

2 Finiteness and Boundedness in Turkish

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0. Introduction

In this paper we consider a variety of Turkish constructions entirely analogous to those that originally motivated the 'Tensed S' and 'Specified Subject' Conditions for English (Chomsky, 1973). We find our constructions subject to just the same constraints as their English analogues except that the presence of Personal Agreement, rather than Tense, is what characterises finite ('opaque') clauses (section 3), that is, subordinate clauses whose Subjects are inaccessible to rules operating in the main clause domain. This of course immediately suggests a generalisation of the Tensed-S Condition on the universal plane to the analogous 'Finite-S' Condition (where 'finite' is appropriately defined — cf. section 4).

A further extension is indicated by the fact that non-finite forms (i.e. non-opaque constructions) are distinguished among certain clause-like constituents ('gerunds') which we show (§1) to be NPs, just as they are distinguished among clauses; that is, the usual Personal Agreement is lacking in these forms. We thus pass from the Finite-S Condition to the Finite Phrase Condition (FPC).

(1) Finite Phrase Condition:

Let A be a phrase of which X^T is a proper constituent. Then if X^T is finite, no rule operating in the domain A can involve a proper constituent of X^T .

where X^T is the 'maximal projection' of X in the bar theory (we assume $\bar{S} = V^T$ — see George (1980) for discussion).

All of the Turkish rules we discuss that obey the FPC also obey a constraint modelled on the Specified Subject Condition, the Subject Accessibility Condition (SAC):

(2) Subject Accessibility Condition:

Let X^1 be a proper constituent of A and let B be the Subject of X^1 . Then no rule can involve a proper constituent C of X^1 unless $C = B$, or C is contained in B.

Over a wide range of cases, and certainly in all of our examples, the same rules seem to obey the one as obey the other. Nevertheless, we keep the two conditions separate, partly because we feel there may be rules obeying only one of them (e.g. Tough Movement in English), and partly because of certain Turkish examples¹ where violating both of the conditions creates greater unacceptability than violating just one. We will not here be concerned with the circumstances in which a rule (like *Wh-Movement*) may appear to violate these two conditions (see Chomsky (1976) and Rizzi (1978) for some discussion).

Our statement of (1)–(2) as conditions on rules may seem out of place in a volume where other papers reformulate them as ‘filters on Logical Form’, sensitive to case rather than finiteness (which is supposed to be only indirectly relevant to Opacity, by virtue of governing Case assignment). We preserve the original format mainly to emphasise that our amendments to the older Conditions on Transformations theory are entirely independent of the changes made in ‘On Binding’ (Chomsky, 1980) (but see note 8 below, and George, 1980, Ch. 4).

1. Differences between Direct Complements and Gerunds

In this section, we show that there are two types of verb-headed complements in Turkish: the purely sentential (‘Direct Complements’), and those dominated by NP (‘Gerunds’). Some of the following arguments will show only that the two complement types are different; others will demonstrate that the Gerunds are, in fact, NPs.

1.1 Tense

In Turkish root sentences, verbs exhibit a rich variety of suffixes for tense, some of which are demonstrated below:

- (3) (biz) viski-yi iç-eceğ-iz
 we whisky-Acc drink-FUTURE-1pl
 iç-iyor-uz
 -PRES PROG-1pl
 iç-ti-k
 -PAST-1pl

We will drink/are drinking/drank the whisky

Direct complements can exhibit all of these tenses:

- (4) herkes [(biz) viski-yi iç-eceğ-iz]
 everybody drink-FUTURE-1pl
 -iyor-uz
 -PRES PROG-1pl
 -ti-k
 -PAST-1pl

san-iyor
 believe-Pres Prog
Everybody believes we will drink/are drinking/drank the whisky

However, Gerunds do not exhibit all of these forms. Instead, certain ‘nominalisation’ suffixes fill the slot otherwise occupied by the tense markers in the sequence of verbal morphemes, to a certain extent neutralising tense.

There are basically two ‘nominalisation’ morphemes in Gerunds: **-mA** and **-dİg**.² These we symbolise GER in the glosses below. **-mA** forms cannot express tense at all:

- (5) Ahmet [(biz-im) viski-yi] {dün
 we-Gen whisky-Acc {bugün
 yesterday/today/tomorrow
 -me-miz]-i iste-di
 drink-GER-1pl-Acc wanted
*Ahmet wanted us to drink the whisky yesterday/today/
 tomorrow*

-dİg forms differentiate between future and non-future only:

- (6) Ahmet [(biz-im) viski-yi] iç-tiğ-imiz-i
 {dün} {iç-tiğ-imiz-i} GER
 {bugün} {yesterday}
 {today} GER
 Ahmet [(biz-im) viski-yi] iç-eceğ-imiz-i
 {yarın} {iç-eceğ-imiz-i} GER Fut
 {tomorrow} GER Fut
 anla-di understood
 Ahmet understood
 {that we drank the whisky yesterday} GER
 {today} GER
 {that we were drinking the whisky yesterday} GER
 {today} GER
 {that we will drink the whisky tomorrow} GER Fut

These facts alone are not sufficient to argue that Gerunds are NP rather than S; we might at this point, in fact, mention a similarity between Gerunds in **-dığ** and Direct Complements: both are capable of accepting morphological marking for Future Tense. These same Gerunds diverge from the Direct Complements, however, in that for them non-future tense marking is neutralised. In what follows we shall see that they otherwise behave like lexical NPs.

