

Offprint from

Turkic Languages

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3 (1999) 1

Harrassowitz Verlag · Wiesbaden

The order of nominalizations in Turkish

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van Schaaik, Gerjan 1999. The order of nominalizations in Turkish. *Turkic Languages* 3, 87-120.

Verbs of Turkish nominalize in a number of ways. On the syntactic level nominalization occurs when a clause is embedded as a Sentential Object (or Subject), thereby allowing for the expression of tense using the values [+future] *-(y)EcEk* and [-future] *-(DIK)*. At this level a further distinction can be made between the expression of "fact" versus "act", signalled by one of the aforementioned tense markers or the deverbaling morpheme *-mE* respectively. The possibility to express this distinction is lexically determined: Verdictive verbs express facts only, remissive, conative, and exercitive verbs express acts only, whereas the choice of the suffix determines what is expressed in the group of expositives, apprehensives, putatives verbs. For emotive verbs there is no difference in meaning. In this paper, syntactic nominalization is opposed to the derivational nominalization of the verbal noun in *-(y)Iş*. Such verbal nouns are the product of a predicate formation rule, by means of which the number of arguments is (partially) reduced.

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Introduction

In this paper I will present a survey of several nominalization processes found in Turkish. The presentation and discussion of the data¹ will be based on the (apparently, not universally accepted) insight that, with

¹ The discussion of the phenomena focuses only on nominalizations of verbs in object position. Although, roughly speaking, various nominalized verbs may also occur in subject position such constructions should be studied against the background of the type of predicate they are the subject of. Since the present analysis deals with verbal predicates of the main clause only, nominalized subjects of verbal, nominal, and adjectival predicates or those combined with a postposition should be considered a topic for further research.

respect to the distribution of Turkish nominalization suffixes, a sharp distinction should be made between nominalizations that take place on a syntactic level and those that must be regarded as the result of morphological derivation.

As for the former type of formations, a number of recent publications (George & Kornfilt 1981; Kennelly 1987; Kural 1993) focus primarily on the question as to how clauses containing an embedded verb in *-DIK* / *-(y)EcEK*² or *-mE* are related to the general principles put forward within the (predominantly) syntactic approach of "generative grammar" (GB). Thereby these constructions are classified as "gerunds" and the two suffixes are analysed in terms of "tensed" versus "infinitive", respectively. In this respect such a classification very much resembles that of Underhill (1972), who calls these verbal forms "gerundives". In George & Kornfilt (1981) and Kennelly (1987) no attention has been given to the nominalizer *-(y)Iş*³ at all, but Kural (1993), who claims to provide an alternative classification, opposes the "tensed" *-DIK* / *-(y)EcEK* and the "infinitive" *-mE* to the "gerundive" *-(y)Iş*, which in turn is identical with Underhill's "deverbal noun". A somewhat different terminology is used by Pamir (1995), who divides "gerunds" into "action nominals (verbal noun)" and "factive nominals (nominalization)", corresponding to the forms in *-DIK* / *-(y)EcEK* or *-mE* respectively.

As will be shown in this paper, yet another (re-)classification of the various types of Turkish nominalizations is possible. This will not be achieved, however, by reshuffling the categories mentioned above on the basis of some syntactic principle, but rather by trying to find out which semantic notions and which morphological processes may be relevant for an accurate description of the data. It will be shown that the type of nominalization (choice of the suffix between *-DIK* / *-(y)EcEK* or *-mE*) is related to the question 1) how the matrix verb is lexically specified for the type ("order") of linguistic expressions that can be taken as a sentential object, and in a number of cases 2) what the intended status of the embedded verb is: "fact" or "act". Furthermore, it will be advanced that formations in *-(y)Iş* can be considered the result of a morphological

² Morphemes are partially represented by cover symbols which are all phonologically conditioned: *D* stands for *t / d*; *I* for *i, ı, ü, u*; *K* for *k / ğ*; and *E* for *e / a*.

³ *y* after a root ending in a vowel.

derivation process, and that such forms may easily end up as a lexical item.

The paper consists of three main parts: In section 1 some theoretical background information about the notion of "order" is provided; section 2 deals with the distribution of nominalizers that are applied on the syntactic level (*-DIK* / *-(y)EcEK* in 2.1 and *-mE* in 2.2), and of those that can only be found on the morphological level (*-(y)Iş* in 2.2).

Especially concerning the status of *-(y)Iş*, some morphological and statistical arguments will be presented in favour of Underhill's classification as "deverbal noun". Finally, section 3 presents a summary of the most frequent types of formations that are (presumably) lexicalized.

1. On the notion of order

As will often be observed, not only words or constituents referring to "objects" can occur as the grammatical complement of some verbs, but also constituents that refer to an "act" or a "fact". In Vendler (1972) a classification of verbs of English is presented in which the content of (objects of) performative verbs (such as *say*, *state*, and the like) is compared to that of verbs expressing their mental counterparts, that is, verbs that denote a mental act (such as *notice*, *find out*) or a mental state (such as *know*, *think*, *believe*). The common denominator within this classification is that these verbs (basically) express propositions (facts). It is this classification which has functioned as a guideline for the present analysis, both because it provides some terminology as well as because of the insight that facts are, roughly speaking, mostly about acts. Therefore, I felt safe in assuming that most verbs that can be used to convey some fact, can also be used to express an act (but not reversely).

Previous work by Vendler (1967) has had some impact on the development of the linguistic framework of Functional Grammar (henceforth FG), especially with respect to the notion of "entity order". For the description of linguistic expressions FG (cf. Dik 1989; Hengeveld 1989; Siewierska 1991) has adopted a multilevel hierarchy, in which each level is the domain of a specific linguistic entity: Within a speech act (E), a propositional content (X) is communicated, which in turn describes a certain state of affairs (e), in which one or more individuals (x) are involved. This hierarchy can be understood as a system of building blocks (structural units) and on each level (or layer) a certain type of entity is construed. On the highest level the speech act, a fourth-order entity, is represented, the linguistic expression of which is the clause:

The actual utterance. This clause contains a proposition, a third-order entity, which can be considered as a "Possible Fact" (cf. Dik 1989: 248). A typical property of third-order entities is that they can be "conveyed" by verbs such as *say*, *mention*, *state*, *claim* and the like, and they can be the subject of belief, knowledge, thought, and recollection, which is expressed by verbs such as *believe*, *know*, *think*, and *remember*. Furthermore, Possible Facts (propositions) can be evaluated in terms of truth values. Propositions are built up by predications, second-order entities, which describe a certain state of affairs (or "event", cf. Dik 1989: 248). This type of entities can be said to *occur*, *take place*, *begin*, *last*, and *end*, and they can be perceived: *seen*, *watched*, *felt*, *heard*, etc.

As will become clear in the sections below, linguistic expressions (*in casu*: Embedded clauses) in Turkish that refer to a fact (proposition—third-order entity) may be differently structured than those that refer to an act (event—second-order entity). These differences are assumed to be lexically specified for verbs that can take an embedded clause as an object.

In terms of generative aspects, the notion of entity order is not only relevant for linguistic expressions that are "under construction", but also lexical material other than verbs can be assumed to be specified for "order". In this way it can be explained, for instance, that some words can be combined with temporal expressions, whereas others cannot. Consider the following classic example:

- (1) a *Toplantı saat iki-de başla-yacak*
 meeting hour two-LOC start-FUT
 'The meeting will start at two o'clock.'
- b **Masa saat iki-de başla-yacak*
 table hour two-LOC start-FUT
 'The table will start at two o'clock.'

Since *toplantı* 'meeting' in 1a can be considered as a word that denotes an "event", it must be assumed that it is lexically specified as a second-order nominal (e), in contrast to *masa* 'table' in 1b, which will be specified as denoting a first-order entity (x).

As this brief description of "order" of linguistic entities hopefully suffices for the understanding of the analysis to be presented here, no

further attention will be given to the internal structure of constituting elements within the multilevel hierarchy.

2. The distribution of nominalizers

In section 2.1. the morphemes *-DIK*⁴ and *-mE* will be discussed and it will be shown that these morphemes are distributed over four classes of matrix verbs:

- 1) verbs that take complements in *-DIK* and which express a *fact* only;
- 2) verbs that take complements in both *-DIK* and *-mE* fall into two sub-groups:
 - a) the expression of *-DIK* or *-mE* leads to differences in meaning: In the case of *-DIK* a *fact*, and in the case of *-mE* an *act* is expressed;
 - b) the expression of *-DIK* or *-mE* does not lead to differences in meaning;
- 3) verbs that take complements in *-mE* and which express an *act* only;
- 4) verbs that take complements in *-mE* and which lead to an imperative meaning.

