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Turkish Participles*

There are two different types of relative clause construction in Turkish. One of these is the type exhibited in (1):

(1) mekteb-e gid-en oğlan
school *-dat* go *-part* boy
'the boy who goes to school'

which is derived from the underlying sentence:

(2) oğlan mekteb-e gid-er
boy school *-dat* go *-pres*
'The boy goes to school.'

Here it appears that the participle suffix (*-en*) replaces the tense suffix (*-er*) of the underlying sentence. In addition, the "head noun" of the construction, *oğlan*, which appears to the right of the relative clause in the higher sentence, is deleted in the lower sentence.[1]

There are four suffixes which may be used in constructions of this type, but the unmarked member of the set is *-En* (having the phonetic forms *-en*, *-an*, *-yen*, *-yan*),[2] which we will use in our further examples.

The other type of construction, also from (2), is exhibited in (3):

(3) oğlan-in git-tiğ -i mektep
boy *-gen* go-*part-3s* school
'the school which the boy goes to'

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[1] Because the match between tenses and participles is not exact, it is not always possible, given a participle construction, to determine the tense of the underlying sentence. We will not be concerned with this issue here.

[2] In accordance with standard Turcological practice, we use the symbols /D E I/ to represent segments which are not fully specified until after the rules of vowel harmony and consonant assimilation. Also in accordance with standard practice, we write "ğ" for postvocalic /g/, although we believe that these segments are not phonologically distinct. For discussion of this issue and explanation of the rules referred to, see Lees (1961) and Zimmer (1965).

Again it appears that the participle suffix (*-tiğ*) replaces the tense and that the head noun is deleted in the lower sentence. In addition, the subject of the embedded sentence is put into the genitive case, and a possessive suffix agreeing in person and number with the subject is attached to the participle. The result is something which looks like a nominalization: 'the school related to the boy's going'. There are two suffixes which may be used in constructions of this type, and the unmarked member of the opposition is *-DIg* (having sixteen phonetic forms according to context), which we will use in our further examples.

Most traditional descriptions of Turkish do not attempt to formulate the conditions under which these two constructions are used; and for each formulation which has been attempted, there is a regular set of counterexamples.[3]

The most obvious generalization is that when the head noun is the subject of the underlying sentence, a construction of the *-En* type appears, while if the head noun is not the subject, a construction of the *-DIg* type appears. Thus in the derivation of (1) from (2), the head noun *oğlan* is the subject of the underlying sentence, while in the derivation of (3) from (2), the head noun *mektep* is in a dative relation to the main verb. This generalization accounts for a sufficient number of cases so that henceforth we will use the term "subject participle" (SP) for the *-En* type, and, by way of contrast, "object participle" (OP) for the *-DIg* type.

The head noun of an object participle construction may be the object of the underlying sentence, or it may be in a variety of adverbial relations to the verb. For example, it may be a directional dative (as in (1)), a directional ablative, a dative with a verb which "takes the dative", an ablative with a verb which "takes the ablative", a noun in a locative or time adverbial phrase, or a noun related to the verb with the postposition *ile* 'with' (in its comitative, but not instrumental, sense).

The first set of counterexamples involves cases where the head noun is genitive in the underlying sentence, cases where English regularly uses the relative pronoun *whose*.

(4) oğl-u mekteb-e gid-en adam
son-*3s* school *-dat* go *-SP* man
'the man whose son goes to school'

This comes from:

(5) adam-ın oğl-u mekteb-e gid-er
man *-gen* son-*3s* school *-dat* go *-pres*
'The man's son goes to school.'