1.2 Case

Traditional grammars of Turkish recognise five Cases, all of which are exemplified on lexical NPs in the following sentence:

- (7) Ahmet- \emptyset viski-yi dolap-tan çıkar-ıp
 -NOM -ACC closet-ABL take out-and
 mutfak-ta-ki masa-ya koy-du
 kitchen-LOC-wh(Rel) table-DAT put-Past
 Ahmet took the whisky out of the cupboard and put it on the table in the kitchen

From a generative point of view, the Genitive is also a Case in Turkish. Its use with lexical NPs is exemplified below:

- viski-nin koku-su
 whisky-GEN smell-3 sg Poss
 the smell of the whisky

The relevant point for our purposes is that Gerunds, like lexical

NPs, end with Case markers, showing the full range of possible Cases, including Genitive. In fact, a Gerund in a given context is assigned just the Case that a lexical NP would have in the same context:

Nominative

- (8) a. [ayak-lar-imiz-i masa-ya koy-ma-miz]- \emptyset
 foot-pl-1pl-Acc table-Dat put-GER-1pl-NOM
 anne-miz-i üz-dü
 mother-1pl-Acc sadden-Past
 That we put our feet on the table saddened our mother.

Compare:

- (8) b. Ahmet- \emptyset anne-miz-i üz-dü
 -NOM mother-1pl-Acc sadden-Past
 Ahmet saddened our mother.

Accusative

- (9) a. Ahmet [(biz-im) viski-yi] iç-me-miz-i
 we-Gen -Acc drink-GER-1pl-ACC
 isti-yor
 want-Pres
 Ahmet wants that we drink the whisky.

Compare:

- (9) b. Ahmet bu kitab-ı ist-i-yor
 this book-ACC want-Pres
 Ahmet wants this book.

Dative

- (10) a. anne-miz [ayak-lar-imiz-i masa-ya
 mother-1pl foot-pl-1pl-Acc table-Dat
 koy-ma-miz]-a kız-di
 put-GER-1pl-DAT get angry-Past
 Our mother got angry at our putting our feet on the table.

Compare:

- (10) b. anne-miz Ahmed-e kız-di
 mother-1pl -DAT get angry-Past
Our mother got angry at Ahmet.

Locative

- (11) a. felç-li sporcu [oğl-un-un futbol-cu
 paralysed athlete son-his-Gen soccer-player
 ol-**ma**-sin]-**da** teselli bul-du
 be-GER-3sg-LOC solace find-Past
*The paralysed athlete found solace in his son's being/
 becoming a soccer player.*

Compare:

- (11) b. felç-li spor-cu din-in-**de**
 paralysed athlete religion-his-LOC
 teselli bul-du
 solace find-Past
The paralysed athlete found solace in his religion.

Ablative

- (12) a. anne-miz [ayak-lar-imiz-i masa-ya
 mother-1pl foot-pl-1pl-Acc table-Dat
 koy-**ma**-miz]-**dan** kork-uyor
 put-GER-1pl-ABL afraid-Pres
Our mother is afraid of our putting our feet on the table.

Compare:

- (12) b. anne-miz bu köpek-**ten** kork-uyor
 this dog-ABL afraid-Pres
Our mother is afraid of this dog.

Genitive

- (13) a. [ayak-lar-imiz-i masa-ya koy-**ma**-miz]-**in**
 foot-pl-1pl-Acc table-Dat put-GER-1pl-GEN

anne-miz-i üz-eceğ-i] muhakkak
 mother-1pl sadden-GER Fut certain (is)
 -Acc -3sg

*That our putting our feet on the table will sadden our
 mother is certain.*

The Genitive in Turkish is not governed by verbs (which is probably why it was not recognised as a Case in traditional grammar); it shows up, rather, in Possessive NP-Compounds and 'Gerunds'. As will be seen later, this fact will be used as part of a further argument for our claim that Gerunds are NPs. In example (13a), the Gerund: *Our putting our feet on the table* is marked with the Genitive as the Subject of the higher Gerund NP[*That NP[...]* will sadden our mother], as is the lexical NP *the maid* in the same frame:

- (13) b. NP[NP[bu hizmetçi]-**nin** anne-miz-i
 this maid-GEN mother-our-Acc
 üz-eceğ-i] muhakkak
 sadden-GER Fut certain (is)
 -3sg
 NP[*That NP[³this maid] will sadden (upset) our mother*] is
 certain³