In section 2.2. it will be claimed that, contrary to the case of *-DIK* and *-mE*, the occurrence of the morpheme *-(y)Iş* cannot be accounted for on a syntactic level, and therefore, an analysis in terms of morphological derivation will be proposed. I will argue that deverbal nouns carrying this suffix have a reduced argument structure, and the fact that verb forms in *-(y)Iş* have some (but definitely not all) verbal properties (when contrasted with nominalizations to be discussed in section 2.3.) will be explained in terms of a one-place nominal predicate (for subjects) or a taking of refuge to nominal compounding (for objects).

A general characteristic of "V in head function" is that it "requires nominalization" (cf. Dik 1989: 64). This is what we typically see in dealing with embedded clauses in Turkish. Before going into detail on the essential matters, let me by way of an introduction give some examples of embedded clauses and explain the most important morphological features of this type of constructions. Consider the following sentences:

⁴ For the sake of convenience, from this point onwards reference to *-DIK* includes reference to *-(y)EcEK*.

- (2) a *Murat-in ses-in-i duy-du-m*
 Murat-GEN voice-P3s-ACC hear-PAST-1s
 'I heard Murat's voice.'

- b *Murat-in öksür-düğ-ün-ü duy-du-m*
 Murat-GEN cough-DIK-P3s-ACC hear-PAST-1s
 'I heard that Murat coughs / coughed.'

The object of *duy* 'hear' in 2a is an NP: The modifier *Murat* (possessor) takes the genitive marker *-(n)In*,⁵ in this way expressing subject-verb agreement and the head noun *ses* 'voice' takes the possessive suffix *-(s)I(n)*,⁶ which agrees in person with the possessor noun. And thus, due to the aforementioned "nominalization requirement", the embedded verb in 2b takes the shape of the NP exemplified in 2a. In 2b, too, subject-verb agreement is expressed by the genitive suffix, and person agreement by possessive concord, by means of *-(s)I(n)*, which follows the nominalizer *-DIK*.

2.1. The morphemes *-DIK* and *-mE*

That differences in order play an important role in the choice between the nominalization suffixes *-DIK* and *-mE* can be demonstrated on the basis of the verb *gör-* 'see', which can be classified as a verb denoting "uncontrolled"⁷ perception. Consider the following examples of such usage:

- (3) a *Murat, Berna-mn ev-den çık-tığ-ın-ı gör-dü*
 Murat Berna-GEN house-ABL leave-DIK-P3s-ACC see-PAST
 'Murat saw that Berna (has) left the house.'

⁵ *n* after a vowel.

⁶ *s* after a vowel; *n* before a suffix.

⁷ By "uncontrolled" I mean that the subject of 'see' has no power to determine whether (s)he will see or not, other than by closing the eyes or by 'not looking'. In that respect 'look' is a "controlled" verb.

- b *Murat, Berna-nın ev-den çık-ma-sın-ı gör-dü*
 Murat Berna-GEN house-ABL leave-mE-P3s-ACC see-PAST
 'Murat saw that Berna was leaving the house.' (= 'M. saw B. leaving the house.')

The difference in the type of nominalization between 3a and 3b—as reflected by the occurrence of the suffix *-DIK* versus *-mE*, and accordingly, the differences in meaning between both sentences—can be ascribed to differences in order of the embedded structures.

In 3a it is a *fact* (= proposition) that is expressed by the expression based on *Berna-nın ev-den çık-*, whereas the same underlying structure expresses an *event* (= state of affairs) in 3b. These differences are commonly explained by saying that 3a is “factive” and that by 3b an “act” is being described. Indeed, “fact” versus “act” sheds some light on Kural’s (1993: 3) distinction between “past” for *-DIK* and “infinitive” for *-mE*, as opposed to “gerundives” and “gerunds” as found in Underhill (1972) and George & Kornfilt (1981).

The morpheme *-DIK*, expressing the tense value [–future], can be contrasted with the suffix *-(y)EcEK* for [+future], as exemplified by 4, where the “uncontrolled” perception verb *duy-* ‘hear’ is replaced by *gör-* ‘see’ of 3:

- (4) a *Murat, Berna-nın ev-den çık-tığ-ın-ı duy-du*
 Murat Berna-GEN house-ABL leave-[+fut]-P3s-ACC hear-PAST
 'Murat heard that Berna (has) left the house.'
- b *Murat, Berna-nın ev-den çık-acağ-ın-ı duy-du*
 Murat Berna-GEN house-ABL leave-[–fut]-P3s-ACC hear-PAST
 'Murat heard that Berna will leave the house.'

The sentential objects of both 4a and 4b express factivity, the only difference being that what is expressed as a (possible) fact, ‘Berna’s leaving the house’, is located in time in different ways over 4a and 4b in relation to the tense of the matrix verb *duy-* ‘hear’.

For 3b, however, such an opposition is impossible since the temporal aspects of the embedded verb *çık-* ‘leave’ are “enclosed” by those of the verb in the main clause: The temporal location of *çık-* is determined by that of *gör-* ‘see’. Thus, the suffix *-mE* may be termed “infinitive” in the sense of (non-factive) “a-temporal”. The reason that the terms “ger-

undives" and "gerunds" are used by some authors is possibly due to the striking correspondence (in translation) with the gerunds⁸ of English.

The examples presented in 3 and 4 all have one thing in common: The verb of the main clause is a verb of "uncontrolled" perception. These have been presented more or less deliberately because both *gör-* 'see' and *duy-* 'hear' allow for complements in *-DIK* as well as in *-mE*, whereas their "controlled" counterparts *seyret-* 'watch' or *izle-* 'watch' and *dinle-* 'listen' may take (are subcategorized for or lexically specified for) nominalizations in *-mE* only. Consider:

- (5) a *Murat'ın tenis oyna-ma-sın-ı seyret-ti-m / izle-di-m*⁹

Murat-GEN tennis play-mE-p3s-ACC watch-PAST-1s

'I watched Murat playing tennis.'

(= 'I watched how Murat played tennis.')

- b *Murat'ın piyano çal-ma-sın-ı dinle-di-m*

Murat-GEN piano play-mE-p3s-ACC hear-PAST-1s

'I heard (listened to) Murat playing the piano.'

These differences in meaning between a fact-nominalization and an event-nominalization are also found in other categories of verbs. Performatives (verbs of saying) such as *söyle-* 'say', *bildir-* 'announce',

⁸ Apparently this is the case in Kural (1993: 3), who terms the nominalized forms based on *-(y)İş* "true gerundive, equivalent to English *-ing*".

⁹ The "controlled" verb *bak-* 'look', requiring the dative suffix, would be inappropriate here, due to semantic differences with *seyret-* or *izle-* 'watch'. This can be inferred by comparing (5a) with the following:

- (i) *Murat'ın tenis oyna-ma-sın-a bak-tı-m*

Murat-GEN tennis play-mE-P3s-DAT look-PAST-1s

'I (critically) observed how Murat played tennis.'

(< > I observed Murat playing tennis.)'

Contrary to 5a, in (i) *how* has the connotation of "manner".

açıkla- 'declare', for instance, are to be interpreted as 'expositive'¹⁰ (describing a fact) when used with *-DIK* in the embedded clause, but as 'exercitive' (expressing a directive, or "indirect imperative") when used with *-mE*. This can be illustrated by the following:

- (6) a *Murat, Berna-mn ev-den çık-tığ-ın-ı söyle-di*
 Murat Berna-GEN house-ABL leave-DIK-P3s-ACC say-PAST
 'Murat said that Berna (has) left the house.'
- b *Murat, Berna-nın ev-den çık-ma-sın-ı söyle-di*
 Murat Berna-GEN house-ABL leave-mE-P3s-ACC say-PAST
 'Murat said that Berna has (had) to leave the house.'