Here *adam*, the head noun, is not the subject of the underlying sentence although it is part of the subject noun phrase; the subject is *oğul* 'son'. However, a subject par-

[3] The most adequate discussion is in Lewis (1967, 260–263) and Lees's review (1970, 132–135). Kissling (1960, 177–178) and Kononov (1956, 444–446 and 452–453) give a number of useful examples.

ticiple is used, and the corresponding object participle construction would be ungrammatical:

(6) *oğl-un-un mekteb-e git-tiğ-i adam
son-*3s* -*gen* school -*dat* go-*OP*-*3s* man

For an example from a literary text, consider (7):

(7) ana -si dağ -lar-da gez -en bir yilan yavru-su
mother-*3s* mountain -*pl* -*loc* wander-*SP* a snake child -*3s*
'A snake's child whose mother wanders in the mountains'

derived from:

(8) yilan yavru-sun-un ana -si dağ -lar-da gez -er
snake child -*3s* -*gen* mother-*3s* mountain-*pl* -*loc* wander-*pres*
'The snake's child's mother wanders in the mountains.'

where a subject participle is used although the head noun *yilan yavrusu* is not the subject.

Another example is (2):

(9) alt , -i ǰam ol-an kayik
bottom-*3s* glass be-*SP* boat
'glass-bottom boat'

derived by the Turkish equivalent of *Wh*-Be Deletion from:

(10) alt -i ǰam ol-an kayik
bottom-*3s* glass be-*SP* boat
'boat whose bottom is glass'

for which the underlying sentence is:

(11) kayiğ-in alt -i ǰam (-dir)
boat -*gen* bottom-*3s* glass -*decl*
'The boat's bottom is glass.'

It will be clear that in all these examples the head noun, while it is not itself the subject, is the possessor of the subject. Compare the case where the head noun is the possessor of some noun other than the subject:

(12) oğlan-in mekteb-in-e git-tiğ-i adam
boy -*gen* school -*3s*-*dat* go-*pres* man
'the man whose school the boy goes to'

This comes from:

(13) oğlan adam-in mekteb-in-e gid-er
boy man -*gen* school -*3s*-*dat* go -*pres*
'the boy goes to the man's school'

Here an object participle is required; the corresponding subject participle construction would be ungrammatical, at least in the same sense as (12):

(14) *oğlan mekteb-in-e gid-en adam
boy school *-3s-dat* go *-SP* man

It turns out, then, that when the head noun is genitive in the underlying sentence, a subject participle is used if the head noun is in the subject noun phrase, an object participle if the head noun is in some other noun phrase. We could therefore extend our initial generalization in a relatively minor way to cover these cases.

But now consider cases like (15):

(15) üst-ün-de šarap dur -an masa
top-*3s* *-loc* wine stand-*SP* table
'the table that wine is standing on'

Compare the phrase:

(16) masa-nin üst-ün-de
table-*gen* top-*3s* *-loc*
'at the top of the table = on the table'

In (15) the head noun, *masa*, is neither the subject nor part of the subject noun phrase in underlying structure; it is deleted from a locative adverbial expression, and the subject of the underlying sentence is *šarap*. Yet a subject participle is used. Consider also:

(17) alt -in-dan su ak -an kapi
bottom-*3s-abl* water flow-*SP* door
'the door that water is flowing out from under'

(18) üzer-in-de bir kuš otur-an ağač
top *-3s-loc* a bird sit *-SP* tree
'the tree that a bird is sitting on'

That the use of a subject participle here is not somehow connected with the idiomatic constructions *üstünde*, *altından*, or *üzerinde*, is shown by (19):

(19) oda -sin-da bir lamba yan -an adam
room-*3s* *-loc* a light burn-*SP* man
'the man in whose room a light is burning'

(Compare the phrase:

(20) adam-in oda -sin-da
man *-gen* room-*3s* *-loc*
'in the man's room')

where *odasında* is not used in any idiomatic function.

