

### Some Observations on Turkish/Turkic RCs

**I.** If there is an operator in Turkish RCs, it would need to be phonologically empty: Turkish RCs have no WH-pronouns. But they do have gaps, corresponding to the RC targets. Precedents for empty operators?

Many European languages have WH-pronouns; some don't. Those which have them don't always exhibit them; instead, they might have a regular complementizer, or neither, as an option:

- (1) a. The sonata **which<sub>i</sub>** I played **t<sub>i</sub>**
- b. The sonata **that<sub>i</sub>** I played **t<sub>i</sub>**
- c. The sonata I played

(For an overview of issues connected to such constructions, cf. Comrie 1998, 1999.) Question: Is the element which looks like a regular complementizer (1b.) indeed a complementizer, or is it a "relative pronoun", but homophonous with the complementizer? Both views exist. Their distribution is different; e.g. WH-based relative pronouns can be preceded by a preposition, while **that** can't:

- (2) a. The piano on **which<sub>i</sub>** I played the sonata **t<sub>i</sub>**
- b. \*The piano on **that<sub>i</sub>** I played the sonata **t<sub>i</sub>**

A mixed view (e.g. Pesetsky 1981): **that** is the complementizer, not a pronoun; its phrasal position is that of a head (C), not that of a phrase (Spec, CP—the position of the WH-based relative pronouns). The homophony is not a coincidence, nor are the differences in distribution. However, RCs with complementizers exhibit similar island effects that RCs with relative pronouns exhibit; e.g. the Coordinate Structure Constraint:

- (3) a. \*This is [the lobster] [which<sub>i</sub> [[John cooked **t<sub>i</sub>** ] and [Mary ate a crab]]]
- b. \*This is [the lobster] [that<sub>i</sub> [[John cooked **t<sub>i</sub>** ] and [Mary ate a crab]]]

The Sentential Subject Constraint:

- (4) a. \*The lobster [which<sub>i</sub> [[that John cooked **t<sub>i</sub>** ] ] is obvious ] ]
- b. \*The lobster [that<sub>i</sub> [[that John cooked **t<sub>i</sub>** ] ] is obvious ] ]



- (6)[[ syuusyoku-ga muzukasii] [buturigaku]]  
 getting job-NOM is-hard physics  
 'physics, which is hard to get a job in'  
 (Both examples from Kuno 1973, as cited in Murasugi 2000: 232.)

There is no real difference between RCs and N-complement constructions in Japanese (cf. also Comrie 1998, for the same point). (But there have been critical voices to Murasugi/Kuno in literature on Japanese.) The gaps that do show up are due to a general, discourse-driven deletion of constituents, which is very productive in Japanese. Since the gaps are not due to movement, the constructions with gaps do not obey island constraints. The meaning of these constructions as similar to familiar RCs derives of a loose "aboutness" connection between the head noun and the modifying clause; there is no tight syntactic connection of the sort exhibited in "European" RCs, arising from movement, and thus from the connection between the moved relative pronoun (or of the moved operator) and the trace left behind.

**III.** Are RCs in all languages that lack relative pronouns of this sort, i.e. "fake" RCs which are actually (syntactically) gap-less N-complement constructions, and don't they exhibit any properties of movement? Does the branching direction of the construction have anything to do with the lack of movement?

Perhaps; Karachay-Balkar, a Turkic language of the northern Caucasus, has RCs which are very similar to Japanese RCs (cf. Comrie 1998: 81):

- (7) [kitab -i al -gan] oquwçu  
 book-ACC buy -RelPart student  
 'The student who bought the book'
- (8) [oquwçu al -gan] kitap  
 studentbuy -RelPart book  
 'The book that the student bought'
- (9) [tüb-ün -dän qara -sa -ŋ, börkü - ŋ tüš-gän ] esgi narat täräk  
 base-3.SG-ABL look up-CND -2.SG cap -2.SG fall -RelPart old fir tree  
 'The old fir tree that when you look up from its bottom your hat falls off'
- (10)[prezident kel -gän ] hapar  
 president come -RelPart news  
 'The news that the president has come'
- (11)a. [et biš -gän ] iyis  
 meat cook -RelPart smell  
 'The smell of meat cooking'

In (7) and (8), there are gaps corresponding to the head noun: a subject in (7), a direct object in (8). We cannot be sure, however, whether these gaps are due to movement or to discourse-based elision. (9) might show that there is no gap; this is not clear, however, given that the target of relativization appears to be the possessor of *tüb* 'bottom', and is thus likely to be a phonologically empty pronoun, due to the 3. SG. agreement marker. In other words, (9) might well be a RC with a resumptive pronoun—albeit a silent one.