Constructions as those in 6 can be compared to "real" exercitive verbs like *emret-* 'order' or *buyur-* 'order' (both expressing a command), but these take only embedded forms in *-mE*. In that sense *söyle-* 'say' in 6b has the same illocutionary effect as the main verbs in 7:

- (7) a *Hizmetçi-ye beş dakika-da hazırlan-ma-sın-ı buyur-du*
 servant-DAT five minute-LOC get ready-mE-P3s-ACC order-PAST
 '(S)he ordered the servant to get ready in five minutes.'
- b *Kaptan-ımız top-lar-ın hazırla-n-ma-sın-ı emret-ti*
 captain-P1p gun-Pl-GEN prepare-PASS-mE-P3s-ACC order-PAST
 'Our captain ordered that the guns be prepared'

Similar differences in meaning, due to the application of either *-DIK* or *-mE*, are found among 'apprehensive' verbs such as *anla-* 'understand', *keşfet-* 'discover', *farket-* 'notice', and 'putatives' such as *bil-* 'know', *hatırla-* 'remember', *inan-* 'believe' (cf. Özsoy 1996). The latter two classes of verbs exhibit another interesting phenomenon: Whereas apprehensive and putative verbs express facts when used in combination with *-DIK*, nominalizations realized by means of the suffix *-mE* express an act which has in the background a shade of meaning that either refers

¹⁰ In order to label verbs according to the type of proposition they basically express, I use Vendler's terminology (1972). These labels will be represented in single quotation marks.

to the “reason” (using an apprehensive verb) or to the “manner” (using a putative verb) in which that act is performed. Consider:

- (8) a *Hasan-in git-me-sin-i anlı-yor-uz*
 Hasan-GEN go-mE-P3s-ACC understand-PRES-1P
 ‘We understand *why* Hasan has gone.’
- (8) b *O, kazan-dığ-ı para-yı ye-me-sin-i bil-mi-yor*
 (s)he earn-PRT-P3s money eat-mE-P3s know-NEG-PRES
 ‘(S)he doesn’t know *how* to spend the money (s)he earns.’

In the data presented so far we have dealt with verbs of perception (*gör-, izle-*), performatives (*söyle-*), apprehensives (*anla-, farket-*) and putatives (*bil-, hatırla-*), which all can take either a complement in *-DIK* or *-mE*, resulting in two different interpretations: Fact versus act.

There are verbs (‘emotives’), however, which can take embedded clauses with either suffix without resulting in differences in meaning. An example is represented in 9:

- (9) a *Murat, Berna-nın ev-den çık-tığ-ın-a üzüldü*
 Murat Berna-GEN house-ABL leave-DIK-P3s-DAT regret-PAST
 ‘Murat regretted that Berna (has) left the house.’
- b *Murat Berna-nın ev-den çık-ma-sın-a üzüldü*
 Murat Berna-GEN house-ABL leave-mE-P3s-DAT regret-PAST
 ‘Murat regretted that Berna (has) left the house.’

There is another, considerable large group of verbs consisting of ‘remissives’ (such as *affet-* ‘pardon’) as well as of ‘conatives’ (such as *iste-* ‘want’, *planla-* ‘plan’) which may take only embedded verbs in *-mE*. The latter type can be regarded as “pure infinitives”, due to the fact that they denote “possible future events” rather than “realized events” (facts), as shown in 10.

- (10) *Berna, Murat’ın ev-den çık-ma-sın-ı iste-di*
 Berna Murat-GEN house-ABL leave-mE-P3s-ACC want-PAST
 ‘Berna wanted Murat to leave the house.’

Finally, a relatively small class of 'verdictives' (*san-* 'think / believe', *zannet-* 'think / believe') can take complements in *-DIK* but not in *-mE*:

- (11) *Berna, Murat-ın bütün viski-yi iç-tiğ-in-i san-ıyor*¹¹
 Berna Murat-GEN all whiskey-ACC drink-DIK-P3s believe-PRES
 'Berna thinks / believes (takes it as a fact) that Murat drank
 all the whisky.'

These observations can be summarized as follows. According to the type of verb of the main clause, the verb of the embedded clause is nominalized in different ways. The distribution of oppositions according to the different types of verbs of Turkish is tabulated below:

verb type	verb	-DIK / -(y)EcEK	-mE	illocution
verdictive	<i>san-</i>	+	–	fact
	<i>zannet-</i>	+	–	
expositive	<i>söyle-</i>	+	+	fact versus act ("imperative")
	<i>açıkla-</i>	+	+	
apprehensive	<i>anla-</i>	+	+	fact versus act ("reason")
	<i>inan-</i>	+	+	
putative	<i>bil-</i>	+	+	fact versus act ("manner")
	<i>hatırla-</i>	+	+	
emotive	<i>üzül-</i>	+	+	no difference in meaning
	<i>kız-</i>	+	+	
remissive	<i>affet-</i>	–	+	act
	<i>beğen-</i>	–	+	
conative	<i>iste-</i>	–	+	act
	<i>planla-</i>	–	+	
exercitive	<i>emret-</i>	–	+	act ("imperative")
	<i>buyur-</i>	–	+	

¹¹ An alternative expression is '*Berna, Murat-ı [bütün viski-yi iç-ti-(3s)] san-ıyor*' where Murat is the direct object of the matrix verb. For studies that investigate the raising phenomena of Turkish in more detail, see Brendemoen & Csató (1986); George & Kornfilt (1981); Kennelly (1987); Kural (1993); and Pamir (1995).

The constructions discussed here are all clauses based on a transitive main verb, the direct object (second argument) of which is a clause itself (a sentential object).¹² Since the embedded verb is not used in head-function of the main clause, the embedded predication cannot be expressed as a sentence, so the verb must nominalize and the embedded predication takes the shape of a noun phrase. Thus, the subject is expressed with the genitive case marker, the embedded verb stem takes a nominalizer, subject-verb agreement is realized by a possessive suffix, an expression of tense is possible. Therefore, this type of nominalization was referred to as “syntactic” nominalization. At this level there are two types of nominalization, each with different types of nominalizers. The occurrence of either one of these is related to the lexically given properties of the (transitive) verb of the main clause, and it is these properties which primarily determine what kind of sentential objects (facts or acts) can be expressed. This lexical specification can be formalized in terms of “sub-categorization” or “selection restrictions”. This information, then, would among other things reveal or predict that a “verdictive” verb such as *zannet-* ‘think / believe’ takes third-order complements only (always with fact-reading); that “expositive” verbs such as *söyle-* ‘say / tell’ may take both third- (cf. 6a—about a fact) and second-order objects (cf. 6b—about an event), and that “remissive” verbs such as *beğen-* ‘like’ are not specified for facts but only for events (and for first-order entities, ‘things’, as in *Viski-yi beğenmedi* ‘He didn’t like the whisky’). Also for verbs of perception (and possibly for some other types as well) we may even assume that they are specified for three orders: They may take objects referring to facts (cf. 3a), events (cf. 3b), and things, as in *Murat Berna’yı bir daha görmedi* ‘Murat didn’t see Berna any more’.

To be more specific with respect to the lexical “coding” of these properties, the second argument of transitive verbs could be specified for the type of objects by including a term variable that specifies its order. Disregarding the semantic functions of the first and second arguments, we would get the following types of categorization: *san-* (x) (X) ‘think’, where “X” specifies objects referring to a proposition (fact); *söyle-* (x)

¹² To a great extent the properties of sentential objects can be ascribed to sentential subjects too, and similarly, the selection restrictions determining the type of nominalization are lexically coded for each predicate that can take sentential subjects. For further comments, see footnote 1.

(X, e) 'say / tell', with "X" for propositions and "e" for events; *üzül-* (x) (X / e) 'regret' with "X / e" indicating that there is no opposition between facts and acts; *beğen-* (x) (e, x) 'like' with "e" for events and "x" for things; and finally, *gör-* (x) (X, e, x) 'see', for which it is specified that terms referring to facts, events, and things can be expressed as the object of the verb of the main clause.

On the morphological level, the opposition between third and second order is expressed by means of suffixes: [-future] facts are signalled by *-DIK*, [+future] facts by the suffix *-(y)EcEK*, and events by *-mE*.

2.2. The morpheme *-(y)Iş*

Whereas in George & Kornfilt (1981) and Kennelly (1987) only the syntactic behaviour of the suffixes *-DIK* and *-mE* is treated, Kural (1993) makes an attempt to analyse the usage of *-(y)Iş* by contrasting it with *-DIK*. Along the lines of Kural's approach, such an opposition could be exemplified by the following pair of constructions:

- (12) a *Murat, Berna-yı öp-tüğ-ün-ü hep unut-uyor*
 Murat Berna-ACC kiss-DIK-P3s-ACC always forget-PRES
 'Murat always forgets that he kissed Berna.'
- b *Murat, Berna-yı öp-üş-ün-ü hep unut-uyor*
 Murat Berna-ACC kiss-(y)Iş-P3s-ACC always forget-PRES
 'Murat always forgets kissing (= how he kissed) Berna.'

Kural (1993: 10, 14) claims that the differences between 12a and 12b can be accounted for by saying that 12a expresses the fact that 'Murat kissed Berna' is forgotten, whereas 12b is about the event (act) itself. As an old saying goes, however, appearances are deceptive, so two remarks are in place. Firstly, presenting these data in the fashion practiced here might easily suggest that 12a and 12b are syntactically equivalent, since the objects of the embedded verb have the accusative marker and both nominalized verbs carry comparable morphological material: A nominalizer plus a possessive suffix followed by an accusative. I will return to this matter shortly.