In contrast to Gerunds, Direct Complements take no Case marking. In the following example, a Direct Complement shows up in a frame where the corresponding Gerund has to be marked with an Accusative suffix. The version with the Direct Complement cannot be so marked, however:

- (14) a. herkes [(biz) viski-yi
 everybody we whisky-Acc
 iç-ti-k] bil-iyor
 drink-PAST-1pl-(no case) believe-Pres
 *herkes [(biz) viski-yi
 everybody we whisky-Acc
 iç-ti-^{k}]-i bil-iyor
 {ğ} believe-Pres
Everybody believes we drank the whisky

Compare:

- (14) b. herkes bu hikâye-yi bil-iyor
 everybody this story-ACC know-Pres
Everybody knows this story.

Here is the corresponding Gerund construction, where Accusative marking is obligatory as in (14b) and in direct contrast to (14a):

- (14) c. herkes [(biz-im) viski-yi
 everybody we-Gen viski-yi
 iç-tiğ-imiz]-i bil-iyor
 drink-GER-1pl-ACC know-Pres
 *herkes [(biz-im) viski-yi
 everybody we-Gen
 iç-tiğ-imiz]-ø bil-iyor
 drink-GER-1pl know-Pres
Everybody knows that we drank the whisky.

Thus, by the criterion of Case Marking, Gerunds, but not Direct Complements, pattern just like lexical NPs.

1.3 Possibility of Being Objects of Postpositions

Postpositions normally require NP objects. Because of this fact, it is significant that they can also govern Gerunds (but not Direct Complements). The element *için* ('for') is typical in this regard: *için* with a lexical NP object:

- (15) herşey-im-i pp[NP[**çocuğ-um**] **için**]
 everything-my-Acc child-my for
 feda et-ti-m
 sacrifice do-Past-1sg
I sacrificed everything for my child.

için with a Possessive NP-Compound:

- (16) herşey-im-i pp[NP[**çocuğ-um-un geleceğ-i için**]
 child-my-Gen future-his for
 feda et-ti-m
I sacrificed everything for the future of my child.

için with a Gerund:

- (17) herşey-im-i pp[NP[**çocuğ-um-un okul-a**]
 child-my-Gen school-Dat

- gid-ebil-me-si için**
 go-able-GER-his for
 feda et-ti-m

I sacrificed everything for my child's being able to go to school.

Note the parallel internal structure of (16) and (17) (cf. also section 1.5, below).

As noted, Direct Complements, unlike Gerunds, cannot be Objects of Postpositions. The following example is representative of cases where a Direct Complement is 'trying' to be a Postpositional Object, and the result is ungrammatical:

- (18) *herşey-im-i pp[[**çocuğ-um okul-a gid-ebil-ecek için**]
 child-my school-Dat go-able-FUT for
 feda et-ti-m

Attempted reading: *I sacrificed everything so that my child would be able to go to school.*

In this instance, too, Gerunds pattern like NPs, as against Direct Complements.

1.4 Focus and Toppling

In Turkish, there are at least two situations in which the normal SOV word order appears to be altered by a movement rule. First, the primary Focus of a Sentence, as marked by superordinate accent, must appear just before the verb:

- (19) **?yazar viski-yi iç-ti**
 author -Acc drink-Past

Example (19), which exemplifies the unmarked SOV order, is unacceptable when the subject is the Focus and bears primary sentence stress. The acceptable counterpart to (19) with the stressed subject is given under (20):

- (20) viski-yi **yazar iç-ti**
The author drank the whisky.

Secondly, 'presupposed' constituents may regularly follow the Verb in what Turkish grammarians call '*devrik cümle*', (toppled

sentence), with a distinctive fall in pitch marking the passage from the Verb to the postposed phrase. We tentatively propose two transformations, which may be schematised as follows, to generate these marked constructions:

(21) Focus Movement:

... Foc ... V

(22) Toppling:

... Presupposition ... V

These rules provide a useful test for distinguishing Direct Complements from Gerunds (and, as we will see in section 3, at least one gives evidence for our reformulation of the Tensed-S Condition). To substantiate our theory, therefore, we must eventually provide a more precise statement of the transformations and justify it more carefully. Since none of the reasonable reformulations known to us would affect their diagnostic value, however, we postpone the needed study for now.

The application of Focus Movement and Toppling to lexical NPs is exemplified by the sentences in (22):

(22) a. (Unmarked order):

yazar viski-yi çocuğ-a ver-di
author -Acc child-Dat give-Past
The author gave the whisky to the child.

Focus Movement:

(22) b. viski-yi çocuğ-a yazar ver-di
-Acc -Dat author give-Past

Toppling:

(22) c. viski-yi çocuğ-a ver-di yazar
-Acc -Dat give-Past author

Sentences with Gerunds undergo both rules freely. Thus from the point of view of external distribution Gerunds act just like lexical NPs.