(10) is an example of a N-complement construction in this language. It looks very similar to the previous examples which were translated as RCs. (11) is similar to this, and it illustrates this pattern as a general one for complex NPs. I don't have examples that might show presence or absence of island effects; however, my expectation would be that, just as in Japanese, subjacency should be violable in this language with impunity, because there don't seem to be genuine, syntactic gaps, and hence no movement.

IV. Before returning to Turkish: Some examples from Sakha. Somewhat like Karachay-Balkar, in that: 1. Same form of predicate for subject or non-subject RC-targets; 2. RCs and N-complement constructions look similar, and they exhibit similar predicate forms. (Turkish is different in both respects, to be seen later.) However, Sakha does seem to show island effects in its RCs.

But first, examples that seem to show that Sakha has similarities to Japanese (and Karachay-Balkar) with respect to tolerating island violations:

(12) [ [ [ [ e<sub>j</sub> e<sub>i</sub> ket-er ] tañah-a<sub>i</sub>] kirdeex ] kih<sub>j</sub> ]  
 wear-AOR clothes-3. dirty person  
 'The person who the clothes that (he is) wearing are dirty'

(13) [[üle bul-ar -ga yarañan] fizika]  
 work find-AOR-DAT difficult physics  
 'Physics, which is hard to get a job in'

These correspond to the Japanese (5) and (6), respectively, with (12) apparently an island violation, and (13) a construction without a gap.

It turns out that while examples like (12) with an adjectival predicate are OK for the “second extraction” which should violate an island, a verbal matrix predicate does not tolerate a similar violation:

(14) ??/\*[ [ [ [ e<sub>j</sub> e<sub>i</sub> ket-er ] tañah-a<sub>i</sub>] kirtij -bit ] uol<sub>j</sub> ]  
 wear-AOR clothes-3. become.dirty-PST person  
 'The boy who the clothes that (he is) wearing became dirty'

N. Vinokurova, who provided the Sakha examples, suggests that in (13), there is a gap after all, and that the underlying structure is as follows:

(15) [Fizika [üle bul-ar -ga] yaraxan]  
 physics work find-AOR-DAT difficult  
 ‘Physics is difficult to find a job in’

NV suggests that the embedded clause is an “infinitival” clause or a small clause. (13) would be the result of relativization, targeting the subject of (15). A similar pair of related constructions, but without a further embedding, would be as follows:

(16) a. Bu sorudax Masha-qa cepceki  
 this assignment Masha-DAT easy  
 ‘This assignment is easy for Masha’

b. [e<sub>i</sub> Masha-qa cepceki] sorudax<sub>i</sub>  
 Masha-DAT easy assignment  
 ‘A/the assignment which is easy for Masha’

It would be interesting to find out if either Japanese or Karachay-Balkar would be open for such an analysis, too.

A few examples from Sakha follow, showing that N-complement clauses have the same shape as RCs in Sakha (true for the “participial” N-complements; there are also finite ones which look different), and that the CNPC (and other island constraints for which no examples will be given here) does hold:

(17) [[president kel -er] sonun]-a ih -ilin-ne  
 president come-AOR news -3 hear-PASS-PST.3  
 ‘The news that the president was coming was heard’

(18) [et buh-ar ] sit -a  
 meat cook- AOR smell-3.  
 ‘The smell of meat cooking’

(19) [[ehigi k1aj-bit] surax]-x1t tarqan -na  
 you win- PST rumor-2.pl spread- PST -3.  
 ‘The rumor that you won spread’

(20) \*[[Masha [[ Misha e<sub>i</sub> kuop -put] suraq – in] isti-bit ] dojdut<sub>i</sub>-ta  
 Masha Misha run.away- PST rumor-3.ACC hear- PST country-3.  
 Intended: ‘The country which Masha heard the rumor that Misha ran away to’

Turning to RCs:

(21) \*[Misha [aaspyt sajin e miigin kör-büt] djon]-u bil -er ] ar11 -ta  
 Misha last summer me.ACC see- PST people- ACC know-AOR island-3.  
 Intended: ‘The island such that Misha knows the people who saw me on it last summer’

The range of “participles” that show up as predicates of the embedded clauses are exactly the same in N-complement clauses and in RCs. Note the bold-faced “past” marker in (20), an N-complement construction, and (21), a RC. Also, in both constructions, the head agrees in person and number with the subject of the embedded clause (unless the subject is relativized, in which case there is no agreement marker in either construction).