Secondly, in discussing the relation between *-DIK* and *-(y)Iş*, Kural (1993: 14) explains for 12a that 'he forgets that the kissing event ever happened', and in analysing the opposition between the suffixes *-mE* and *-(y)Iş* he states (Kural 1993: 10) for 12b that 'he always forgets a

certain instance of kissing Berna'. His description of 12a may indeed be paraphrased by saying that 'he (= Murat) does not remember the fact that he kissed Berna', that is, 'he (= Murat) does not know whether he kissed Berna or not'.

As for the interpretation of 12b, I think that Kural touches on a point which is very crucial for the way some of the verbal forms in *-(y)Iş* should be understood. The point is that the "act" or "event" described in 12b is indeed "a certain instance" (in Kural's words), but more specifically, it is *a single instance* of kissing Berna that is referred to. He seems to be somewhat puzzled, however, with *-(y)Iş*, since a comment made later on 12b is quite contradictory to the one quoted here. In his second comment he states: "He may remember that the kissing event occurred, but have no memory how it happened or how it felt". In my opinion this is a description that would fit a fact, but not a single instance of an act where 12b is actually about: 'Murat always forgets *how* he kissed Berna', in which the word 'how' does not refer to "manner" but to that "single instance" as such. Furthermore, contrary to what has been claimed by Kural (1993: 6) verbs in *-(y)Iş* cannot be modified for frequency adverbs as they denote a "single instance" of an event 13a, although his own example 13b might suggest the opposite. Consider:

- (13) a *Murat, Berna-yı* (* *sık sık*)
Murat Berna-ACC often

öp-üş-ün-ü hep unut-uyor
kiss-(y)Iş-P3s-ACC always forget-PRES
'Murat always forgets often kissing (= how he often kissed) Berna.'

- b *?bu ülke-de bebek-ler-in sık sık öl-üş-ü*
this country-LOC baby-PL-GEN frequently die-(y)Iş-P3s
'babies frequently dying in this country'

Apart from the question as to whether the fragment of Turkish in 13b is grammatical at all, the frequency adverb *sık sık* 'often' is not modifying

ölüş in the sense of 'repetitive dying' of (particular) babies,¹³ but should rather be understood as an adverb that pertains to the occurrence 'babies die in this country', namely that 'it frequently occurs that babies die in this country'. Most of my informants reject 13b and suggest that it would become more grammatical if the adverb *sık sık* 'often' were "moved" to the position directly after *bu ülkede* 'in this country', e.g. *Bu ülkede sık sık bebeklerin ölüşü*.

A more fundamental issue, however, is related to the observation that there are apparently two verb forms that make reference to an "act" as opposed to "fact": Besides verb forms having the suffix *-(y)Iş*, there are forms in *-mE* that can be used for the same type of reference. As we have seen in section 2.1., there are several verb classes of Turkish which are lexically specified (categorized) for the type of verbal complement they can take: Some of them can take only complements denoting a fact (signalled by the suffix *-DIK*), others may only take complements expressing an event (expressed by the suffix *-mE*), and additionally, there is a considerably large class of verbs that allow for the expression of both morphemes. With the exception of the class of 'emotives', they all differentiate between fact or event, depending on the nominalizing suffix being applied.

Now, given this system in which each verb is categorized for the type of complement, and which thereby allows for a grammatical differentiation between facts and events, isn't it at least remarkable that there seems to exist a third morpheme that expresses an act rather than a fact? And in connection with this, we might reformulate the question as: Are the forms in *-mE* and *-(y)Iş* equivalent or perhaps complementary, that is, are there any verbs that categorize for *-(y)Iş* but not for *-mE*? In seeking an answer to the latter question, we can observe that using verbs like *hatırla-* 'remember' and *unut-* 'forget' does not give any clear indication, in terms of entity order, of the type of complement that can be expected, since in principle any type of entity is possible: We may remember or forget facts and events, but also things (referred to by first-order entities). So both nominalizations in *-DIK* and *-mE* as well as other complements may be expected, and thus, the notion as such of categorization

¹³ If they could do so they might even be able not to do so, and most probably they wouldn't do so, unless 'die' has another meaning here than what is generally agreed upon.

for the type of complement in this case does not seem to have any relevance.

An alternative approach is to reconsider the problem in terms of the question as to whether all three morphemes can be compared with one another on the same (syntactic) level. Although this seems to be the case on the basis of 12 and 14, we can simultaneously observe that the only verbs that allow for such an opposition are *hatırla-* 'remember' and *unut-* 'forget', as we have commented upon above. The full range of possibilities for the expression of an event with *unut-* 'forget' and likewise, with *hatırla-* 'remember', is represented in 14 and 15. Consider:

- (14) a *Murat, Berna-yı öp-me-yi unut-ma-dı*
 Murat Berna-ACC kiss-mE-ACC forget-NEG-PAST
 'Murat has not forgotten to kiss Berna.'
- b *Murat, Ali-nin Berna-yı öp-me-sin-i unut-ma-dı*
 Murat Ali-GEN Berna-ACC kiss-mE-P3sACC forget-NEG-PAST
 'Murat has not forgotten how Ali kissed Berna.'

Due to the fact that the subject of 14a is co-referential with the subject of the matrix verb, it yields the interpretation of a future event ("non-realized", "infinitival"), whereas that of 14b does not. The embedded clause of 14a is about Murat's *own* (future) event of kissing Berna, but 14b is about a (realized) event in which *Ali* and Berna were involved. The single event reading for its parallel form in *-(y)İş* seems, in terms of "laboratory circumstances", equally well formed, although expanding 15a with adverbial expressions for time and frequency leads to an increasing sense of reluctance with respect to acceptability, as is shown in 15b. For 15b two alternatives are available: When reference is made to an event the suffix *-mE* must be used, and in case reference is made to a fact, very much expectedly, the morpheme *-DIK* will occur. These are represented by 15c and 15d respectively:

- (15) a *Murat, Ali-nin Berna-yı öp-üş-ün-ü unut-ma-dı.*
 Murat, Ali-GEN Berna-ACC kiss-mE-P3sACC forget-NEG-PAST
 'Murat has not forgotten how Ali kissed Berna.'

b **Murat, Ali-nin o akşam Berna-yı*
Murat, Ali-GEN that evening Berna-ACC

sürekli *öp-üş-ün-ü unut-ma-dı.*
constantly kiss-mE-P3sACC forget-NEG-PAST
'Murat has not forgotten how Ali constantly
kissed Berna that evening.'

c *Murat, Ali-nin o akşam Berna-yı sürekli öp-me-sin-i unutma-dı.*
'Murat has not forgotten how Ali constantly kissed Berna that even-
ing.'

d *Murat, Ali-nin o akşam Berna-yı sürekli öp-tüğ-ün-ü unutma-dı.*
'Murat has not forgotten that Ali constantly kissed Berna that evening'

The fact that expansion with adverbs in embedded clauses based on the *-(y)Iş* forms leads to a lesser degree of acceptability may be taken as an indication that those embedded verbs are to a certain extent "less verbal" than their *-DIK* and *-mE* counterparts, and moreover, it may very well indicate, too, that the formation of *-(y)Iş* forms cannot be dealt with on a syntactic level. If this view is correct, it would not only imply that these forms should not be syntactically compared to forms in *-DIK* or *-mE*, but also that an alternative for the formation of forms in *-(y)Iş* should be proposed.

This is corroborated by the statistics we obtained by looking at the distribution of the *actual* occurrence of *-(y)Iş* forms in a body of coherent utterances, that is, by taking into account how they are used in the production of spoken and written Turkish. In order to get some statistical insight into their actual usage, a series of machine readable texts (based on literature, news bulletins, interviews, spontaneous speech production, etc.) was investigated for the degree in which *-(y)Iş* forms are combined with (embedded) subjects, direct objects, indirect objects, and adverbs. The table in 16 shows how these constituents are distributed in terms of percentages, related to a total number of 88 different verb stems.