Unmarked order:

- (23) a. herkes [yazar-lar-in viski-yi
everybody author-pl-Gen -Acc
iç-tik-lerin]-i bil-iyor
drink-GER-3pl-Acc know-Pres
Everybody knows that the authors drank the whisky.

Focus Movement:

- (23) b. [yazar-lar-in viski-yi iç-tik-lerin]-i herkes bil-iyor

Toppling:

- (23) c. herkes bil-iyor [yazar-lar-in viski-yi iç-tik-lerin]-i

Both rules are blocked when Direct Complements are involved:

Unmarked order:

- (24) a. herkes [yazar-lar viski-yi iç-ti]
everybody author-pl -Acc drink-PAST
san-iyor
believe-Pres
Everybody believes the authors drank the whisky.

Focus Movement:

- (24) b. *[yazar-lar viski-yi iç-ti]
-PAST

herkes san-iyor
everybody

Toppling:

- (24) c. *herkes san-iyor [yazar-lar viski-yi iç-ti]
-PAST

If we assume that a Direct Complement is simply a clause, but that a Gerund, because of its NP-nature, is not *as a whole* a sentence, the relevant restriction on the output of these word order rules can be formulated in a very simple way:

A bare clause must appear just before the governing V in surface structure.

All the facts in (22) to (24) are then accounted for automatically if Gerunds but not Direct Complements are NPs.

1.5 Internal Morphology

In this section, we show that the internal morphology of Gerunds mirrors exactly that of Possessive NP-Compounds consisting of lexical NPs. Since the latter are unquestionably NPs, we take this fact as a further argument for the NP-nature of those complements we have been calling Gerunds.

The structure of Possessive NP-Compounds is exemplified below:

- (25) *yazar-lar-in* viski-si
 -GEN -3 POSS
 the authors' whisky

In (26), we give the whole paradigm for this construction. Notice that the Genitive suffix on the 'possessor' changes slightly with the different persons and that the 'possessed'-suffix on the 'possessed'-NP agrees in person and number with the 'possessor':

- (26)
- | | | |
|-----|-----------------------|---------------------------------------|
| | NP ₁ -Gen. | NP ₂ -Possessive Agreement |
| 1sg | <i>ben-im</i> | <i>viski-im</i> |
| 2sg | <i>sen-in</i> | <i>viski-n</i> |
| 3sg | <i>on-un</i> | <i>viski-si</i> |
| 1pl | <i>biz-im</i> | <i>viski-miz</i> |
| 2pl | <i>siz-in</i> | <i>viski-niz</i> |
| 3pl | <i>onlar-in</i> | <i>viski-si</i> |
| | ∅ | <i>viski-leri</i> |

Exactly the same paradigm is found in NP-Complements:

- (27)
- | | | |
|-------------------|-----------------|-----------------------------------|
| Ahmet | -GEN | -POSS |
| [<i>ben-im</i>] | <i>viski-yi</i> | <i>iç-tığ-im]-i</i> bil-iyor |
| [<i>sen-in</i>] | <i>viski-yi</i> | <i>iç-tığ-in]-i</i> 1sg know-Pres |
| [<i>on-un</i>] | <i>viski-yi</i> | <i>iç-tığ-in]-i</i> 2sg |
| [<i>biz-im</i>] | <i>viski-yi</i> | <i>iç-tığ-in]-i</i> 3sg |
| | <i>viski-yi</i> | <i>iç-tığ-imiz]-i</i> 1pl |

- | | | |
|-----------------------|-----------------|------------------------------|
| [<i>siz-in</i>] | <i>viski-yi</i> | <i>iç-tığ-imiz]-i</i> 2pl |
| { [<i>onlar-in</i>] | <i>viski-yi</i> | { <i>iç-tığ-in]-i</i> |
| { ∅ | <i>viski-yi</i> | { (<i>iç-tik-lerim]-i</i>) |
| | | <i>iç-tik-lerim]-i</i> 3pl |

Ahmet knows that (person) drank the whisky.

These morphological peculiarities are never found in root sentences. The internal structure of Direct Complements, on the other hand, shows no sign of Possessive NP-Compounds: rather, this complement type is structured like root sentences, which suggests that we are right in claiming that these complements are clausal, while Gerunds are not. As argued above, they are NPs.

Here is the complete paradigm for Direct Complements:

- (28)
- | | | | | |
|-------|-----------|-----------------|---------------------------|----------|
| Ahmet | [(ben)] | <i>viski-yi</i> | <i>iç-ti-m]</i> | san-ıyor |
| | [(sen)] | <i>viski-yi</i> | <i>iç-ti-n]</i> -Past-1sg | |
| | [(o)] | <i>viski-yi</i> | <i>iç-ti-∅]</i> -2sg | |
| | [(biz)] | <i>viski-yi</i> | <i>iç-ti-k]</i> -3sg | |
| | [(siz)] | <i>viski-yi</i> | <i>iç-ti-niz]</i> -1pl | |
| | [(onlar)] | <i>viski-yi</i> | <i>iç-ti-(ler)]</i> -2pl | |
| | | | | -3pl |

Ahmet believes (person) drank the whisky.