Let’s assume, for the time being, that Sakha does have operator movement, as well as having the possibility of “loose” connections between a complement clause and a nominal head. This would suggest that the resemblance of RCs and N-complement constructions don’t necessitate absence of operator movement in a language. This would further account for Sakha’s similarities to Japanese and Karachay-Balkar on the one hand, and to English and, as we shall see below, to Turkish, on the other.

## V. Turkish

Turkish RCs, while also lacking relative pronouns, and while also being head-final, have different properties: **1.** The nominalization markers on the predicate of the modifying clause differ according to the target of the RC; we shall see those in detail below. Just as an observation, this contrasts with Karachay-Balkar as well as Sakha, where the same predicate form shows up, irrespective of the grammatical relation within its clause of the “gap” corresponding to the head noun.

**2.** The external shapes of RCs and of N-complement constructions are different from each other. N-complement constructions are phrasal compounds; the head noun bears the compound marker *-(s)I*, i.e. the third person singular nominal agreement:

- (22) a. ev kapı -sı  
house door -3.SG  
'house door'
- b. [hırsız -ın kaç -tığ -ı] haber -i  
thief -GEN escape -FN-3.SG news-"3.SG"  
'The news that the thief escaped'

RCs don't have such a compound marker on their head noun.

**3.** These N-complement clauses can also be fully finite, i.e. they can be fully tensed (Sakha has a similar construction, but with a quotative, and no compound marker):

- (23) [hırsız kaç -tı] haber -i  
thief escape -PAST news-"3.SG"  
'The news that the thief escaped'

RCs in Turkish cannot be fully tensed; they have to exhibit either one of the two main types of nominalization.

4. N-complement constructions can also show up with another kind of nominalization. While the nominalization illustrated in (22)b. is sometimes referred to as "Factive Nominalization", and would correspond to European indicatives, another productive type is sometimes referred to as "Non-Factive Nominalization" and would correspond to European subjunctives:

(24) hırsız -in [[ kaç -ma ] çaba -sı]  
 thief -GEN escape-NFN attempt -3.SG  
 ‘The thief’s attempt to escape’ (lit. ‘the thief’s escape attempt’)

The non-factive nominalization never shows up in RCs. Note also that non-factive nominalizations don't show up with embedded questions, either; in other words, no matter what we take their functional projections to be (i.e. whether they are CPs, DPs, or both) the specifier position of their highest projection cannot host an interrogative operator. It appears that their specifier position cannot host a relative clause operator, either. A nice generalization would be to state that this nominalization type cannot host operators of any kind; this would therefore support the analysis of Turkish RCs as operator—variable constructions, despite the abstractness of that analysis.

5. Turkish has no way to express the Karachay-Balkar construction we saw in (11a) (and its Sakha equivalent in (18)) by means of a similar construction, i.e. by an N-complement construction that looks like a RC—in other words, neither a construction that looks like a subject-targeting RC as in (11b) nor a construction that looks like a non-subject targeting RC as in (11c) is well-formed:

(11) b. \* [et piş -en] koku  
 meat cook -RelPart smell  
 Intended reading: ‘The smell of meat cooking’

(11) c. \* [et -in piş -tiğ -i] koku  
 meat-GEN cook -RelPart-3.SG smell  
 Intended reading: ‘The smell of meat cooking’

Turkish would need to resort to other constructions. Note that (11a) is a construction which is similar to Japanese gap-less "RCs".

Of course the question arises as to why an N-complement construction isn't available, either, such as in (22b) or (24):

(11) d. \* [et -in piş -me] koku -su  
 meat-GEN cook-NFN smell -3.SG  
 (11) e. \* [et -in piş -tiğ -i] koku -su  
 meat-GEN cook-FN-3.SG smell -3.SG  
 Intended reading for both examples: ‘The smell of meat cooking’

It is easier to exclude (11e); its factive semantics would require a different type of head, such as ‘news’, ‘rumor’ and the like. The non-factive semantics of (11d) would also require a different kind

of head, such as ‘probability’, or even ‘temperature’. In any event, we see that the different nominalizations of the clause impose rather strict requirements on the kind of head for which they can serve as complements, and that a “vague relatedness” between clause and head is not what Turkish N-complement constructions embody. Given that the nominalization and the head noun form a compound, this is not surprising. In a context where this sequence could indeed form a technical term, it is conceivable that (11d) would become well-formed.