(16)	subject	38%	adverbial	10%
	direct object	0%	"bare" noun	25%
	indirect object	11%	compound	25%

The criteria for the determination of the syntactic category of these constituents are as follows. In a broad sense, all forms in *-(y)lš* are nominalized and occur as the subject, object or some other constituent of the matrix clause, so they occur as zero marked (subject), they can have the accusative marker (direct object) or some other case marker, depending on the type of constituent they represent. Thus, these distinctions play no role in the distribution represented in 16. In a narrow sense, however, the *-(y)lš* forms are the (presupposed) "head" of the embedded clause and they may take the same type of constituents as mentioned above. Embedded subjects always have the genitive marker, and thus, constituents having the genitive marker are taken to be the subject of the embedded verb. Constituents preceding the embedded verb and carrying the accusative suffix are considered to be the direct object of the embedded verb, and those having other case markers (such as dative, locative, ablative, or instrumental) are the indirect object if they are obligatory, otherwise they are regarded as adverbs. Nouns and nominal compounds are those constituents which are preceded by either a demonstrative pronoun, an indefinite article, a quantifier, an adjective, or combinations thereof. Structures that were considered compounds consist of a head noun (the derived noun in *-(y)lš*) preceded by a noun which is unmarked for case.

One of the most striking results is the clear absence of direct objects: Their expression is taken care of by the (unmarked) complement of nominal compounds, which attribute to some 25% of the stock. Together with another 25% of "bare" (nominalized) nouns they constitute 50% of the sample, and in not less than 38% of the occurrences the subject is expressed. Whereas direct objects are absent, the expression of indirect objects (11%) and adverbials (10%) does occur, but not very frequently. As for the expression of subjects, the distribution among transitive, intransitive and passive verbs does not show any peculiarities: 17% of the nominalized forms were based on a transitive verb, 11% on an intransitive verb, and 10% on verbs with passive morphology.

Before exploring the question as to how the figures in 16 should be interpreted, let me present some typical examples of the categories mentioned here.

(17) *Subject only (intransitive verb):*

a **Hayat-ımız-m yürü-yüş-ü** *bu-ydu işte*
 life-P1p-GEN go-(y)Iş-p3s this-PAST thus
 'This was the course of our life, thus.' (= the way our life 'went')

Subject only (intransitive verb):

b *Anne-m hep titr-iyor, dudak-lar-ı-nın titre-yiş-i*
 mother-P1s all shiver-PRES lip-PL-P3s-GEN tremble-(y)Iş-P3s
göz-le bile gör-ül-ebil-ir
 eye-'with' even see-PASS-POT-PRES
 'My mother shivers all over, the trembling of her lips can even be seen by the naked eye.'

(18) *Subject plus indirect object (intransitive verb):*

a **İzin-den dön-üş-ümüz-de**
 holiday-ABL return-(y)Iş-P1p-LOC
çocuk-lar-ı oraya götür-dü-k.
 child-PL-ACC there bring-PAST-P1
 'Returning from holiday, we took the children there.'

b *Ziffereo, Bağdat'a gel-iş-in-de*
 Ziffereo Baghdad-DAT come-(y)Iş-P3s-LOC
 'In a statement he made at his arrival in Baghdad, Ziffereo ...'
yap-tığ-ı açıklama-da ...
 do-DIK-P3s statement-LOC
 'In a statement he made when coming to Baghdad, Ziffereo ...'

(19) *Subject plus adverb*

a *1958-1962 yıl-lar-ı arasında*
 year-PL-CM between
nüfus-un hızla art-ış-ı
 population-GEN rapid increase-(y)Iş-P3s
 'The rapid increase of the population between the years 1958 and 1962'

b *Bu, bazı-ları-nın geri dön-üş-ün-ü*
 this some-PL-GEN back go-(y)Iş-P3s-ACC

biraz çabuklaş-tır-abil-ir
 a little speed up-CAUS-POT-PRES
 'This may speed up the 'return-back' of some of them a little.'

(20) *Subject plus nominal compound*

Ruble-nin ABD para birim-i karşısında değer yitir-iş-i
 rouble-GEN USA money unit-CM against value lose-(y)Iş-P3s¹⁴
 'The value-loss of the rouble in relation to the US money unit'

(21) *Indirect object plus "direct object" (= compound)*

Suudi Arabistan'a F-15 sat-ış-ı
 Saudi Arabia-DAT F-15 sell-(y)Iş-CM
 'The sale / selling of F-15s to Saudi Arabia'

(22) *Nominal compound*

a *Cumhuriyet dönem-in-de hızlı nüfus art-ış-ı*
 republic era-CM-LOC rapid population increase-(y)Iş-CM
 'The rapid population growth in the period of the Republic'

b *Yol çizgi boya-sı sat-ış-ı*
 road stripe paint sell-(y)Iş-CM
 'The sale / selling of road-striping paint'

(23) *"Bare" noun*

a *Her çıkış-ın bir iniş-i var-dır*
 each ascend-(y)Iş-GEN a descend-(y)Iş-P3s 'exist'-emph.
 'Every "up-going" has its "down-going"'

¹⁴ Since the compound *değer yitiriş* 'value loss' is contained in the possessive construction the head of which is *ruble* 'rouble' the compound marker is not expressed, but "overruled" by the possessive suffix P3s. In this respect, 20 can be contrasted to 21 and 22a. For details, see van Schaaiik (1992, 1996).

b *Şef-imiz-in her uğrayış-in-da*
 boss-P1p-GEN each visit-(y)Iş-P3s-LOC

ayn söz-ler-i söyle-di
 same word-PL-ACC say-PAST
 'At every visit of our boss he spoke the same words'

c *Bu üniversite-de yüz-de kırk-lık bir kapasite artışı*
 this university-LOC 100-LOC 40-adj a capacity increase-CM
 'An increase of capacity of 40 per cent at this university'

In 17a-b, both being based on an intransitive verb, the embedded subjects have the genitive and, accordingly, the nominalized verb forms show person agreement as expressed by possessive markers. In examples 18a-b there is no overt subject, but the implicit subject status comes to the fore by the occurrence of person agreement: The possessive suffixes *-(I)mIz*¹⁵ 'our' in 18a and *-(s)I(n)* 'his' in 18b. Adverbs are included in 19a-b, which both resemble 17 a-b. The phrase in 20 contains a genitivized subject as well as a zero-marked direct object, and, furthermore, an adverbial clause. An alternative way of handling *değer yitiriş* 'loss of value' is to say that it constitutes a nominal compound (cf. Van Schaaijk 1996), which is expressed as *değer yitiriş-i* 'value loss-CM' when it is used as a "free" NP, but which takes a possessive marker in a possessive environment (as is the case in 29 because of *ruble-nin* 'of the rouble'). Also the text fragment from which 21 was taken does not contain a subject. Its heading "indirect object plus direct object" may be somewhat misleading, but what 21 at least demonstrates is that the compound *F-15 satış-ı* 'the sale of F-15s' (still) has the verbal property that it is expandable by an indirect object. Similar observations can be made in 22a, where *nüfus artışı* 'increase of population' is expanded by two adverbial phrases. In contrast to the case of 21, *satış* 'sale' in 22b does not exhibit any verbal properties since it occurs as the head in a complex (right-branching) compound which is entirely based on nominal material: *((yol (çizgi boya)-sı) satış-ı)*. Examples 23a-c are based on nouns: In 23a-b these nouns are individuated by the quantifier *her* 'every', and for 23b this yields the (alternative) interpretation 'Every

¹⁵ The "fourfold" vowel *I*, as in *(I)*, occurs after a consonant.

single time the boss drops by ...'. Finally, 23c shows again that a *-(y)Is* nominalization may end up as a full (lexical) noun. It functions here as the head of a compound which is modified by the adjectival phrase *yüzde kırk-lık* 'of forty per cent'.

Returning to the figures tabulated in 16, they strongly suggest that embedded constructions based on the suffix *-(y)Is* cannot be considered to represent a formation type that is equivalent to that of *-DIK* and *-mE* nominalizations. The expression of direct objects seems to be impossible, only in a limited number of cases do indirect objects and adverbials occur, and in far fewer than 50% of the cases is there an overt subject. Hence, speaking in overall terms, the comparison of *-(y)Is* formations with finite clauses (as those in *-DIK* and *-mE*) is not successful.

When we compare the degree of "expressibility" of constituents in the constructions under discussion with the analyses of nominalizations described in Mackenzie (1996) and Koptjevskaja-Tamm (1993), we see that the general type of (non-)finite construction that comes closest to our *-(y)Is* forms is a "genitive gerund" or a "productive nominalization". Mackenzie, who follows Ross (1973), distinguishes "gerunds" (e.g. *my horse winning the race*), "genitive gerunds" (e.g. *my horse's winning the race*), and "productive nominalizations" (e.g. *my horse's winning of the race*). Typically, gerund constructions contain subjects and direct objects that are expressed as in finite clauses; in constructions termed genitive gerunds only the subject is expressed by a genitive, whereas in productive nominalizations both subject and direct object take a genitive (or possessor-like) marker. According to Mackenzie, these distinctions match well with Koptjevskaja-Tamm's findings, which were produced in a cross-linguistic study based on 99 languages: The gerund type of construction equals her "sentence type", a characteristic of which is that all constituents retain sentential marking; the genitive gerund corresponds with her "possessive-accusative" type of construction, where the subject takes the genitive and all other constituents have sentential marking; and finally, the "ergative-possessive" and "nominal" types as described in Koptjevskaja-Tamm correspond to Mackenzie's nominalization category. Roughly speaking, the main characteristic of the latter types is that either subjects and / or direct objects genitivize.

