’

b. [Ali-nin gid-**iş**-in]-den sonra biri taşın-dı-Ø  
 Ali-GEN leave-Iş-POSS.3.SG-ABL after someone move-PST-3.SG  
 ‘After Ali’s leaving someone moved in.’

c. [Ali-nin git-**me**-sin]-den sonra her şey değış-ti-Ø  
 Ali-GEN leave-mA-POSS.3.SG-ABL after everything change-PST-3.SG  
 ‘After Ali left, everything (has) changed.’

d. [Ali-(\*nin) git-**tik**-(\*in)]-ten sonra her şey değış-ti-Ø  
 Ali-GEN leave-DIK-POSS.3.SG-ABL after everything change-PST-3.SG  
 ‘After Ali left, everything (has) changed.’

### 2.4 As the Subject of an Unaccusative Verb

As an unaccusative verb, *kesinleş-* ‘to become certain’ can take any of these nominalized clauses as its internal argument in the subject position, as in (6).

(6) a. [Ev-in yık-**ım**-ı]  
 house-GEN destroy-Im-POSS.3.SG  
 ‘The destruction of the house...’

b. [Ali’nin gid-**iş**-i]  
 Ali-GEN leave-Iş-POSS.3.SG  
 ‘Ali’s leaving...’

c. [Ali'nin git-me-si]  
 Ali-GEN leave-mA-POSS.3.SG  
 'Ali's leaving...'

d. [Ali-nin git-tiğ-i]  
 Ali-GEN leave-DIK-POSS.3.SG  
 'That Ali left...'

... kesinleş-ti.  
 become.certain-PST.3.SG  
 '...became certain.'

## 2.5 As an Adjunct

In Turkish, another type of subordinate clause, 'diye' clauses, can function as a clausal argument, as in (7a), and be substituted by a nominalization, as in (7b).

(7) a. Ayşe-Ø [Ali-Ø git-ti-Ø diye] duy-du-Ø  
 Ayşe-NOM Ali-NOM leave-PST-3.SG COMP hear-PST-3.SG  
 'Ayşe heard that Ali left.'

b. Ayşe-Ø [Ali'nin git-tiğ-in]-i duy-du-Ø  
 Ayşe-NOM Ali-GEN leave-DIK-POSS.3.SG-ACC be.upset-PST-3.SG  
 'Ayşe was upset because Ali left.'

They can also function as reason-denoting adjunct clauses, shown in (8a), in which case substituting the clausal adjunct with a nominalization yields ungrammaticality when the nominalization receives structural case, as in (8b). However, an adjunct nominalization is grammatical when the case it receives is lexical, given in (8c). Also, (8d) shows that a postpositional phrase formed with *için* 'since' is perfectly fine.

(8) a. Ali-Ø Ayşe<sub>i</sub>-yi [pro<sub>i</sub> çalışkan diye] sev-iyor-Ø  
 Ali-NOM Ayşe-ACC hardworking COMP like-IMPERF-3.SG  
 'Ali likes Ayşe because she is hardworking.'

b. \*Ali-Ø Ayşe<sub>i</sub>-yi [pro<sub>i</sub> çalışkan ol-duğ-un-u]  
 Ali-NOM Ayşe-ACC hardworking be-DIK-POSS.3.SG-ACC

sev-iyor-Ø  
 like-IMPERF-3.SG  
 Intended: 'Ali likes Ayşe because she is hardworking.'

c. Ali-Ø [Ayşe-nin git-me-sin]-e / git-tiğ-in-de  
 Ali-NOM Ayşe-GEN leave-mA-POSS.3.SG-DAT leave-DIK-POSS.3.SG-LOC

şaşır-dı-Ø  
 be.surprised-PST-3.SG  
 ‘Ali was surprised that/when Ayşe left.’

d. Ali-Ø Ayşe<sub>i</sub>-yi [pro<sub>i</sub> çalışkan ol-duğ-u için]  
 Ali-NOM Ayşe-ACC hardworking be-DIK-POSS.3.SG since

sev-iyor-Ø  
 like-IMPERF-3.SG  
 ‘Ali likes Ayşe because she is hardworking.’

This shows us that nominalizations cannot function as adjuncts unless they receive lexical case. The question of whether such lexical case-marked nominalizations are embedded under a null P head, or the marker itself is the P head, is beyond the scope of this paper.

## 2.6 Dependent Case Assignment

Marantz (1991) defines dependent case assignment as follows:

- (9) If there are two NPs in the same VP-phase such that NP<sub>1</sub> c-commands NP<sub>2</sub>, then value the case of NP<sub>1</sub> as dative unless NP<sub>2</sub> has already been marked for case.