I conclude that Turkish RCs are different from constructions translated as RCs in Karachay-Balkar and in Japanese, and that N-complement constructions are, as well. Furthermore, while Turkish, too, can omit constituents under certain discourse conditions, this is much more limited than in Japanese. Nonetheless, if we want to convince ourselves that Turkish, as a language lacking relative pronouns, and despite the fact that it is left-branching, has RCs that exhibit properties of movement (of an empty operator), we have to see if Turkish RCs exhibit island effects.

## VI. Ross's Syntactic Islands and deriving them from more general principles

The idea that certain syntactic domains are "islands", i.e. nothing can escape them. Examples:

A. The Coordinate Structure Constraint (CSC): Nothing can be extracted from one conjunct, without being extracted from the other conjunct, as well:

(25)a. [John cooked a lobster and Mary ate a crab].

b. \*What did [John cook **t<sub>i</sub>** and Mary ate a crab]?

B. The Wh-Island Constraint: Nothing can be extracted from a domain introduced by a wh-element:

(26)a. You don't know [whom<sub>i</sub> John took **t<sub>i</sub>** to the exhibit].

b. \*[Which exhibit]<sub>j</sub> don't you know [whom<sub>i</sub> John **t<sub>i</sub>** took to **t<sub>j</sub>**] ?

C. The Complex NP-Constraint (CNPC):

Nothing can be extracted from a Complex NP, i.e. an NP which is headed and which dominates a clause. In English, these are relative clauses and constructions with nominal complements:

(27)a. This is [the hat which<sub>i</sub> Otto bought at Bloomingdale's].

b. \*I know the store where<sub>j</sub> this is [the hat which<sub>i</sub> Otto bought **t<sub>i</sub>** at **t<sub>j</sub>**].

(28)a. I heard [the rumor that Otto escaped to Siberia].

b. \*This is the country which<sub>i</sub> I heard [the rumor that Otto escaped to **t<sub>i</sub>**].

D. The Sentential Island Constraint (SSC): Nothing can be extracted from a sentential subject, i.e. a sentence which is a subject:

(29)a. [That John gave *The Minimalist Program* to Mary as a present] is widely known.

b. \*This is the book which<sub>i</sub> [that John gave **t<sub>i</sub>** to Mary as a present] is widely known.

Extraction out of an extraposed sentential subject is fine:

(30)a. It is widely known [that John gave *The Minimalist Program* to Mary as a present].

b. This is the book which<sub>i</sub> it is widely known [that John gave **t<sub>i</sub>** to Mary as a present].



Why should there be syntactic islands? Why should these particular domains (and a few others) act as islands, and not other domains?

Chomsky (1977): All movements are local. They must obey the Subjacency Condition, which essentially says that no movement can cross, within one single application, more than one bounding node. The Subjacency Condition is universal; the bounding nodes may differ cross-linguistically (this latter point claimed in later work, e.g. Rizzi). NP is assumed to be a bounding node; some languages might choose IP or CP as a second bounding node. For English, the bounding nodes are assumed to be NP/DP and CP.

This explains the CNPS and some instances (but not all) of the CSC. If a sentential subject is assumed to be an NP (which, in those days, some syntacticians did), the SSC is explained, as well. But somewhat ad-hoc, as 1. other embedded sentential arguments are not islands, so they would not be dominated by NP; why should a sentential subject be different in this respect? 2. problematic with respect to X'-syntax, as such an NP would not be headed by an N. (However, some have claimed that there is such a head: *it*.)

Sentences are assumed to have an "escape hatch": Spec,CP. If that position is filled, as it is in wh-islands, nothing else can leave the domain. Thus, Subjacency explains the wh-island constraint, as well.

Problematic: The CSC in those instances where Subjacency does not predict islandhood (e.g. coordinated VPs), and the SSC (for the reasons just mentioned).

The former: Usually dealt with by appealing to a general Parallelism constraint.