In the case of Turkish, however, there is only a parallel with the distinctions given above as far as *-DIK* and *-mE* nominalizations are concerned: Subjects take the genitive, but other constituents retain sentential marking. On the basis of this observation, this type of nominalizations

can be categorized as "genitive gerunds" (cf. Underhill's "gerundives"). As for the *-(y)Iş* nominalization, however, such parallels cannot be drawn, due to the mere fact that direct objects do not occur other than with zero-marking. The closest approximation is Koptjevskaja-Tamm's so-called "incorporating" type (Mackenzie's *race-winning of my horse*), characterized by genitive expression of subjects and incorporation of the direct object. This type of nouns is termed nominal compound in the present analysis, and constitutes 25% of the actual occurrences in our sample.

On the basis of the foregoing it is safe to claim for the data presented so far, that *-(y)Iş* types of formation are basically produced by a productive nominalization process which delivers a deverbal noun in the first place. According to Mackenzie¹⁶ (who follows Vendler 1957), such nouns are formed, then, to denote "abstractions" (second-order entities) or, according to Lees (1960), they denote "ways of doing something" (cf. 14b, 15a, 17a). As for the "expressibility" of constituents, Mackenzie (1985, 1986) defends the hypothesis that such deverbal nouns are in principle a-valent (as formalized by the Valency Reduction Hypothesis), but that arguments and "implied" satellites can easily be reintroduced. For Agents and Patients the situation in Turkish is immediately clear: Subjects can be expressed (as they are by means of the genitive), but contrary to what might be expected, direct objects do not occur. The notion of "implied" satellite perhaps needs some clarification here. As Dik (1978, 1989) observes, for action verbs (and also for those denoting a Position or a Process) "the way in which such an action" is performed is necessarily implied, e.g. saying that 'John danced' implies that he danced in a certain way, which can be optionally expressed by a manner adverb. In quite a similar fashion,¹⁷ using *dön(-üş)* 'return' in 18a implies a "direction" (to somewhere) or a "source" (from somewhere, here: *izinden* 'from vacation'), and *gel(-iş)* 'coming' in 18b implies "source" or "direction" (*in casu Bağdat-a* 'to Baghdad'). And even for 23c we

¹⁶ For a detailed survey of the syntactic, semantic, and pragmatic effects of nominalizations, see Mackenzie (1996).

¹⁷ I am aware of the fact that there is a principled difference between the argument status and satellite status of constituents (see Dik 1989: 72-75), but I assume that these differences are, at least for non-first arguments, irrelevant with respect to deverbal nouns.

could say that if there is a “40% capacity increase” that it must be located “somewhere”. Hence, *bu üniversitede* ‘at this university’ would constitute an implied locational satellite. In this view, also the indirect object of 21 *Suudi Arabistan-a* ‘to Saudi Arabia’ could easily be taken as an “implied” constituent, for ‘selling’ means ‘selling something to someone’. However, for the direct object of 22b, *yol çizgi boyası* ‘road-striping paint’, it is impossible to assume some degree of “impliedness”. Finally, for verbs denoting a process, such as *art-* ‘increase’ in 19a, 22a, 23c or *yitir-* ‘lose’ in 20, some additional (= implied) information about size, degree, volume, speed, and the like may be expected in any case.

Now, stipulating that a deverbal noun in *-(y)lş* may take subjects and implied constituents by (re-)introducing them would mean for Turkish that (constituent) sequences as represented in 24 can be accounted for in 84% (= 38% subjects; 11% indirect objects; plus 10% adverbials and 25% “bare” nouns) of the occurrences of *-(y)lş* forms:

(24) (subjectGEN) (indirect object) (adverbial) verb *-(y)lş*

On the other hand, it is at least remarkable that in our sample not a single occurrence of a direct object marker with the accusative was found. The sole example (as attested in a recent newspaper) which could be considered as one containing a direct object was the following:

(25) *Bu toprak ürün-ler-in-in satış-ı*
 this soil produce-PL-CM-GEN sale-P3s
 ‘The sale of these agricultural products’

However, expanding 25 by an Agent phrase leads to an ungrammatical sequence, which implies that the simultaneous expression of a subject and a direct object is “blocked”. This can be shown by the following.

(26) **Köylü-ler-in bu toprak*
 farmer-PL-GEN this soil

ürün-ler-in-in satış-ı yasaklan-dı
 produce-PL-CM-GEN sale-P3s forbid-PAST
 ‘The sale of these agricultural products by the farmers was forbidden.’

Even 25 was not equally well excepted by my informants. Most of them proposed to replace *satış* by its passive counterpart *satılış*, which makes *bu toprak ürünlerin-in* 'these agricultural products' the subject of the embedded verb. Contrary to what Mackenzie's model predicts, the simultaneous expression of subject and direct object in the form of (two) Possessors (as in (*my horse's*) *winning (of the race)*) seems possible only in a very limited number of cases in Turkish.

Clearly, there is a difference between *-(y)Iş* nouns derived from intransitive verbs and those made on the basis of a transitive verb. Following Mackenzie's model, that is, assuming a productive mechanism that derives such nouns, "ready for use" so to speak, implies that a verb is "deprived" of its arguments and satellite positions, which can (at least in a number of cases) be (re-)introduced after that nominalization has taken place. Now, if we presume that such productions are made "on the fly" or "whenever desired" (as if comparable to what I have called "syntactic" nominalization) the question might be raised: "Why all this trouble of reducing argument and satellite positions if they are going to be reintroduced anyhow?" If such a nominalization is carried out to create a noun denoting an "abstraction" (in the sense of Vendler 1957), with different semantics as reflected in the reduced argument structure, it seems reasonable then, that such a new predicate is stored lexically, just because of the "derived" semantics it brings along. Furthermore, lexical storage involves re-indexation for the newly obtained lexical category. Similar to the indexations "V", "N", "A" for the basic predicates verb, noun, and adjective, the additional indexation could be thought of in terms of "N < V", NV, Nv, or whatever seems appropriate,¹⁸ in which the "N" stands for the new status of the predicate, meaning that it should primarily be used as a noun, that is, that it has in principle obtained all properties of a basic nominal predicate. That implies that it can be specified for definiteness and that it can take case markers and possessive

¹⁸ Assuming that there are three basic lexical categories, V, N, A, a system of co-indexation could be set up for the six theoretically possible transitions between these categories. For Turkish, however, the transitions N < A and A < N are hardly utilized, so I give only examples of the four most common derivations: N < V *açılış* 'opening'; A < V *unutulmaz* 'unforgettable'; V < N *sula-* 'to water'; V < A *çabuklaş(tır)* 'to speed up'.

For a thorough treatment of word formation in Turkish, see Lewis (1967).

suffixes, etc., but that the possibility of pluralization is probably excluded since such deverbal nouns constitute a denotation of a "single event". Its co-indexation "V", then, means that the predicate (still) retains some of its verbal properties, but certainly to a limited extent, as is reflected by its reduced argument structure.

Whereas "real" nouns are a-valent in Mackenzie's view, it remains to be seen if this could be said for the *-(y)Iş* nominalizations of Turkish as well, especially when it comes to a more detailed classification. Taking verbs as predicates with a full argument structure on the one hand, and say, basic nouns as a-valent predicates on the other one, it will be clear that there are some arguments in favour of the view that verbal nouns take a position somewhere between these extremes. To be more concrete, I would suggest that for a first argument (the subject) of an intransitive verb, it is not very likely that its argument position is reduced and possibly reintroduced later, but that it remains part of the predicate structure. The reason is equally simple as straightforward: Due to the (still somewhat) verbal character of the verbal noun a subject is always to be presupposed. Talking about *akış* 'flow' always presupposes that 'something flows', in other words, it is not feasible to talk about an abstraction of some event by using a deverbal noun without, sooner or later, having a subject in mind, irrespective of the fact whether its subject is something tacitly in the background or whether it is overtly expressed. Especially when we bear in mind that the statistics showed 38% overt subjects, leaving room for 12% (= 62% minus 50% nouns, including compounds) additional cases of unexpressed subjects (although verb-subject agreement was shown throughout).