Notice that in (15) and in (17)–(19), the subject of the embedded sentence is either clearly indefinite (as *bir kuš* 'a bird', *bir lamba* 'a light') or must be interpreted as indefinite (as *šarap* 'wine' or *su* 'water').[4] It turns out that if the subject of the embedded sentence is definite, an object participle is required:

(21) üst-ün-de šarab-in dur -duğ-u masa
top-*3s* -*loc* wine -*gen* stand-*OP* -*3s* table
'the table that the wine is standing on'

(22) alt -in-dan suy -un ak -tiğ -i kapi
bottom-*3s-abl* water-*gen* flow-*OP-3s* door
'the door that the water is flowing out from under'

(23) üzer-in-de kuš -un otur-duğ-u ağač
top -*3s-loc* bird-*gen* sit -*OP* -*3s* tree
'the tree that the bird is sitting on'

(24) oda -sin-da lamba-nin yan -diğ-i adam
room-*3s* -*loc* light -*gen* burn-*OP-3s* man
'the man in whose room the light is burning'

So we have a regular and interesting opposition: where the head noun is the genitive member of a locative expression, we find a subject participle if the subject of the embedded sentence is indefinite, an object participle if the subject of the embedded sentence is definite.[5] This seems like an unusual fact and leads us to investigate further to see whether indefinite subjects have any other syntactic peculiarities. It turns out that there is a corresponding contrast of word order in simple sentences: while the subject normally comes first in a Turkish sentence, an indefinite subject is regularly shifted to the position next to the verb. So we find contrasts such as:

(25) su kapi-nin alt -in-dan ak -iyor
water door-*gen* bottom-*3s-abl* flow-*prog*
'The water is flowing out from under the door.'

(26) kapi-nin alt-in-dan su ak-iyor
'Water is flowing out from under the door.'

(27) lamba adam-in oda -sin-da yan -iyor
light man -*gen* room-*3s* -*loc* burn-*prog*
'The light is burning in the man's room.'

(28) adam-in oda-sin-da bir lamba yan-iyor
'A light is burning in the man's room.'

We therefore have to recognize, at what we will show must be a fairly deep level

[4] The article *bir* 'a, one' marks a noun as indefinite, but a noun without this article may be definite or indefinite (and singular or plural); thus *üzerinde kuš oturan ağač* 'the tree that a bird/birds is/are sitting on' (cf. (18)).

[5] The subject of the embedded sentence comes out genitive if it is definite, nominative if it is indefinite, since the object participle construction requires a genitive suffix on the subject, while the subject participle does not.

in the grammar, a rule of Indefinite Noun Phrase Movement. The unmarked order of constituents in a Turkish sentence is: subject, direct object, indirect object, verb, as in (29):[6]

(29) adam taš -i oğlan-a at -ti
man stone-*obj* boy -*dat* throw-*past*
'The man threw the stone at the boy.'

We will assume that the rules of the base component will provide this order.[7] Now, if the direct object is indefinite, it moves to the position immediately to the left of the verb; in addition it lacks the objective suffix:

(30) adam oğlan-a taš at-ti
man boy stone throw
'The man threw a stone/stones at the boy.'

If the subject is indefinite, it moves to the left of the verb:

(31) taš-i oğlan-a bir adam at-ti
stone boy a man throw
'A man threw the stone at the boy.'

If both subject and direct object are indefinite, both move and the object is put closer to the verb; presumably the ordering of the clauses of the movement rule will accomplish this.

(32) oğlan-a bir adam taš at-ti
boy a man stone throw
'A man threw a stone at the boy.'

An intransitive verb may be accompanied by an adverbial phrase, normally dative, locative, or ablative. The unmarked order is then: subject, adverbial phrase, verb, as in (33):

(33) dana-lar bostan-a gir -iyor
calf -*pl* garden-*dat* enter-*prog*
'The calves are entering the garden.'

If the subject is indefinite, it again moves:[8]

[6] Those grammars that have discussed word order (Lewis 1970, 239–241; Kissling 1960, 113–114) claim that in the basic order, indirect object precedes direct object. But my informants consistently claim that the reverse order is "more neutral", i.e. unmarked. It may be that having the indirect object closer to the verb than the direct object seems counterintuitive to speakers of Germanic languages.