The latter: In later work (e.g. Chomsky (1986 b.)), certain domains are claimed to be Barriers for extraction, unless they are "L-marked", i.e. roughly, governed by a *lexical* (i.e. not functional) head. Consequence: Subjects and adjuncts predicted to be barriers, i.e. islands, while argument domains are not. This does seem to be essentially correct. (The VP-internal subject hypothesis may challenge this approach, but if we assume that subjects, even when VP-internal, are not governed by the V or "agree" with the verb, then the spirit of this approach can be maintained.)

## VII. The Sentential Island Constraint: Does it hold in Turkish?

Do Ross's syntactic islands act as islands in Turkish, too? What about the SSC in particular? It doesn't seem to hold:

(31)a.[müdür -ün öğretmen-i kov -acağ -ı] duy-ul -du  
director-GEN teacher -ACC fire -FUTN -3.SG hear-PASS -PAST  
'That the director was going to fire the teacher was heard'

b.[[müdür -ün e<sub>i</sub> kov -acağ -ı] duy-ul -an] öğretmen<sub>i</sub>  
director -GEN fire-FUTN -3.SG hear-PASS -(y)An teacher  
'\*The teacher who that the director was going to fire (him) was heard'

- (32)a. [[mimar adam -a rüşvet ver -diğ -i] bil -in -iyor  
 architect man -DAT bribe -FN-3.SG know -PASS -PRES.PROG.  
 That the architect bribed the man is known!.
- b. [[mimar -in e<sub>i</sub> rüşvet ver -diğ -i] bil -in -en] ] **adam<sub>i</sub>**  
 architect-GEN bribe -FN-3.SG know -PASS -(y)**An man**  
 The man who that the architect bribed is known' (i.e. 'the man such that it is  
 known that the architect bribed (him)').

Is the SSC the only island which is not valid for Turkish?

The CSC does hold:

- (33)a. [Ali istakoz-u pişir -di] ve [Oya balığ-ı ye -di]  
 Ali lobster -ACC cook -PAST and Oya fish -ACC eat -PAST  
 'Ali cooked the lobster and Oya ate the fish'
- b. \*[Ali-nin e<sub>i</sub> pişir -diğ -i] ve [Oya-nın balığ-ı ye -di ğ -i]  
 Ali -GEN cook -FN-3.SG and Oya-GEN fish -ACC eat -FN-3.SG  
 istakoz  
 lobster  
 '\*The lobster that Ali cooked and Oya ate the fish'

The CNPC holds, too, for relative clauses as potential hosts of extraction, but not for N-complement clauses:

- (34)a. \*[Hasan -ın [[e<sub>i</sub> geçen yaz e<sub>j</sub> ben -i gör -en] kişi -ler<sub>i</sub>]-i  
 Hasan-GEN last summer I -ACC see-(y)**An** person -PL -ACC  
 tanı -diğ -i] adaj  
 know -DIK -3.SG island  
 '\*The island which Hasan knows the people who saw me (on it) last summer' (i.e. 'The island such  
 that Hasan knows the people who saw me on it last summer')

Related simple relative clause, i.e. the Complex NP:

- (34)b. Hasan [[e<sub>i</sub> geçen yaz ada -da ben -i gör -en]  
 Hasan last summer island-LOC I -ACC see-(y)**An**  
 kişi -ler<sub>i</sub>]-i tanı -yor  
 person -PL -ACC know -PRES.PROG.  
 'Hasan knows the people who saw me on the island last summer'

- (35)a. ??/\*[Ali-nin [[Hasan -ın e<sub>i</sub> kaç -tığ -ı]  
 Ali -GEN Hasan-GEN run away -FN -3.SG  
 söylenti -sin -i] duy -duğ -u ] ülke<sub>i</sub>  
 rumor -CMPD -ACC hear -FN-3.SG country  
 'The country which Ali has heard the rumor that Hasan has run away to'

Not very good, but somewhat better than extraction out of a relative clause (e.g. [34 a.]), under the relevant reading as given. (Irrelevant, but better, reading: 'The country where Ali heard the rumor that Hasan has run away', where the extraction is not from the potential island, but from higher up.)