According to this definition, when a nominalized clause appears in the direct object position of a causative verb, we expect accusative case on the nominalization and dative case on the second object if these nominalizations are DPs in their outer-most layer. Indeed this is the case, as (10) shows.

- (10) a. Ali-Ø sana [ev-in yık-ım-ın]-ı  
 Ali-NOM you.DAT house-GEN destroy-Im-POSS.3.SG-ACC

izle-t-ti-Ø  
 watch-CAUS-PST-3.SG  
 ‘Ali made you watch the destruction of the house.’

- b. Ali-Ø sana [Ayşe-nin gid-iş-in]-i  
 Ali-NOM you.DAT Ayşe-GEN leave-Iş-POSS.3.SG-ACC

izle-t-ti-Ø  
 watch-CAUS-PST-3.SG  
 ‘Ali made you watch the way Ayşe left.’

c. Ali-Ø sana [Ayşe-nin git-tiğ-in]-i  
 Ali-NOM you.DAT Ayşe-GEN leave-Iş-POSS.3.SG-ACC

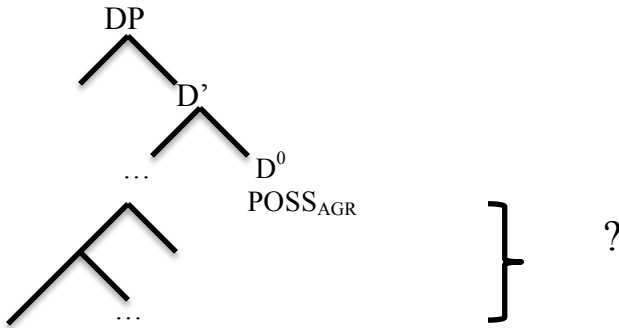
düşün-dür-dü-Ø  
 think-CAUS-PST-3.SG  
 ‘Ali made you think that Ayşe left.’

d. Ali-Ø sana [Ayşe-nin git-me-sin]-i  
 Ali-NOM you.DAT Ayşe-GEN leave-mA-POSS.3.SG-ACC

söyle-t-ti-Ø  
 tell-CAUS-PST-3.SG  
 ‘Ali made you tell that Ayşe must leave/ tell Ayşe to leave.’

According to the tests we applied in this section it looks as though in the outermost layer these forms are indeed DPs, as depicted in (11). The next question is at which layer the D<sup>0</sup> kicks in, which we try to answer in the following section.

(11)



### 3 Internal Structure of the Nominalized Clauses

#### 3.1 {-DIK} Nominalizations

When we try to modify an embedded clause formed with the nominalizer {-DIK} with the adverbs listed in Cinque (1999), the ungrammaticality of (12a) and (12c) shows that among the functional layers that a {-DIK} nominalization consists of, Mood<sub>speech act</sub>, Mood<sub>evaluative</sub>, Mood<sub>evidential</sub>, Mod<sub>epistemic</sub> and T(future), Mood<sub>irrealis</sub>, Mod<sub>necessity</sub>, and Mod<sub>possibility</sub> seem to be missing.<sup>2</sup> The clause size being smaller than a full-CP can account for the absence of the top four functional layers.

<sup>2</sup> For the adverbs lower than *usually* see the appendix.

- (12) a. Ayşe-Ø Ali-nin (**\*açıkçası** /**\*Allah'tan** /**\*sözde** /**\*muhtemelen**)  
 Ayşe-NOM Ali-GEN honestly/ luckily / allegedly/ probably
- git-tiğ-in-i duy-du-Ø  
 leave-DIK-POSS.3SG-ACC hear-PST.3.SG  
 Intended: 'Ayşe heard that Ali honestly/luckily/allegedly/probably left.'
- b. Ayşe-Ø Ali-nin **bir zamanlar** Türkiye-ye git-tiğ-in-i  
 Ayşe-NOM Ali-GEN once Turkey-DAT go-DIK-POSS.3.SG-ACC  
 duy-du.  
 hear-PST.3.SG  
 'Ayşe heard that Ali went to Turkey once.'
- c. Ayşe-Ø Ali-nin (**\*belki**/**\*muhakkak**/**\*bir ihtimal**)  
 Ayşe-NOM Ali-GEN maybe / necessarily / possibly
- git-tiğ-in-i duy-du-Ø  
 leave-DIK-POSS.3.SG-ACC hear-PST.3.SG  
 Intended: 'Ayşe heard that Ali maybe/necessarily/possibly left.'
- d. Ayşe-Ø Ali-nin **genellikle** ders-e katıl-dığ-ın-ı  
 Ayşe-NOM Ali-GEN usually class-DAT participate-DIK-POSS.3.SG-ACC  
 duy-du-Ø  
 hear-PST-3.SG  
 'Ayşe heard that Ali usually participates in class.'