[7] Since we have no evidence to the contrary. The order exemplified in (29) must be given either by the base, or by rules applying before any of the rules discussed here, since any other variation in word order is given by Scrambling (see below).

[8] It seems that the indefinite subject shifts only over an adverbial phrase for which the intransitive verb is subcategorized, that is, when the adverbial phrase is part of the verb phrase in some strict sense. If we try adding a locative adverbial to (29), producing:

(i) adam sokağ-in orta-sin-da taš-i oğlan-a at-ti ?
man street middle stone boy threw
'The man threw the stone at the boy in the middle of the street.'

(34) bostan-a dana-lar gir-iyor
garden calves enter
'Calves are entering the garden.'

Compare also the derivation of (26) from a structure similar to that of (25), or the derivation of (28) from a structure similar to that of (27).

The rule moving indefinite objects has been familiar for some time, probably because of the accompanying overt morphological difference (the presence vs. absence of the objective suffix).[9] But the literature contains no clear statement of the rule regarding indefinite subjects. The reason may be that this rule is easily confused with the more general process of scrambling which takes place at a lower level in Turkish. There is considerable fluidity of word order in the surface form of Turkish sentences, especially in the colloquial language. Thus, starting again with (29), we can have the following variants, among others:[10]

(35) adam taši oğlana atti
(=29) adam oğlana taši atti
taši adam oğlana atti
taši oğlana adam atti
taši adam atti oğlana
taši atti adam oğlana
oğlana adam taši atti
oğlana taši adam atti
oğlana atti adam taši

It is therefore possible that the alternations exhibited by (25)–(26) or (27)–(28) have been mistaken for simply another manifestation of the scrambling process exhibited in (35). But in fact there are a number of significant differences. The nearly

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the corresponding sentence with an indefinite subject would be:

(ii) bir adam sokağ-in orta-sin-da taš-i oğlan-a at-ti

where *bir adam* is not subject to movement by the rule we have been discussing, although it is subject to scrambling by the rule we are about to discuss. Similarly, for 'a man is watering the flowers in the garden', the possibilities, with informant's judgments, are:

(iii) bir adam bahče -de čiček -ler-i su -lu-yor ("best")
a man garden-*loc* flower-*pl* -*obj* water-*prog*
(iv) bahče-de bir adam čiček-ler-i su-lu-yor ("good")
(v) bahče-de čiček-ler-i bir adam su-lu-yor ("least good")

Discourse conditions!
Hard to find context

It seems that the relations between transitive verb and adverbial element in these examples is not the same as the relation between intransitive verb and adverbial in (34), (26), and (28). We hope that this explains why constructions of the type of (15) and (17)–(19) are found only with intransitive verbs.

[9] For example, this contrast is discussed at length in Grønbech (1936).

[10] There are other variants which are not permitted, including:

*atti adam taši oğlana
*atti taši adam oğlana

For this example at least, there is a restriction that the verb may not come first. Scrambling in Turkish is thus not entirely free.

free scrambling of (35) is only possible if all the noun phrases are definite. But if the object, for example, is indefinite, it must remain in its position in front of the verb. Thus, starting with (30), we can get:

(36) adam oğlana taš atti
(=30) oğlana adam taš atti
oğlana taš atti adam
taš atti adam oğlana

among other variants, but not:

(37) *adam taš oğlana atti
*taš adam oğlana atti
*adam oğlana atti tas
*adam atti taš oğlana

There are similar restrictions with respect to indefinite subjects and adverbial noun phrases.

Indefinite Movement correlates with a clear semantic contrast between definite and indefinite noun phrases, and is obligatory. Scrambling is optional, or more accurately, correlates with differences in focus or emphasis of the noun phrases involved. In addition, Indefinite Movement must precede Relativization, because it provides the environment in terms of which we can define the use of subject participles.