A comparison with root sentences like those in (3) will show that Direct Complements have the same morphological features: no overt case marking on the subject, full-scale tense marking after the verbal stem, verbal agreement markers after tense. The agreement suffixes themselves clearly belong to a different paradigm than that exhibited for NPs in (26) and in (27). It is in fact the same as that for root sentences.

2. A Parallel between Direct Complements and Gerunds

So far we have been labouring to distinguish Direct Complements from Gerunds, so as to show that the former are Sentences and not

NPs, and that the latter are NPs but not Sentences. We now turn to a similarity between the two complement types: both can be finite, and both can be non-finite. For the moment we confine our attention to the morphological consequences of this opposition; in section 3, we will see its effects in terms of 'Opacity' under the Finite Phrase Condition.

Within the grammar of Turkish we may define a finite phrase as one whose Specifier exhibits Subject Agreement, where it is immaterial whether the Agreement marker is taken from the nominal or the verbal paradigm (see section 4 below for a more general definition).

Under this definition, (4) and (5) show that both Gerunds and Direct Complements can be finite — they exhibit the full range of agreement markers (nominal and verbal, respectively).

Now we show the reverse parallel — both types can be non-finite:

Non-Finite Gerund

- (29) (ben) [viski-yi iç-meg]-e
 I -Acc drink-GER-(no Agr)-Dat
 razi ol-du-m
 consent-Past-1sg
I consented to drink the whisky.

Corresponding Finite Gerund

- (30) (ben)[kiz-im-in viski-yi iç-ne-sin]-e
 daughter-my-Gen -Acc drink-GER-3SG-Dat
 razi ol-du-m
I consented to my daughter's drinking the whisky.

Non-Finite Direct Complement

- (31) Ahmet [biz-i viski-yi iç-ti]
 we-Acc -Acc drink-Past-(no Agr)
 san-iyor
 believe-Pres
Ahmet believes us to have drunk the whisky.

Corresponding Finite Direct Complement

- (32) Ahmet [biz viski-yi iç-ti-k] san-iyor
 -Past-1PL
Ahmet believes we drank the whisky.

Another type of Non-Finite Direct Complement

- (33) (siz) [t bütün viski-yi bitir-dij]
 2pl whole -Acc finish-Past-(no Agr)
 gibi görün-üyor-sumuz
 like look-Pres-2pl
You look like you finished all of the whisky.

Corresponding finite Direct Complement

- (34) [siz bütün viski-yi bitir-di-niz]
 finish-Past-2PL
 gibi görün-üyor-ø
 like look-Pres-3sg
It looks like you finished all the whisky.

3. Rules Subject to Opacity

Now we illustrate how our test rules, Reciprocal, Toppling, Passive, Disjoint Reference, Reflexivisation and Control, differentiate finite and non-finite phrases as to accessibility. In each case, we see that while the rule applies to a non-finite Complement it cannot apply to a finite phrase, whether Direct Complement or Gerund.

Reciprocal

Applying into a non-finite Direct Complement:

- (35) (biz_i) [birbir-imiz_i -i viski-yi iç-ti]
 we each other-our-Acc -Acc drink-Past-(no Agr)
 san-iyor-uz
 believe-Pres-1pl
We believe each other to have drunk the whisky.

Trying to apply into a finite Direct Complement:

- (36) *(biz_i) [birbir-imiz_i viski-yi iç-ti-k]
 we e.o.-our -Acc drink-Past-1pl
 san-iyor-uz

believe-Pres-1pl

We believe each other drank the whisky.

Trying to apply into a finite Gerund:

- (37) *yazar-lar_i [birbir-lerin_i-in viski-yi
author-pl e.o.-their-Gen -Acc
iç-tük-lerin_i-i san-iyor-lar
drink-GER-3PL-Acc believe-Pres-3pl]

The authors believe that each other drank the whisky.

Toppling

Applying into a non-finite Direct Complement:

- (38) dinleyici-ler [_____ viski-yi iç-ti]
auditor-pl -Acc drink-Past-(no Agr)
san-iyor-lar **biz-i**
believe-Pres-3pl we-Acc

The auditors believed us to have drunk the whisky.

Trying to apply into a finite Direct Complement:

- (39) *dinleyici-ler [_____ viski-yi iç-ti-k] san-iyor-lar
-1PL

biz

we-Nom

The auditors believed we drank the whisky.

Trying to apply into a finite Gerund:

- (40) ?dinleyici-ler [_____ viski-yi iç-tüg-imiz]-i san-iyor-lar
-GER-1PL-Acc

biz-im^s

we-Gen

The auditors believed that we drank the whisky.