Since the top-most compatible adverb *bir zamanlar* 'once' targets T(Past), we can conclude that {-DIK} nominalizations can go up to that point, and this is the layer where  $D^0$  is merged. This makes them DP-shelled TPs, schematized in (13).

- (13) [frankly Mood<sub>speech act</sub> [fortunately Mood<sub>evaluative</sub> [allegedly Mood<sub>evidential</sub>  
 [probably Mod<sub>epistemic</sub> [once T(past) [then T(future) [perhaps Mood<sub>irrealis</sub>  
 [necessarily Mod<sub>necessity</sub> / [possibly Mod<sub>possibility</sub> [usually Asp<sub>habitual</sub>  
 [again Asp<sub>repetitive(I)</sub> [often Asp<sub>frequentative(I)</sub> [intentionally Mod<sub>volitional</sub>  
 [quickly Asp<sub>celetative(I)</sub> [already T(anterior) [no longer Asp<sub>terminative</sub>  
 [still Asp<sub>continuative</sub> [always Asp<sub>perfect(?)</sub> [just Asp<sub>retrospective</sub> [soon Asp<sub>proximative</sub>  
 [briefly Asp<sub>durative</sub> [characteristically(?) Asp<sub>generic/progressive</sub> [almost Asp<sub>prospective</sub>  
 [completely Asp<sub>SgCompletive(I)</sub> [tutto Asp<sub>PICompletive</sub> [well Voice [fast/early  
 Asp<sub>celerative(II)</sub> [again Asp<sub>repetitive(II)</sub> [often Asp<sub>frequentative(II)</sub> [completely  
 Asp<sub>SgCompletive(II)</sub>... V

The ungrammaticality of (12c) resulting from the apparent gap between the T(Past) and Asp<sub>habitual</sub> begs for an additional explanation. I reason that this stems from lexical blocking. Namely, the matrix predicate selects for the more specific {-(y)AcAK} form when the subordination denotes possibility/certainty in the future. In fact, when we test these adverbs with {-(y)AcAK} nominalizations, this gap seems to be filled.

- (14) Ayşe-Ø Ali'nin **o zaman/belki/ muhakkak/ bir ihtimal**  
 Ayşe-NOM Ali-GEN then/ maybe / necessarily / possibly

gid-eceğ-in-i duy-du-Ø  
 leave-yAcAK-POSS.3.SG-ACC hear-PST.3.SG  
 Intended: 'Ayşe heard that Ali then/maybe/necessarily/possibly will leave.'

To summarize, we concluded that {-DIK} clauses can take up to T(Past) layer adverbs, with {-(y)AcAK} as a more specific form blocking the usage of {-DIK} in contexts referring to future certainty/possibility. Thus, they must be TPs taken as a complement by a D<sup>0</sup>.

### 3.2 {-mA} Nominalizations

Let us now test which adverbs {-mA} clauses can host:

- (15) a. Ayşe-Ø Ali'nin (**\*açıkçası/\*Allah'tan/\*sözde**) okul-u  
 Ayşe-NOM Ali-GEN honestly/ luckily/ allegedly school-ACC

bitir-me-sin-e sevin-di-Ø  
 finish-mA-POSS.3.SG-DAT be.glad-PST.3.SG  
 Lit. Meaning: 'Ayşe was glad that Ali honestly/ luckily/ allegedly graduated.'

- b. Ali'nin teklif-i **muhtemelen** reddet-ecek ol-ma-sı-Ø  
 Ali-GEN offer-ACC probably reject-FUT be-mA-POSS.3.SG-NOM

Ayşe-yi şaşırt-tı-Ø  
 Ayşe-ACC surprise-PST.3.SG  
 Intended: 'That Ali probably rejected the offer surprised Ayşe.'

- c. Ayşe-Ø Ali-nin **bir zamanlar** hukuk oku-muş  
 Ayşe-NOM Ali-GEN once law study-PERF

ol-**ma**-sın-a                      şaşır-dı-Ø  
 be-mA-POSS.3.SG-DAT be.surprised-PST.3.SG  
 ‘Ayşe was surprised that Ali (had) studied law once.’

d. Ayşe-Ø    Ali-nin    **belki/bir ihtimal** gel-ecek    ol-**ma**-sın-a  
 Ayşe-NOM Ali-GEN maybe/ possibly    come-FUT be-mA-POSS.3.SG-DAT

şaşır-dı-Ø  
 be.surprised-PST-3.SG  
 ‘Ayşe was surprised that Ali will probably/ possibly come.’

e. Ayşe-Ø    Ali’nin    **genellikle** ders-e    katıl-ma-sın-a  
 Ayşe-NOM Ali-GEN usually    class-DAT participate-mA-POSS.3.SG-DAT

sevin-di-Ø  
 be.glad-PST.3.SG  
 ‘Ayşe was glad that Ali usually participates in class.’