Consider again the examples of the three types of construction where subject participles are used:

(38) *oğlan* mektebe gider (cf. (2)) ⇒ mektebe giden oğlan
adamin oğlu mektebe gider (cf. (5)) ⇒ oğlu mektebe giden adam
masanin üstünde šarap duruyor (cf. (15)) ⇒ üstünde šarap duran masa

In each case the head noun (italicized above) is the first noun in the underlying sentence, after Indefinite Movement has applied.

If the head noun is placed first in the sentence by Scrambling, we do not get a subject participle. The simple sentence underlying (21) is:

(39) šarap masa-nin üst-ün-de dur -uyor
wine table-*gen* top-*3s* -*loc* stand-*prog*
'The wine is standing on the table.'

from which Scrambling may produce (40):

(40) masanin üstünde šarap duruyor
table on wine stand
'*The wine* is standing on the table.'

There are object participle constructions corresponding to each of these; (40) corresponds to (21) (and may *not* give (15)), while (39) gives the less acceptable (41):[11]

(41) šarab-in üst-ün-de dur -duğ-u masa
wine *-gen* top-*3s -loc* stand-*OP -3s* table
'the table that the wine is standing on'

Therefore Relativization, which specifies the choice between subject and object participles, must follow Indefinite Movement but precede Scrambling.

The head noun must not only be first in the sentence, at the indicated point in the rules, but must be either nominative or genitive; a subject participle may not be used if the first noun is in any other case. Thus from (42) in which the head noun, although initial, is dative, we cannot derive (43) with a subject participle, but only the corresponding object participle construction (44):

(42) bostan-a dana-lar gir -iyor
(=34) garden-*dat* calf *-pl* enter-*prog*
'Calves are entering the garden.'
(43) *dana-lar gir -en bostan
calf *-pl* enter-*SP* garden
(44) dana-lar-in gir -diğ-i bostan
calf *-pl -gen* enter-*OP-3s* garden
'the garden which calves are entering'

Compare the semantically similar (45):

(45) bostan-in ič-in-e dana-lar gir -iyor
garden-*gen* in-*3s-dat* calf *-pl* enter-*prog*
'Calves are entering into the garden.'

where *bostan* 'garden' is genitive, and consequently a subject participle construction is permitted:

(46) ič-in-e dana-lar gir -en bostan
in-*3s-dat* calf *-pl* enter-*SP* garden
'the garden into which calves are entering'

Similar examples can be constructed to show that if the head noun is objective, locative, or ablative, a subject participle is not permitted.[12]

[11] "Less acceptable" is the judgment of native speakers; a reason may be the potential ambiguity arising from the fact that the sequence *šarabin üstünde* may be read 'on top of the wine'; or the preposing of locative adverbials may be a favored form of Scrambling.

[12] A few proverbs seem to be counterexamples to this claim, e.g. the much-discussed (by Kononov, Lewis, and Lees) *Güneš girmiyen eve hekim girer* 'The doctor enters the house which sun does not enter', where the head noun (*ev*) must be dative in the underlying sentence; also *Ateš olmiyan yerden duman čikmaz* 'Smoke does not come from the place where there is no fire', where the head noun (*yer*) must be locative. Since the *-DIg* construction is a relatively recent Turkish innovation, we may suppose that the retention of the more archaic *-En* construction in these sentences must be connected with the fact that they are proverbs.

The restriction that the head of a subject participle construction must be nominative or genitive leads us to see whether we can make a further generalization by finding what structural property these two cases have in common. We would like to suggest that there is a level at which nominative and genitive are not formally distinguished, namely before the application of a transformation which introduces the genitive marker.