Passive (NP-Movement)

Applying into non-finite Direct Complement:

- (41) (biz) [t viski-yi iç-ti]
we -Acc drink-Past (no Agr)

san-iyor-uz

believe-PASS-Pres-1pl

We are believed to have drunk the whisky.

Trying to apply into a finite Direct Complement:

- (42) *(biz) [t viski-yi iç-ti-k]
we -Acc drink-Past-1PL
san-iyor-uz
believe-PASS-Pres-1pl]

Attempted reading: *We are believed to have drunk the whisky.*

Disjoint Reference

Applies into non-finite Direct Complement:

- (43) *(ben) [biz-i viski-yi iç-ti]
I we-Acc -Acc drink-Past (no Agr)
san-iyor-um
believe-Pres-1sg

I believe us to have drunk the whisky.

Trying to apply into finite Direct Complement:

- (44) (ben) [(biz) viski-yi iç-ti-k] san-iyor-um
I we -Acc drink-Past-1PL believe-Pres-1sg
I believe we drank the whisky.

Reflexive

Applying into finite Direct Complement:

- (45) (sen_i) [kendi-n_i-i başarı-ya ulaş-mış]
2sg self-your-Acc success-Dat reach-Past (no Agr)
san-iyor-sun
believe-Pres-2sg
You believe yourself to have succeeded.

Trying to apply into finite Direct Complement:

- (46) *(sen_i) [kendi-n_i başarı-ya ulaş-mış-sin]
2sg self-your success-Dat reach-Past-2SG
san-iyor-sun
believe-Pres-2sg
You believe yourself succeeded.

Trying to apply into finite Gerund:

- (47) *(sen)_i [kendi- η]-in başarı-ya ulaş-**tığ-ın**]-i
 2sg self-2sg-Gen success-Dat reach-GER-2SG-Acc
 san-iyor-sun⁶
 believe-Pres-2sg
You believe that yourself succeeded.

Control in non-finite Gerunds

Gerunds in -mA also have non-finite variants, corresponding to the 'Equi' or 'Control' structures in English:

- (48) a. (ben)_i [PRO]_{i,j} viski-yi iç-meğ]-e
 I -Acc drink-GER-(no Agr)-Dat
 razı ol-du-m
 consent-Past-1sg
I consented to drink the whisky.

- b. *(ben)_i [PRO]_i viski-yi iç-me-m]-e
 drink-GER-1SG-Dat
 razı ol-du-m

- (49) a. (ben) sen-i_i [PRO]_{i,j} viski-yi
 I you-Acc -Acc
 iç-meğ]-e zorla-di-m
 drink-GER-(no Agr)-Dat force-Past-1sg
I forced you to drink the whisky.

- b. *(ben) sen-i_i [PRO]_i viski-yi iç-me- η]-e
 drink-GER-2SG-Dat
 zorla-di-m

In this construction, the complement subject must be PRO and it must be bound to some matrix NP. Externally, these non-finite Gerunds are entirely parallel to the finite ones already discussed. We conclude that the FPC applies, as predicted, to Gerunds as well as to Direct Complements, and that the parameter relevant to finiteness in Turkish is Agreement rather than Tense.⁷

In the foregoing we have not given an example of every rule trying to apply into every complement type. In certain cases, independent principles render a given example irrelevant to the validity of (1), and in such cases we have omitted the example in question. The resulting gaps fall into three general cases:

- Those due to the fact that the subject of a non-finite Gerund must be PRO, so Control is the only rule that could apply;
- Those due to the fact that the subject of a non-finite Direct Complement may not be PRO, so Control could not apply;
- Those due to the fact that, because of A/A, Passive and Disjoint Reference cannot apply to the subject of a Gerund, whether finite or not.

So far we have also neglected to test the accessibility of subjects of non-gerundive (lexical) NPs. And in fact an attempt to remedy this omission quickly leads us to data that seem problematic for our view. Consider for example

- (50) (biz) birbit-imiz-in tabla-**sin-i** yıka-di-k
 we each other-1pl-Gen tray-3SG-Acc wash-Past-1pl
We washed each other's tray.

Here the Genitive Subject of the NP *each other's tray* is bound by an element (*we*) outside of that NP, even though the NP, being marked by the suffix **si**, should be finite on our previous assumptions. Fortunately there is a neat way out of this dilemma, suggested by the fact that the only agreement marker of the Possessive paradigm (26) to misbehave like this is **si**. For just this suffix is used quite regularly outside the Possessive construction, to mark compound nouns, as in

- (51) sigara tabla-**si**
 cigarette tray-'si'
ash tray

We propose that the Possessive **-si** is never, after all, an agreement marker in lexical NPs (in spite of our earlier glosses), but is always an instance of the same compound marker seen in (51), which is suffixed to complex nominal constituents by a completely general lexical and gerundive NPs, despite their superficially identical morphologies, differ at least partially in their syntactic function; specifically, the element **-si** is an agreement marker on Gerunds but not on lexical Nouns. In fact there is independent evidence for some bifurcation between these cases, in the form of (i) the use of the same morphology in certain Relative clauses and (ii) the non-occurrence of the third person plural **1-Ar** with overt genitives in lexical NPs. A

full description of these points would take us beyond the scope of this paper, and anyway it would not prove the specific claim we are making about *-si*. Establishing the needed bifurcation does, however, defeat a possible objection to this claim.