The incompatibility of the adverbs *açıkçası* ‘honestly’, *Allah’tan* ‘luckily’, and *sözde* ‘allegedly’ in (15a) with the nominalizations formed by {-mA} provides evidence that the Mood<sub>speech act</sub>, Mood<sub>evaluative</sub>, Mood<sub>evidential</sub>, and Mod<sub>epistemic</sub> layers are absent in these embedded clauses, as depicted in (16).

- (16) [frankly Mood<sub>speech act</sub> [fortunately Mood<sub>evaluative</sub> [allegedly Mood<sub>evidential</sub>  
 [probably Mod<sub>epistemic</sub> [once T(past) [then T(future) [perhaps Mood<sub>irrealis</sub>  
 [necessarily Mod<sub>necessity</sub> / [possibly Mod<sub>possibility</sub> [usually Asp<sub>habitual</sub>  
 [again Asp<sub>repetitive(I)</sub> [often Asp<sub>frequentative(I)</sub> [intentionally Mod<sub>volitional</sub>  
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 Asp<sub>SgCompletive(II)</sub>... V

The rest of the adverbs seem to be compatible,<sup>3</sup> which again suggests that {-mA} clauses are DP-shelled TPs. What is different than {-DIK} clauses is that in {-mA}

<sup>3</sup> For the adverbs lower than *usually* see the appendix.

clauses, when the embedded clause refers to a different time than the matrix predicate or to a possibility, the TAM marker on the embedded predicate must be overt and the light verb *ol-* ‘to be’ hosts the nominalizer {-mA}, observed in (15b-d).

### 3.3 {-DIK} vs. {-mA} Clauses

At this point, since both {-DIK}/{-(y)AcAK} and {-mA} clauses seem to be TPs under a DP, one obvious question to ask is what the motivation behind these different nominalizers might be. One immediate option is that one of them denotes factivity while the other does not. However, either nominalizer can form a factive (17b,c) or a non-factive (17a,d) embedded clause.

- (17) a. Ali-nin dün gel-me-sin-i iste-di-m,  
 Ali-GEN yesterday come-mA-POSS.3.SG-ACC want-PST-1.SG PST.3.SG  
 ama o gel-me-di-Ø  
 but he come-NEG-PST-3.SG  
 ‘I wanted Ali to come yesterday, but he did not.’
- b. #Ali-nin dün gel-me-sin-e sevin-di-m,  
 Ali-GEN yesterday come-mA-POSS.3.SG-DAT be.glad-PST-1.SG  
 ama o gel-me-di-Ø  
 but he come-NEG-PST-3.SG  
 Intended: ‘I was glad that Ali came yesterday, but he did not.’
- c. #Ali-nin dün gel-diğ-in-i gör-dü-m,  
 Ali-GEN yesterday come-DIK-POSS.3.SG-ACC see-PST-1.SG  
 ama o gel-me-di-Ø  
 but he come-NEG-PST-3.SG  
 Intended: ‘I saw that Ali came yesterday, but he did not.’
- d. Ali’nin dün gel-diğ-in-i san-dı-m,  
 Ali-GEN yesterday come-DIK-POSS.3.SG-ACC think-PST-1.SG  
 ama o gel-me-miş-Ø  
 but he come-NEG-EVID.3.SG  
 ‘I thought that Ali came yesterday, but it turns out that he did not.’

The sentences in (17b-c) become semantically odd when we cancel, since the nominalizations are factive, while in others it is possible to cancel. It seems {-DIK} and {-mA} clauses are selected by different factive and non-factive predicates (for a detailed account, see Erguvanlı-Taylan; 1998, 2014).

### 3.4 {-(y)Iş} Nominalizations

When we modify {-(y)Iş} clauses with Cinque’s (1999) adverbs, what we see is that any adverb above *genellikle* ‘usually’ yields ungrammaticality, as shown in (19a-b).<sup>4</sup> This suggests the functional layers above Asp<sub>Habitual</sub> are absent in {-(y)Iş} clauses.