An ordinary possessive construction like (47) has the same surface configuration as a verbal noun (gerundive nominal) construction like (43):

(47) Ahmed-in šapka-si
Ahmed-*gen* hat -*3s*
'Ahmet's hat'

(48) Ahmed-in gel -me-si
Ahmed-*gen* come-*VN*-*3s*
'Ahmet's coming'

This configuration includes a genitive suffix on the possessor (or subject), and the appropriate possessive suffix on the possessed noun (or verbal noun); compare (49):

(49) a. ben-im šapka-m
I -*gen* hat -*1s*
'my hat'

b. ben-im gel -me-m
I -*gen* come-*VN*-*1s*
'my coming'

We would like to capture this generalization by attaching the genitive marker and possessive suffix[13] to structures like (47) and those like (48) with a single rule. But (48) is clearly derived from a deep structure resembling a finite sentence, something like *Ahmet gel* + *Tense*. Genitive Marking would therefore have to be a transformation, and we would have to suppose that the nominalization transformation which creates (48) produces a surface structure identical to that of ordinary possessives, so that Genitive Marking could then apply to both structures.

We will not attempt to specify formally here how this is done[14] or for that matter,

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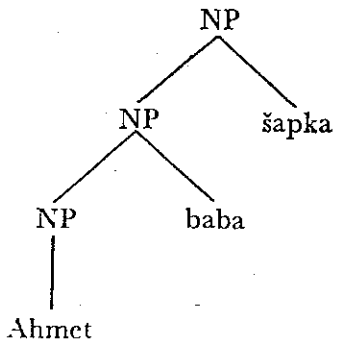
For some speakers, (43) is grammatical and occurs in free variation with (44). For such speakers, a subject participle is obligatory if the head noun is nominative or genitive; either subject or object participle may appear if the head noun is dative, locative, or ablative; an object participle is obligatory if the head noun is objective (where the use of subject participle would produce ambiguity). Most speakers, however, judge (43) to be doubtful at best.

[13] We will operate here with the undoubtedly false assumption that the same rule attaches both genitive and possessive markers.

[14] It is worthwhile to undertake a brief investigation into the deep structural similarity between what (according to the above analysis) become nominative and genitive constructions.

In an ordinary possessive construction, which is an NP, the possessor is also an NP, since it can be expanded to include any of the constituents of a noun phrase, including another possessor:

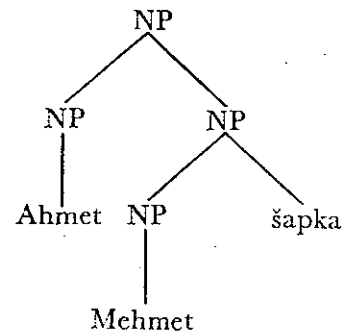
(i)



Ahmed-in baba -si -nin šapka-si
Ahmed-*gen* father-*3s-gen* hat -*3s*
'Ahmet's father's hat'

The possessed noun and its modifiers appear to form a constituent, but this is not NP, since it can be expanded to include any of the constituents of a noun phrase *except* another possessor. Thus there is no:

(ii)



*Ahmed-in Mehmed-in šapka-si
*Ahmed-*gen* Mehmet-*gen* hat -*3s*

meaning '*Ahmet's Mehmet's hat' in the sense that the hat is the property both of Ahmet and Mehmet.

The restriction that a possessed noun may have only one possessor NP is true for Turkish, English, and Thai and we suggest that it is universal. In this connection, note that examples in which the possessor NP includes a conjunction, as *Ahmedin ve Mehmedin šapkasi* 'Ahmet's and Mehmet's hat', are not counterexamples, nor are examples in which the possessor has an NP in apposition (a reduced nonrestrictive relative), as *Ahmedin, babanin, šapkasi* 'Ahmet's, the father's, hat', equivalent to *Ahmedin, yani babanin, šapkasi,* 'Ahmet's, that is the father's, hat'. Also not counterexamples are phrases like *Ahmedin aščí šapkasi* 'Ahmet's cook's hat' (where Ahmet possesses a distinctive hat worn by cooks). The phrase *aščí šapkasi* 'cook's hat' is not a possessive in the same sense that (47) is, as shown by the fact that in Turkish it lacks the genitive suffix. In both Turkish and English, the phrases are accented differently: *aščí šapkasi* vs. (47) *Ahmedín šapkasi.* Also in both languages, adjectives and other modifiers may come between possessor and possessed: *Ahmedin beyaz šapkasi* 'Ahmet's white hat', but may only precede phrases of the type under discussion: *beyaz aščí šapkasi* 'white cook's hat', not **aščí beyaz šapkasi* *'cook's white hat'.