Note that while the *-si* of lexical NPs is outside of the agreement system, 'aparadigmatic', the same element is apparently the third person marker in Gerunds (and, incidentally, Relatives). This is how we explain the fact that it renders the one type of NP opaque, but not the other.

To complete this section, we note that relative clauses also occur in both finite and non-finite forms.⁸ Hence they constitute a further testing ground for our theory. And in fact we believe they provide us with positive evidence. To substantiate this, however, we would have to settle some tricky questions about impersonal passives, which we cannot discuss here.

4. Conclusion

The point of this paper has been to provide evidence that the 'Tensed-S' and 'Specified Subject' Conditions of Chomsky (1973) are, in slightly modified form, principles of Universal Grammar. This hypothesis would explain how certain rules of Turkish are bounded, without requiring us to decide whether the Conditions in question control directly the operation of the relevant rules, or merely filter the resulting 'logical forms'.

In particular, we have argued that the principle corresponding to the 'Tensed-S' Condition actually refers to a more general notion of 'Finiteness', rather than to 'Tensedness': in Turkish Finiteness is demonstrably not 'Tensedness', but the presence of a *Subject Agreement marker*, where 'Subject' is understood roughly as the Nominative of a finite clause, the Genitive of a finite NP or Relative Clause, or the first Accusative of a non-finite Direct Complement.

This conclusion makes it an urgent matter to define 'Finiteness' in general, since the claim that the 'Tensed-S' Condition is in some sense universal would lose much of its empirical content if each language were free to substitute arbitrarily an idiosyncratic parameter for 'tense' in its definition of finiteness.

Of course the most obvious move from here is to replace the term 'Tense' with 'Personal Agreement' in the statement of the Tensed-S Condition: indeed, this was how we first reacted to the data we have

presented, and at least one listener in each of the several groups that have heard our evidence came up with the same proposal. Even so, we are sceptical of this straightforward move, if only because it seems, like the original Tensed-S Condition, rather too concrete.

What we have in mind is a language just like Turkish, except that the *Personal Agreement markers regularly precede the Tense suffixes* in Sentences. We predict that if such a language could exist, then it would use neutralisation of Tense, not of Personal Agreement, to differentiate finite from non-finite phrases for purposes of Opacity.

This prediction is based on the observation that Tense is shown on the *first* Auxiliary element in an English clause, and Agreement on the *last* element of verbal morphology in Turkish. Given that Auxiliaries precede the Main Verb in English and follow it in Turkish, this suggests that the *verbal Specifier furthest from the Main Verb* is the key to the definition of 'finiteness'. In particular, if we supply enough internal bracketing in the series of verbal elements in any clause, we can say that a clause is opaque unless the Main Specifier, the superior Verbal Specifier governed by the Subject, is *aparadigmatic*. We take *aparadigmatic* to refer, in English, to the initial elements of Aux not showing tense or modals, in Turkish, to the elements of the final slot of verb inflection not showing person or number. If we substitute 'phrase' for 'clause' in the preceding formulation and eliminate 'verbal', we generalise our principle to distinguish finite and non-finite NPs, as well. And in general, we complete our formulations of the FPC and the SAC with the following definitions:

- (52) A phrase X⁷ is *finite* if its Main Specifier Q is paradigmatic, that is, the independently motivated oppositions in Q are not neutralised;

and

- (53) The *Main Specifier* of X⁷ is the superior Specifier of X governed by its Subject.

Observe that our theory supports the classical \bar{X} -hypothesis that S is a projection of V and that it sharpens the resemblance between the FPC and the SAC, in that we must use the notion 'Subject' in the sense of \bar{X} -theory to state both principles.

Our theory may have some advantage in the description of a

language which, like many Australian languages (and, apparently, some dialects of English), completely lacks overt Agreement but still distinguishes infinitives, which cannot show Tense. If we claimed that Agreement was universally the crucial element for characterising finiteness, then we would not only have to posit completely 'abstract' personal inflections for these languages, but would also have to tie their distribution to the presence of Tense. These manoeuvres are unnecessary under our more general approach.

Notes

1. See example (40) and note 5 for a discussion of examples where only the FPC is violated. There exist similar examples (involving Control cases) where only the SAC is violated and where the result is considerably better than when both SAC and FPC are violated. Thus, in contrast to (40b) in note 5, we get (40c), which is rather more acceptable:

(40)c. ?[] yazar-lar [-----] ic-meğl-e razi ol-du-lar
author-pl drink-NOM-(no Agr)-Dat consent-Past-3pl
viski-yi
whisky-Acc

The authors consented to drink the whisky.