- (18) [frankly Mood<sub>speech act</sub> [fortunately Mood<sub>evaluative</sub> [allegedly Mood<sub>evidential</sub> [probably Mod<sub>epistemic</sub> [once T(past) [then T(future) [perhaps Mood<sub>irrealis</sub> [necessarily Mod<sub>necessity</sub> / [possibly Mod<sub>possibility</sub> [usually Asp<sub>habitual</sub> [again Asp<sub>repetitive(I)</sub> [often Asp<sub>frequentative(I)</sub> [intentionally Mod<sub>volitional</sub> [quickly Asp<sub>celetative(I)</sub> [already T(anterior) [no longer Asp<sub>terminative</sub> [still Asp<sub>continuative</sub> [always Asp<sub>perfect(?)</sub> [just Asp<sub>retrospective</sub> [soon Asp<sub>proximative</sub> [briefly Asp<sub>durative</sub> [characteristically(?) Asp<sub>generic/progressive</sub> [almost Asp<sub>prospective</sub> [completely Asp<sub>SgCompletive(I)</sub> [tutto Asp<sub>PICompletive</sub> [well Voice [fast/early Asp<sub>celerative(II)</sub> [again Asp<sub>repetitive(II)</sub> [often Asp<sub>frequentative(II)</sub> [completely Asp<sub>SgCompletive(II)</sub>... V

- (19) a. Ayşe-Ø Ali-nin (**\*açıkçası/\*Allah’tan/\*sözde/\*muhtemelen**) okul-u  
Ayşe-NOM Ali-GEN honestly/ luckily/ allegedly/ probably school-ACC
- bitir-iş-in-i anlat-tı-Ø  
finish-yIş-POSS.3.SG-ACC tell-PST.3.SG  
Lit. Meaning: ‘Ayşe told (me) Ali’s honestly/ luckily/ allegedly/ probably graduating.’
- b. Ayşe-Ø Ali-nin (**\*bir zamanlar/\*belki**) hukuk oku-yuş-un-a  
Ayşe-NOM Ali-GEN once/ maybe law study-yIş-POSS.3.SG-DAT
- şaşır-dı-Ø  
be.surprised-PST.3.SG  
Lit. Meaning: ‘Ayşe was surprised at Ali’s once/ maybe studying law.’

<sup>4</sup> For adverbs lower than *often* see the appendix.

c. Ayşe-Ø      Ali-nin    **genellikle/ yine/ sık sık** ders-e      geç  
 Ayşe-NOM Ali-GEN usually/ again/ often      class-DAT late

gel-iş-in-e                              kız-dı-Ø  
 come-Iş-POSS.3.SG-DAT be.angry-PST.3.SG  
 ‘Ayşe was angry at Ali’s usually/ again/ often coming late to the class.’

Given the ungrammaticality of (19a-b) and the grammaticality of (19c), we can conclude that the top-most functional layer in  $\{-(y)Iş\}$  clauses is  $Asp_{habitual}$ , and thus they are AspPs taken as a complement by the  $D^0$ . This makes them shorter than  $\{-mA\}$  and  $\{-DIK\}$  clauses, which we claim are TPs.

### 3.5 $\{-Im\}$ Nominalizations

Compared to the other nominalized clauses we investigated,  $\{-Im\}$  nominalizations seem to be the smallest. Firstly, they cannot take an external argument. When we try to add an agent to the structure in (20), it becomes marked for some speakers and ungrammatical for others.

(20) ??/\* Ali-nin    ev-i                      yık-ım-ı                      iş-i  
 Ali-GEN house-ACC destroy-Im-POSS.3.SG work-ACC

kolaylaş-tır-dı-Ø  
 become.easy-CAUS-PST-3.SG  
 Intended: ‘Ali’s destruction of the house made things easier.’

Secondly, as Tenny and Pustejovsky (2000) state, measure and restitutive adverbs are closer to the verb. These correspond to the aspectual adverbs lower than vP in Cinque’s (1999) system, which are compatible with  $\{-Im\}$  for some speakers, shown in (21a-b). On the other hand, modifying these nominalizations with the adverbs targeting the vP layer and above yield ungrammaticality, as in (21c-d).

(21) a. %Ev-in                      **sık sık** yık-ım-ı-Ø                      aile-yi                      üz-dü.  
 House-GEN often    destroy-Im-POSS.3.SG-NOM family-ACC upset-PST  
 Lit. Meaning: ‘Frequently destroying the house upset the family.’

b. %Köprü-nün **tekrar kısmen** bak-1m-1-Ø trafiğ-e  
 Bridge-GEN again partially repair-Im-POSS.3.SG-NOM traffic-DAT

neden ol-du-Ø

cause be-PST-3.SG

Lit. Meaning: ‘Again partially repairing the bridge has caused traffic.’

c. \*Ev-in **güzelce** bak-1m-1-Ø uzun sür-dü-Ø  
 House-GEN nicely repair-Im-POSS.3.SG-NOM long last-PST-3.SG  
 Lit. Meaning: ‘Nicely repairing the house took long.’

d. \*Bebeğ-in **dün** öl-üm-ü-Ø aile-yi üz-dü-Ø  
 Baby-GEN yesterday die-Im-POSS.3.SG-NOM family-ACC upset-PST-3.SG  
 Lit. Meaning: ‘The baby’s death yesterday upset the family.’