For transitive verbs we get the following picture: Both the subject and direct object argument positions are reduced. The most frequent way of expressing a direct object is by means of a nominal compound. Passives (derived intransitives) on the other hand, are much like "real" intransitives: The direct object of the "original" transitive verb takes the place of the first argument of the passive. Hence, it will be expressed with the genitive marker in combination with a deverbal noun, as can be exemplified by the following:

- (27) a *Eskişehir-in düşman işgal-in-den kurtul-uş-u*
 Eskişehir-GEN enemy occupation-Ps3-ABL to be liberated-(y)Iş-Ps3
 'the liberation of Eskişehir from the occupation by the enemy'

b *toplantı-nın aç-il-iş-in-da*
 meeting-GEN open-PASS-(y)Iş-Ps3-LOC
 'at the opening of the meeting'

Taking into account that the expression of direct objects is "blocked" for transitive verbs and that its subject never appears in such nominalizations, we may assume that these verbs constitute the only category of verbal nouns which have a fully reduced argument structure. As a consequence, such deverbal nouns are fully lexicalized and a-valent. This view is supported by the observation that in *-(y)Iş* nominalizations of passive verbs only the original direct object can be expressed, and, as can be expected, is expressed as the genitivized subject. Deverbal nouns based on a passive verb stem can be compared to intransitive deverbal nouns.

In terms of a morphological derivation process, the effects of nominalization can be summarized as follows:

- | | | |
|--------|--|---------------------------------------|
| (28) a | <i>Intransitive verb</i> | <i>Example</i> |
| | Input: $\text{pred}_V(A_1)$ | $\text{ak}_V(A_1)$ 'to flow' |
| | Output: $\text{pred-(y)Iş}_{NV}(A_1)$ | $\text{ak-ış}_{NV}(A_1)$ 'flow' |
| b | <i>Transitive verb</i> | <i>Example</i> |
| | Input: $\text{pred}_V(A_1)(A_2)$ | $\text{sat}_V(A_1)(A_2)$ 'to sell' |
| | Output: $\text{pred-(y)Iş}_{NV}(A_1)$ | $\text{sat-ış}_{NV}(A_1)$ 'sale' |
| c | <i>Passive verb (= derived intransitive)</i> | <i>Example</i> |
| | Input: $\text{pred-PASS}_V(A_2)$ | $\text{aç-il}_V(A_2)$ 'to be opened' |
| | Output: $\text{pred-PASS-(y)Iş}_{NV}(A_2)$ | $\text{aç-il-ış}_{NV}(A_2)$ 'opening' |

It should be noted, however, that once a deverbal noun in *-(y)Iş* based on an intransitive verb has been lexicalized the first argument position may "erode", thereby losing its "event"-reading. There are many examples of a transition of e-noun to x-noun. For instance, the noun *çıkış* can be considered as an e-noun meaning '(way) of going out' and allowing for the expression of a subject (type 28b), but also as an x-noun when it refers to 'exit'. In the latter case, the occurrence of a genitive complement can of course not be interpreted as a subject.

As we have seen, the deverbal nouns under consideration are to be considered "abstractions" for which it can be expected that "expressi-

bility” of constituents is more limited than in finite embedded clauses. The abstractions were described as “single instances” of some action, as has been illustrated on the basis of the “kissing event” in 12. In some data, however, which have not been introduced yet, the element of singularity of (an individuated) event, as singled out from a series of (possible) events, in a number of cases hardly seems to be distinct from a fact-reading or “circumstance”-reading. The category of verbs that exhibit this property are verbs which contain the verbal negator *-mE*, as demonstrated by the following:

- (29) a *Bence bun-un neden-i bir erkek arkadaş-ım-in*
I. m. v. this-GEN reason-P3s a male friend-P1s-GEN

ol-ma-yış-tı ve ev-im-e akşamları erkek-ler-in
ol-NEG-(y)Iş-P3s and house-P1s-DAT evenings man-PL-GEN

misafir olarak gel-me-yiş-i-dir

guest as come-NEG-P3s-emph

‘In my view the reason for this is *that* I don’t have a male friend and *that* men do not come to my house as guests in the evening.’

- (29) b *Birbirin-i sev-mi-yen insan-lar-ı*
each other-ACC love-NEG-PRT person-PL-ACC

evlen-dir-ip sonra da
marry-CAUS-CONV after and

geçin-eme-yiş-ler-in-e şaş-ıyor-lar.
cope-NEG-POT-(Y)Iş-PL-Ps3-DAT surprise-PRES-P3

‘And after they have married off people who do not love each other, they are surprised *that* they are not able to cope (with each other).’

Yet another small number of verbal expressions based on *-(y)Iş* nouns were found which could be advanced as possible counter-examples for the point of view defended here, namely, that “full blown” deverbal expressions are not likely to occur frequently. As a matter of fact, without exception, these examples were taken from texts that were translated into Turkish, and what is more, these translations are not of a very recent

date. Compare the following examples, which all allow for a “facts” or “manner” reading:

- (30) a *Bütün gece eğlen-ir-ler, fakat bu eğlence aynı*
whole evening amuse-PRES-3P but this feast same

zamanda genç kızın baba ev-in-den ve kız
time-LOC young girl-GEN father house-P3s-ABL and girl

arkadaş-lar-ın-dan ayrıl-ış-ın-ı sembolize eder
friend-PL-P3s-ABL leave-(y)İş-P3s-ACC symbolize-PRES
'They have fun the whole evening, but at the same time this feast symbolizes (the moment) that the young girl leaves her father's house and her girl friends.'

- b *Karı-m-ın piyano-nun ön-ün-de sahte bir*
wife-P1s-GEN piano-GEN front-P3s-LOC false a

kayıtsızlık-la otur-uş-un-u hatırlı-yor-um
indifference-INST sit-(y)İş-P3s-ACC remember-PRES-1S
'I remember (that moment) that / how my wife was seated in front of the piano with a false air of indifference.'

- c *Koca dolap-lar-ı araba-dan tek başına indir-iş-i*
giant closet-PL-ACC car-ABL alone unload-(y)İş-P3s

de güçlü ol-duğ-un-u göster-iyor-du
too strong be-DIK-P3s-ACC show-PRES-PAST
'And also that moment / how he unloaded the giant closets from the pick-up was showing that he was strong.'

- d *Ben-i kucakla-yıp kemik-ler-im-i*
I-ACC embrace-CON bone-PL-P1s-ACC

kırar-casına sık-tı, öp-tü.
break-'as if' press-PAST kiss-PAST
'(S)he embraced me, squeezed me as if to break my bones, and kissed me.'

'Dişle-di' demek daha doğru ol-ur,
bite-PAST say more just ol-PRES

öylesine sert idi öp-üş-ü
that hard was kiss-(y)Iş-P3s
'To say "bit me" is more accurate, it was
that hard, her / his (way of) kissing.'

As can be observed by looking at texts written by Turkish authors, such "expanded" expressions do not occur (at least in our sample). A possible explanation for the occurrence of such *-(y)Iş* forms plus complements in translations (thereby taking the appearance of a finite clause—comparable to those in *-DIK* and *-mE*) may be interference with the source texts. Another factor that may have contributed to the usage of *-(y)Iş* forms rather than suffixes for finite forms is possibly the *Zeitgeist*. The translations from which the examples were taken are not very up to date, the oldest one dating back to the late 1940s and the most recent one published some fifteen years ago. In order to get an impression of how modern speakers of Turkish would select an appropriate suffix, ten informants were asked to complete a number of sentences from which the suffix *-(y)Iş* had been omitted. The results¹⁹ indicate unequivocally that the preference for this suffix is not very high in most cases, even when a "manner"-reading is possible. In the case of 30d the *-(y)Iş* form was selected unanimously (ten times), but for 30b not more than four respondents filled in *otur-uş* 'way of being seated', whereas six respondents opted for *-DIK*, two of whom provided an alternative in *-mE*. This can, of course, be explained in terms of "fact" versus "act" reading (cf. section 2.1.). Also for 30a there was a high preference to "act" (eight times *-ma(si)*) over the usage of the deverbal suffix *-(y)Iş* (twice), whereas for 30c the *-(y)Iş* form in the translation was replaced by the "act" suffix *-me(si)* in 100% of the cases.

¹⁹ The degree of reliability or the extent to which these results are representative should of course be investigated on a more solid basis; for instance, by taking a much larger group whose members are evenly distributed in terms of age, level of education, social class, geographical region, etc.