how the relativization transformation operates. But if there is a Genitive Marking rule, it must apply to at least some of the output of Relativization, namely object participles. The two object participle suffixes *-DIg* and *-EjEg* are also used as factive nominals, in constructions like (50):

(50) Ahmed-in gel -diğ-i belli
Ahmed-*gen* come-*nom*-*3s* obvious
'(The fact of) Ahmet's coming is obvious; it is obvious that Ahmet came.'

Notice the similarity between (50) and an object participle construction like (51):

(51) Ahmed-in gel -diğ-i ev
Ahmed-*gen* come-*OP*-*3s* house
'the house that Ahmet came to'

(50) and (51) are clearly related and we claim that Genitive Marking has applied to both, as to (48).

It is therefore possible that nouns which would be genitive on the surface are not marked for case at the point where Relativization applies, although all other

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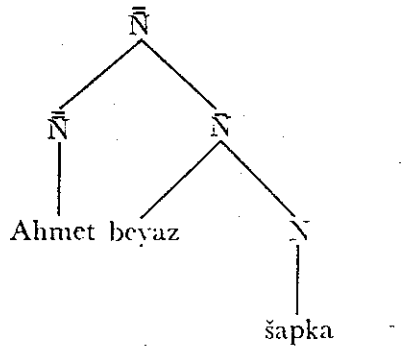
For the internal structure of the noun phrase we may adapt the formalism suggested by Chomsky (1970), using $\bar{\bar{N}}$ for the traditional NP, $\bar{N}$ for the remainder of the NP minus possessor. Thus:

(iii)



Ahmed-in beyaz šapka-si
Ahmed-*gen* white hat -*3s*
'Ahmet's white hat'

The point which we arrive at is that the possessor is identifiable as an initial $\bar{\bar{N}}$ in a structure dominated by $\bar{\bar{N}}$. Now, the subject of a verbal noun construction is identifiable in the same terms. As the subject of a simple sentence, it is an $\bar{\bar{N}}$; the sentence, as a nominalization, is embedded under an $\bar{\bar{N}}$ node in some higher sentence.

The similarity between nominative and genitive for which we are looking seems to be related to the observation of Chomsky (1970, 211) that "the internal structure of the nominal mirrors that of the sentence". The grammatical function of the possessor in a noun phrase is analogous to that of the subject in a sentence; this relationship is marked by the nominative in a sentence, by the genitive in a noun phrase. The difference between genitive and nominative then appears to be that the genitive marks nominal constructions as distinct from verbal constructions.

cases must be marked.[15] Relativization then supplies a subject participle if the head noun is initial in the clause and not marked for case, an object participle otherwise. It probably marks the head noun in the embedded sentence for eventual deletion, rather than deleting it at once, since otherwise possessives in examples like (4) (*oğlu*) would be hard to account for.[16] Genitive and Possessive Marking then apply to all surface possessive structures.

[15] They may have been marked in the base, or, as possibly in the case of the objective and some uses of the dative, by earlier transformations.

[16] That is, the *Doom* approach proposed by Postal (1970) may be needed here; Relativization would mark the head noun in the embedded sentence with the feature [+*Doom*], and nouns so marked would be deleted after Possessive Marking had applied. I am indebted to Susumu Kuno for this suggestion.

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