The data above suggest that little- $v^0$  is missing in {-Im} nominalizations and there is speaker variation regarding the presence of Aspectual layers below the little- $v$  in Cinque’s (1999) system (22).

(22) ... [well Voice [fast/early Asp<sub>celerative(II)</sub> [again Asp<sub>repetitive(II)</sub> [often Asp<sub>frequentative(II)</sub> [completely Asp<sub>SgCompletive(II)</sub>... V

Given that little- $v^0$  is absent and there is speaker variation for the existence of the aspectual layers below little- $v^0$ , {-Im} nominalizations seem to be VPs embedded under a DP. This makes them the shortest structure among the four nominalizations investigated. One additional piece of data indeed proves this. Except for {Im}, all other nominalizers can form subordinations with negated predicates and license an NPI in subject position.

(23) a. \*[Hiçbir şey-in yık-**ma**-yım-1]  
 nothing-GEN destroy-NEG-Im-POSS.3.SG

b. [Hiçbir şey-in yık-1l-**ma**-yış-1 / yık-1l-**ma**-ma-sı / yık-1l-**ma**-dığ-1]  
 nothing-GEN destroy-PASS-NEG-Iş/-mA/-DIK-POSS.3.SG  
 Intended: ‘Destruction of nothing’

#### 4 Summary & Conclusion

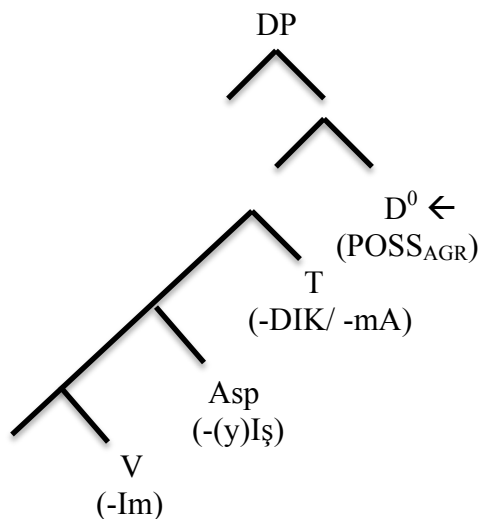
In this paper, we first established that the nominalizations formed with {-DIK}, {-mA}, {-(y)Iş} and {-Im} are DPs by testing them in various argument positions, in

adjunct position and also in the dependent case assignment system in Section 2. In addition, to see above which functional layer the  $D^0$  is merged, we tested the clause sizes with adverbial modification based on Cinque's (1999) analysis. With the results of the tests applied summarized in Table 1 below, we conclude that comparison of the clause sizes leads to the analysis illustrated in (24).

Table 1

Test/ Nominalizer	{-DIK}	{-mA}	{-(y)Iş}	{-Im}
Argument Positions	Complement to a Predicate	Any	Any	Any
Functioning as an Adjunct	✓	✓	✓	✓
Triggering DAT	✓	✓	✓	✓
Subj NPI licensed by lower NEG	✓	✓	✓	*
Adverb Modification	up to TP layer	up to TP layer	up to AspP layer	up to VP layer

(24)



## APPENDIX

### (1) {-DIK}

- (a) Ayşe Ali'nin **yine** ders-e geç gel-diğ-in-i duy-du.  
Ayşe-NOM Ali-GEN again class-DAT late come-DIK-POSS.3.SG-ACC hear-PST.3.SG  
'Ayşe heard that Ali has again come to class late.'
- (b) Ayşe Ali'nin **sık sık** ders-e geç gel-diğ-in-i duy-du.  
Ayşe-NOM Ali-GEN often class-DAT late come-DIK-POSS.3.SG-ACC hear-PST.3.SG  
'Ayşe heard that Ali often comes late to the class.'
- (c) Ayşe Ali'nin iş-e **isteyerek** git-tiğ-in-i duy-du.  
Ayşe-NOM Ali-GEN work-DAT willingly go-DIK-POSS.3.SG-ACC hear-PST.3.SG  
'Ayşe heard that Ali goes to work willingly.'
- (d) Ayşe Ali'nin **hızlıca** dışarı git-tiğ-in-i gördü.  
Ayşe-NOM Ali-GEN quickly outside go-DIK-POSS.3.SG-ACC see-PST.3.SG  
'Ayşe saw that Ali went outside quickly.'
- (e) Ayşe Ali'nin **zaten** git-tiğ-in-i duy-du.  
Ayşe-NOM Ali-GEN already leave-DIK-POSS.3.SG-ACC hear-PST.3.SG  
'Ayşe heard that Ali has already left.'
- (f) Ayşe Ali'nin **artık** iş-e gel-me-diğ-in-i duy-du.  
Ayşe-NOM Ali-GEN any more work-DAT come-NEG-POSS.3.SG-ACC hear-PST  
'Ayşe heard that Ali does not come to work any more.'
- (g) Ayşe Ali'nin **hala** çalış-tığ-ın-ı duy-du.  
Ayşe-NOM Ali-GEN still work-DIK-POSS.3.SG-ACC hear-PST.3.SG  
'Ayşe heard that Ali is still working.'
- (h) Ayşe Ali'nin **her zaman** ders çalış-tığ-ın-ı duy-du.  
Ayşe-NOM Ali-GEN always lesson study-DIK-POSS.3.SG-ACC hear-PST.3.SG  
'Ayşe heard that Ali always studies.'
- (i) Ayşe Ali'nin **geçenlerde** git-tiğ-in-i yeni duy-du.  
Ayşe-NOM Ali-GEN recently go-DIK-POSS.3.SG-ACC just hear-PST.3.SG  
'Ayşe just heard that Ali has recently gone.'