3. A brief note on lexicalization

As was indicated in the introduction, Pamir (1995: 182-183) makes a distinction between "action nominals (verbal nouns)" and "factive nominals (nominalization)". Although the *-mE* constructions discussed in 2.1. all have nominal morphology, these forms (consisting of a verb stem plus *-mE*) should be considered as the result of a nominalization that takes place at the syntactic level. Therefore they are to be regarded as inflectional rather than derivational forms. The genitive case marker, nominalizing morpheme, and possessive suffixes are used to express subject, tense, and subject-verb agreement only in a specific environment: When a predication is used as an embedded clause. Similar arguments can be advanced for the expressions referred to by Pamir as "nominalization", that is, forms in *-DIK / -(y)EcEK*. Hence, both formations in *-mE* and *-DIK / -(y)EcEK* should be termed either "verbal nouns" or "nominalization", since the same process underlies all formations. Furthermore, the term "verbal noun" is not very adequate either, because what is usually meant by this term is a type of predicate that is produced by derivation and not produced via an inflectional path.

So, the term "(de)verbal noun" should only be used for those forms in *-mE* which are brought about by some derivational rule that is applied to produce a new predicate. Such predicates indeed exist, especially since the underlying formation rule is highly productive. One should bear in mind, however, that there is a fundamental difference between seemingly equal *-mE* forms which occur in embedded clauses or in some other domain. Many forms containing *-mE* are lexicalized (deverbal) nouns, and are not *a priori* the result of an inflectional formation, as discussed above. This can be exemplified by the following:

- (31) a *Berna, Murat-in araba-sın-ı*
 Berna, Murat-GEN car-P3s-ACC

süsle-me-sin-i *beğen-me-di*
 decorate-mE-P3s-ACC like-NEG-PAST
 'Berna didn't like how Murat has decorated his car.'

- b *Berna, Murat-in süsleme-sin-i* *beğen-me-di*
 Berna, Murat-GEN decoration-P3s-ACC like-NEG-PAST
 'Berna didn't like Murat's decoration.'

In 31a *süsle-me-si* 'his way of decorating' is the result of a series of inflectional operations, whereas *süsleme-si* 'his decoration' in 31b is based on the lexicalized form *süsleme*.

A typical property of lexical *-mE* forms is that in many cases they also seem to denote first-order entities (things) besides second-order entities (events). For instance, *süsleme* 'decoration' also refers to a thing, the 'result of decorating' or the 'things one decorates with'; *bağlama* (< *bağla-* 'to tie, bind') is not only 'tying; binding', but also a certain 'musical instrument' or 'brace; crossbeam'; *besleme* (< *besle-* 'to feed, to nourish') is not only 'feeding, nourishing' but also (formerly) 'servant brought up as a member of the household'; *çıkartma* (< *çıkart-* + *caus* 'to remove') means 'having removed' and 'sticker' or 'transfer'; *havalandırma* (< *havalandır-* 'to air, to ventilate') refers primarily to a device ('air-conditioning') and secondarily to the event of 'airing, ventilating'; *açıklama* (< *açıkla-* 'to explain, clarify') 'explanation / statement / comment' can be used to denote an act (of explaining) or to refer to a certain type of document (or text). Similarly, the predicate *alıştırma* (< *alıştır-* 'to train, exercise') means 'doing an exercise / training', but also the more concrete, textual representation of what should be exercised or trained.

A possible interesting parameter for further investigation as to how deverbal nouns may eventually end up in the lexicon (as e-nouns or as x-nouns) might be the transitive : intransitive opposition of the underlying verb. The same would hold for the fate of nominalizations in *-(y)Iş*. Since these forms are derivational by nature, it may be expected that a sizeable proportion have been lexicalized. Indeed, this is confirmed by a superficial survey of an electronic dictionary (Redhouse 1996).

Lexical forms in *-mE*, however, far outnumber the forms in *-(y)Iş*. Also, for this latter type of lexical formations many instances of a shift in entity order can be observed. Apart from the example *çıkış* 'act of going out' and 'exit', the following predicates may illustrate this point: *giriş* 'entering' (event) and 'entrance' (thing); *geçiş* 'passing' (event) and 'passage' (thing); *görüş* 'act of seeing' and 'opinion'; and finally, *iniş* 'going down' and 'downward slope'.

A special category of interesting lexicalized forms are some 35 "doublets", that is, derivational forms in both *-mE* and *-(y)Iş* based on one verb stem, e.g. *akma* – *akış* (< *ak-* 'to flow'); *çekilme* – *çekiliş* (< *çekil-* 'to be drawn'). How such forms can be further classified in terms

of entity order (or other relevant notions such as "result" or "manner"), however, is left to further investigation.

References

- Boeschoten, H. E. & Verhoeven, L. (eds.) 1987. *Studies on Modern Turkish. Proceedings of the Third International Conference on Turkish Linguistics*. Tilburg: Tilburg University Press.
- Brendemoen, Bernt & Csató, Éva Ágnes 1987. A syntactic analysis of Turkish gerundial clauses with subject control. In: Boeschoten & Verhoeven (eds.), 121-135.
- Csató, Éva Ágnes 1990. Non-finite verbal constructions in Turkish. In: Bernt Brendemoen (ed.) *Altaica Osloensia, Proceedings from the 32nd meeting of the Permanent International Altaistic Conference, 1990*. Oslo: Universitetsforlaget. 75-88.
- Dik, Simon C. 1978. *Functional Grammar*. Amsterdam, Dordrecht: Foris. [3rd printing 1981.]
- Dik, Simon C. 1989. *The theory of Functional Grammar (Part 1: The structure of the clause)*. Dordrecht: Foris.
- George, Leland & Kornfilt, Jaklin 1981. Finiteness and boundedness in Turkish. In: Heny, F. (ed.) *Binding and filtering*. London: Croom Helm; Cambridge (Mass.): MIT Press. 105-128.
- Hengeveld, Kees 1989. Layers and operators. *Journal of Linguistics* 25/1, 127-157.
- Kennelly, Sarah D. 1987. Turkish gerunds. In: Boeschoten & Verhoeven (eds.), 136-148.
- Kural, Murat 1993. *V-to-(I-to-C) in Turkish*. UCLA Occasional Papers in Linguistics 11.) Los Angeles: UCLA, Department of Linguistics.
- Lees, Robert B. 1960. *The grammar of English nominalizations*. Bloomington: Indiana University Press.
- Koptjevskaja-Tamm, Maria 1993. *Nominalizations*. London: Routledge.
- Lewis, Geoffrey 1967. *Turkish grammar*. Oxford: Oxford University Press.
- Mackenzie, J. Lachlan 1985. Nominalization and valency reduction. In: Bolkestein, A. Machtelt & de Groot, Casper & Mackenzie, J. Lachlan (eds.) *Predicates and terms in Functional Grammar*. Dordrecht: Foris. 29-47.
- Mackenzie, J. Lachlan 1986. *Aspects of nominalization in English and Dutch*. (Working Papers in Functional Grammar 15.) Amsterdam: IFOTT.

- Mackenzie, J. Lachlan 1996. English nominalizations in the layered model of the sentence. In: Devriendt, B. & Goossens, L. & van der Auwera, J. (eds.) *Complex structures. A functionalist perspective*. Berlin: Mouton de Gruyter. 325-355.
- Özsoy, Sumru 1996. *Türkçe konuşalım*. İstanbul: Dil Uygulama ve Araştırma Merkezi, Boğaziçi Üniversitesi.
- Pamir Dietrich, Ayşe 1995. An analysis of subordinate clauses in Turkish. In: İmer, K. & Kocaman, A. & Özsoy, Sumru (eds.) *Dilbilim araştırmaları*. Ankara: BBB. 182-196.
- Redhouse Sözlük 1996. *İngilizce - Türkçe ve Türkçe - İngilizce sözlük* [CD-ROM]. İzmir: Sayısal A.Ş.
- van Schaaik, Gerjan 1992. The treatment of Turkish nominal compounds in FG. In: Fortescue, Michael & Harder, Peter & Kristoffersen, Lars (eds.) 1992. *Layered structure and reference in a functional perspective*. Amsterdam: Benjamins. 231-252.
- van Schaaik, Gerjan 1996. *Studies in Turkish grammar*. (Turcologica 28.) Wiesbaden: Harrassowitz.
- Siewierska, Anna 1991. *Functional Grammar*. (Linguistic theory guides.) London: Routledge.
- Underhill, Robert 1972. *Turkish grammar*. Cambridge (Mass), London: MIT Press.
- Vendler, Zeno 1957. Verbs and times. In: *Philosophical Review* 56, 143-160.
- Vendler, Zeno 1967. *Linguistics in philosophy*. Ithaca (New York): Cornell University Press.
- Vendler, Zeno 1972. On saying something. In: *Res cogitans, an essay in relational psychology*. Ithaca (New York): Cornell University Press.
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