Related N-complement construction:

- (35)b. Ali [[Hasan -ın Sibiryaya kaç -tığ -ı]  
 Ali Hasan-GEN Siberia-DAT run away-FN-3.SG  
 söylenti -sin -i] duy -muş  
 rumor -CMPD -ACC hear -REP.PAST  
 '(They say that) Ali has heard the rumor that Hasan has run away to Siberia'

Insofar as N-complement constructions not islands in Turkish, old-fashioned Subjacency might be unable to draw a distinction to extractions out of relative clauses; however, Barriers-type approach based on L-marking can, as N-complement clauses are L-marked; relative clause modifiers are not L-marked (are adjuncts to the head). Similarly, the Minimalist Program could draw a distinction, based on the different types of Merge: Complements are merged with their heads under the "regular" Set-Merge, while adjuncts are merged under Pair-Merge.

The Wh-island Constraint doesn't seem to hold in Turkish in general; not a problem, since Wh-elements in-situ in Turkish (one would need to say that Subjacency doesn't hold at LF; a controversial and undecided issue). Actually, in certain domains, the Wh-island Constraint does hold: non-D-linked Wh-adjuncts are bad within certain islands, such as in Complex NPs (cf. Kesici 2007).

On balance, syntactic islands do seem to hold in Turkish. Therefore, it's worth to look for reflexes of the SSC – especially if those fall out from other facts of the language.

### VIII. Relative Clauses in Turkish and their participles: simple and complex

**1. In simple relative clauses:** The well-known subject/non-subject asymmetry (abstracting away from non-subjects in impersonal constructions) of *-(y)AN/-DIK+Agr* markings on the modifier clause, depending on the target of relativization:

- (36)a. [e<sub>i</sub> geçen yaz ada -da ben -i gör -en] kişi -ler<sub>i</sub>  
 last summer island-LOC I -ACC see *-(y)An* person -PL  
 'The people who saw me on the island last summer' (Subject as target)

- b. [(ben-im) geçen yaz ada -da e<sub>i</sub> gör -düğ -üm] kişi -ler<sub>i</sub>  
 I-GEN last summer island-LOC see *-DIK -1.SG* person -PL  
 'The people who(m) I saw on the island last summer' (Non-subject as target)

Why? Proposal: What's important is not the difference between the two nominalization markers, but the presence vs. absence of predicate/subject agreement. (Languages conceivable with only one nominalization marker, but same subject/non-subject asymmetry, tied to presence vs. absence of agreement.)

The reason for this asymmetry with this particular encoding: Turkish (like English) is a type of language where resumptive pronouns are allowed to "save" constructions that are bad otherwise. In *simple* relative clauses, resumptive pronouns are bad:

(37)a. \* [onlar<sub>i</sub>/kendileri<sub>i</sub> geçen yaz ada -da ben -i gör -en] kişi -ler<sub>i</sub>  
 they/themselves last summer island-LOC I -ACC see -(y)An person-PL

‘\*The people who<sub>i</sub> they<sub>i</sub> saw me on the island last summer’ (Subject as target)

b. \* [(ben-im) geçen yaz ada -da onlar -i /kendilerin -i]  
 I-GEN last summer island-LOC they-ACC/themselves-ACC  
 gör -düg -üm] kişi -ler<sub>i</sub>

see-DIK -1.SG person -PL

‘\*The people who(m) I saw on the island last summer’ (Non-subject as target)

(38) If an empty category is licensed and identified by AGR, it *must* be **pro**. (Jaeggli 1984.)

Consequence: If the modifier clause with a subject as target were headed by *-DIK+Agr* (or even *-[y]AN +Agr*), the target position would be occupied by **pro**, i.e. a resumptive pronoun:

(39) \* [pro<sub>i</sub> geçen yaz ada -da ben -i gör -dük -leri] kişi -ler<sub>i</sub>  
 last summer island-LOC I -ACC see -DIK -3.PL person-PL

‘\*The people who<sub>i</sub> they<sub>i</sub> saw me on the island last summer’ (Subject as target)

The ill-formedness of (39) is, syntactically, on a par with the ill-formedness of (37)a.

General account of the asymmetry and the *-(y)An/-DIK+Agr* dichotomy: The "unmarked case" is *-DIK+Agr*. *-DIK* found as factive nominalization in general, both in argument and adjunct embeddings. *Agr* morphology needed to assign Case to the subject and to mark subject/predicate agreement. The question is/was: Why can't this "unmarked strategy" not used for *all* targets? Answer just given: Resumptive pronouns not possible in simple relative clauses. This rules out forms that have *Agr* on the predicate. (To rule out *-DIK* for Turkish subject RCs: Proposal that *-(y)An* expresses complementizer agreement with a subject variable in Turkish; not all languages have complementizer agreement; when they don't, or when there is no complementizer at all, then the nominalization form for subject and non-subject RCs will be the same, as it is in some genetically related Turkic languages.)