2. In accordance with general Turkological practice, we shall use archiphonemes in our representations of suffixes. The surface values for the vowels are spelled out by the well-known rules of Vowel Harmony.

3. The bracketing and labelling of the English glosses reflect our analysis of the Turkish strings; needless to say, neither of the two Complements in question is thus held to be an NP in English.

4. At first glance, (33) looks like a counter-example to our claim that Direct Complements cannot be Objects of Postpositions, since the Direct Complement is followed by the element *gibi* (*like*), which occurs elsewhere as a Postposition. However, there is independent evidence (not presented here) to the effect that *gibi* is not a Postposition in construction like (33); rather, it is adjoined to the verb *görün* to form the complex Verb *gibi görün* (*look like*). Evidence for such a restructuring is presented in Kornfilt (1976: 4).

5. This example (40) where Topping violates only the FPC is not as bad as the comparable example where it violates both the FPC and SAC (cf. the Introduction, at note 1):

(40)b. ?[]* dinleyici-ler [yazar-lar-in] ----- ic-tig-in-i
listener-pl author-pl-Gen drink-GER-3 AGR-Acc
san-ı-yor-lar viski-yi
believe-Pres-3pl -Acc

Some speakers do not even reject (40b) in the first place. It is conceivable that there is a dialect split here, but this pattern is typical of 'derivative generation' (cf. Chomsky, 1970), by which speakers may accept certain ungrammatical sentences which are sufficiently analogous to grammatical ones; see George (1980, Ch. 6) for discussion.

6. Analogous examples constructed by using the third person reflexive *kendisi* instead of first or second person are grammatical. This is not a problem for us, however, since the *kendisi* is, on independent grounds, not a bound anaphor of sentence grammar; in particular, its antecedent may be found in a previous utterance, and, in its honorific use, need not have an antecedent at all. Hence, it is no surprise that it occurs irrespective of the Conditions. The first and second person reflexives, in contrast, are bound anaphors in the strict sense, so their distribution is constrained by Sentence Grammar conditions, as shown by the examples in the text.

7. We should also mention that the reason why Control cannot take place in finite Gerunds cannot be a morphological restriction against Control Verbs taking finite complements; as (30) shows, agreement marking under *razı olmak* (*consent*) is possible (as it is, in fact, under many other Control Verbs).

8. One point of special interest concerning Relative Clauses is the fact that those Relatives we would have to call finite (the *-Dik-* construction) show their inaccessible Subject in the Genitive, not the Nominative. This, of course, suggests on the face of it that the NIC is insufficiently general in comparison to our FPC. Chomsky (personal communication) has claimed that this argument against the 'On Binding' approach could be defused by an analysis of the relevant subjects as abstract Nominatives that are spelled out as Genitive by a superficial 'gleich' of the morphology. This *ad hoc* manoeuvre might work here, but seems hopeless in the analogous case of Gerunds, where we would like to say that the inaccessible Subjects are Genitive for the same reason that the Subjects of lexical NPs are Genitive, so that an abstract Nominative analysis is less plausible. One might still hope to defend the NIC account by decomposing the Genitive into subcategories including the Nominative (see Thiersch, 1978), but there are other Relative Clause facts, too complicated to present here, that may still cause trouble for the NIC.

For more information about the morphological alternation found in Turkish Relative Clauses, cf. Underhill (1972) and Hankamer and Knecht (1976).

References

- Chomsky, N. (1970), 'Remarks on Nominalization' in R. Jacobs and P. Rosenbaum (eds.), *Readings in English Transformational Grammar*, Blaisdell, Waltham, Massachusetts.
- (1973), 'Conditions on Transformations', in S. Anderson and P. Kiparsky (eds.), *Festschrift for Morris Halle*, Holt, Rinehart and Winston, New York.
- (1976), 'On Wh-Movement' in P. Culicover, T. Wasow, and A. Akmajian (eds.), *Formal Syntax*, Academic Press, New York, 1977.
- (1980), 'On Binding', this volume, Ch. 1. Previously published in *Linguistic Inquiry* 11, 1-46.
- George, L. (1980), 'Analogical Generalizations of Natural Language Syntax', doctoral dissertation, MIT, Cambridge, Massachusetts.
- Hankamer, J. and L. Knecht (1975), 'The Role of the Subject/Non-subject Distinction in Determining the Choice of Relative Clause Participle in Turkish' in *Papers from the VI. Meeting of NELS*, Published as Vol. 6 of the *Montreal Working Papers in Linguistics*, 1976.
- Kornfilt, J. (1976), 'Some Aspects of Turkish "Subject Raising"', unpublished paper, Harvard University.
- Rizzi, L. (1978), 'Violations of the WH-Island Constraint in Italian and the Subjacency Condition' in *Montreal Working Papers in Linguistics*, 10.
- Underhill, R. (1972), 'Turkish Particples', *Linguistic Inquiry*, 3, 87-99.