- (j) Ayşe Ali'nin **hemen** git-tiğ-in-i duy-du.  
Ayşe-NOM Ali-GEN immediately leave-DIK-POSS.3.SG-ACC hear-PST.3.SG  
'Ayşe heard that Ali immediately left.'
- (k) Ayşe Ali'nin bu ders-ten **nerede**yse kal-dığ-ın-ı duy-du.  
Ayşe-NOM Ali-GEN this course-ABL almost fail-DIK-POSS.3.SG-ACC hear-PST.3.SG  
'Ayşe heard that Ali almost failed this course.'
- (l) Ayşe Ali'nin sigara-yı **tamamen** bırak-tığ-ın-ı duy-du.  
Ayşe-NOM Ali-GEN cigarette-ACC completely quit-DIK-POSS.3.SG-ACC hear-PST  
'Ayşe heard that Ali quit smoking completely.'
- (m) Ayşe Ali'nin ödev-i **iyi** yap-tığ-ın-ı gör-dü.  
Ayşe-NOM Ali-GEN assignment-ACC well do-DIK-POSS.3.SG-ACC see-PST.3.SG  
'Ayşe saw that Ali did the assignment well.'

(2) {-mA}

- (a) Ayşe Ali'nin **yine** ders-e gel-me-sin-e şaşır-dı.  
Ayşe-NOM Ali-GEN again class-DAT come-mA-POSS.3.SG-DAT be.surprised-PST  
'Ayşe was surprised that Ali came the class again.'
- (b) Ayşe Ali'nin **sık sık** ders-e gel-me-sin-e sevin-iyor.  
Ayşe-NOM Ali-GEN often class-DAT come-mA-POSS.3.SG-DAT be.glad-IMPERF  
'Ayşe is happy that Ali comes often to the class.'
- (c) Ayşe Ali'nin okul-a **isteyerek** devam et-me-sin-e sevin-di.  
Ayşe-NOM Ali-GEN school-DAT willingly continue-mA-POSS.3.SG-DAT be.glad-PST  
'Ayşe was happy that Ali continues to his studies willingly.'
- (d) Ayşe Ali'nin ev-e **hızlıca** gel-me-sin-e şaşır-dı.  
Ayşe-NOM Ali-GEN house-DAT quickly come-mA-POSS.3.SG-DAT be.surprised-PST  
'Ayşe was surprised that Ali came home quickly.'
- (e) Ayşe Ali'nin **zaten** gel-miş ol-ma-sın-a şaşır-dı.  
Ayşe-NOM Ali-GEN already come-EVID be-mA-POSS.3SG-DAT be.surprised-PST  
'Ayşe was surprised that Ali has already come home.'

- (f) Ayşe Ali'nin iş-e **artık** gel-me-me-sin-i iste-di.  
Ayşe-NOM Ayşe-GEN work-DAT no longer come-NEG-mA-POSS.3.SG-ACC want-PST  
'Ayşe wanted Ali not to come to work any more.'
- (g) Ayşe Ali'nin **hala** ders çalışma-sın-a şaşır-dı.  
Ayşe-NOM Ali-GEN still study-mA-POSS.3.SG-DAT be.surprised-PST.3.SG  
'Ayşe was surprised that Ali was still studying.'
- (h) Ayşe Ali'nin **her zaman** ders çalış-ma-sın-a üzül-üyor.  
Ayşe-NOM Ali-GEN always study-mA-POSS.3.SG-DAT be.sad-IMPERF.3.SG  
'Ayşe is sad that Ali always studies.'
- (i) Ayşe Ali'nin **geçenlerde** geri dön-me-sin-e sevin-di.  
Ayşe-NOM Ali-GEN recently back come-mA-POSS.3.SG-DAT be.happy-PST.3.SG  
'Ayşe was happy that Ali has recently come back.'
- (j) Ayşe Ali'nin **hemen** git-me-sin-e üzül-dü.  
Ayşe-NOM Ali-GEN immediately leave-mA-POSS.3.SG-DAT be.sad-PST.3.SG  
'Ayşe was sad that Ali immediately left.'
- (k) Ayşe Ali'nin bu ders-ten **az daha** kal-ma-sın-a şaşır-dı.  
Ayşe-NOM Ali-GEN this course-ABL almost fail-mA-POSS.3.SG-DAT be.surprised-PST  
'Ayşe was surprised (to hear) that Ali almost failed this course.'
- (l) Ayşe Ali'nin sigarayı **tamamen** bırak-ma-sın-ı iste-di.  
Ayşe-NOM Ali-GEN cigarette-ACC completely quit-mA-POSS.3.SG-ACC want-PST.3.SG  
'Ayşe wanted Ali to quit smoking completely.'
- (m) Ayşe Ali'nin ödev-i **iyi** yap-ma-sın-a sevin-di.  
Ayşe-NOM Ali-GEN assignment-ACC well do-mA-POSS.3.SG-DAT be.happy-PST.3.SG  
'Ayşe was happy that Ali did his assignment well.'
- (3) **{-(y)İş}**
- (a) Ali'nin iş-e **isteyerek** gid-iş-i Ayşe'yi sevindir-di.  
Ali-GEN work-DAT willingly go-İş-POSS.3.SG-NOM Ayşe-ACC make.happy-PST  
Lit. Meaning: 'Ali's willingly going to work made Ayşe happy.'

- (b) Ayşe Ali'nin **hızlıca** dışarı çık-ış-ın-ı gör-dü.  
Ayşe-NOM Ali-GEN quickly outside exit-Iş-POSS.3.SG-ACC see-PST.3.SG  
'Ayşe saw Ali going out quickly.'
- (c) Ayşe Ali'nin **zaten** git-miş ol-uş-un-a şaşır-dı.  
Ayşe-NOM Ali-GEN already go-EVID be-Iş-POSS.3.SG-DAT be.surprised-PST.3.SG  
'Ayşe was surprised that Ali's already gone.'
- (d) Ayşe Ali'nin **artık** iş-e gel-me-yiş-in-e şaşır-dı.  
Ayşe-NOM Ali-GEN any more work-DAT come-NEG-Iş-POSS.3.SG-DAT  
be.surprised-PST.3.SG  
Lit. Meaning: 'Ayşe got used to Ali's not coming to work any more.'
- (e) Ayşe Ali'nin **hala** ev-e dön-me-yiş-in-e kız-dı.  
Ayşe-NOM Ali-GEN still house-DAT return-NEG-Iş-POSS.3.SG-DAT be.angry-PST  
Lit. Meaning: 'Ayşe was angry at Ali's still not returning home.'
- (f) Ali'nin derse **her zaman** katıl-ış-ı Ayşe'yi sevindir-iyor.  
Ali-GEN class-DAT always participate-Iş-POSS.3.SG-NOM Ayşe-ACC  
make.happy-IMPERF-3.SG  
Lit. Meaning: 'Ali's always participating in class makes Ayşe happy.'
- (g) Ayşe Ali'nin **geçenlerde** iş-ten ayrıl-ış-ın-dan bahset-ti.  
Ayşe-NOM Ali-GEN recently work-ABL leave-Iş-POSS.3.SG-ABL mention-PST.3.SG  
'Ayşe talked about/mentioned (how) Ali has recently left/quit work.'
- (h) Ayşe Ali'nin ev-den **hemen** gid-ış-in-i anlat-tı.  
Ayşe-NOM Ali-GEN house-ABL immediately leave-Iş-POSS.3.SG-ACC tell.PST.3.SG  
'Ayşe told how Ali immediately left the house.'
- (i) Ayşe Ali'nin **az daha** köprü-den düş-üş-ün-ü gördü.  
Ayşe-NOM Ali-GEN almost bridge-ABL fall-Iş-POSS.3.SG-ACC see-PST.3.SG  
'Ayşe saw how Ali almost fell off the bridge.'
- (j) Ayşe Ali'nin sigara-yı **tamamen** bırak-ış-ın-ı anlat-tı.  
Ayşe-NOM Ali-GEN cigarette-ACC completely quit-Iş-POSS.3.SG-ACC tell-PST.3.SG  
'Ayşe told how Ali quit smoking completely.'

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