## 2. "Relativization Participles" in complex relative clauses:

The "unmarked case" also found when target positioned within any kind of non-subject; e.g. sentential object:

(40)a. Ali [Hasan -ın Sibirya -ya kaç -tığ -ın -ı

Ali Hasan-GEN Siberia-DAT run away-FN-3.SG -ACC  
 duy -muş  
 hear -REP.PAST

'(They say that) Ali has heard that Hasan has run away to Siberia'

b.[Ali -nin [[Hasan -in e<sub>i</sub> kaç -tığ -in -ı  
 Ali -GEN Hasan -GEN run away-FN-3.SG -ACC  
 duy -**duğ**-u ] ülke<sub>i</sub>  
 hear -**FN**-3.SG country

"The country which Ali has heard the rumor that Hasan has run away to'

The "marked case", i.e. Agr-less -(y)An, found when target positioned within a larger subject (irrespective of subject/non-subjecthood of target itself); (31)b. repeated as (41):

(41)[[müdür -ün e<sub>i</sub> kov-acağ -ı] duy-ul -**an**] öğretmen<sub>i</sub>  
 director -GEN fire-FUTN -3.SG hear-PASS -(y)An teacher  
 '\*The teacher who that the director was going to fire (him) was heard'

At least in standard dialect, "unmarked strategy" with -DIK + Agr ill-formed:

(42)\*[[müdür -ün e<sub>i</sub> kov-acağ -ın -ın duy-ul -**duğ**-u]  
 director -GEN fire-FUTN -3.SG -GEN hear-PASS -**FN**-3.SG  
 öğretmen<sub>i</sub>  
 teacher

'\*The teacher who that the director was going to fire (him) was heard'

Original proposal to explain why "unmarked strategy" blocked with subject targets in simple relative clauses doesn't carry over: 1. the target isn't a subject; the Agr morpheme heading the relative clause (nor the one heading the sentential subject) doesn't force the target gap to be a pronoun; 2. resumptive pronouns in these constructions are not as bad as in simple relative clauses:

(43) ?[[müdür -ün kendisin -i<sub>j</sub> kov-acağ -ı] duy-ul -**an**] öğretmen<sub>i</sub>  
 director-GEN himself -ACC fire-FUTN -3.SG hear-PASS -(y)An teacher  
 '\*The teacher who that the director was going to fire him was heard'

Another proposal in the literature to explain the morphology in complex relative clauses is Hankamer & Knecht's (1976) Mother Node Principle (MNP), which dictates that a relativization target triggers the "relativization participle" appropriate for its "mother node". This covers the facts, but doesn't follow from anything else, nor does it connect the facts of complex relative clauses with other general facts of the language, not even to those of simple relative clauses straightforwardly.

### IX. Proposal:

The SSC does hold in Turkish, but in the form of a (Left-) **Dislocated** SSC.

Sketch:

"Large subjects" are barriers (i.e. islands), as they are not L-marked. To serve as extraction domains, such subjects must move away from subject position. I propose that a SS must be topicalized first to serve as an extraction domain. This accords well with Kuno's ('73) claim that targets of relativization must be topics, and Bianchi's ('94-'95) claim that Italian relative clauses involve topicalization before "relativization".

The "large subject" must move to a position where it is L-marked, otherwise it remains a barrier. There are no obvious positions of this sort.

Proposal for a position: Extend L-marking to "information-structural" positions, especially to Topic (Spec/TopicPhrase). The sentential subject moves there and is not a barrier any longer:

(44) [[mimar -in e<sub>i</sub> rüşvet ver -diğ -i] j [e<sub>j</sub> bil -in -en]] adam<sub>i</sub>  
architect-GEN bribe -FN -3.SG know -PASS -(y)An man  
\*'The man who that the architect bribed is known'.

Why can't the "unmarked strategy" with *-DIK+Agr* not be used here? The same example would be as follows:

(45)\*[[mimar -in e<sub>i</sub> rüşvetver -diğ-in -in]j [pro<sub>j</sub> bil -in -diğ -i]] adam<sub>i</sub>  
architect -GEN bribe - FN-3.SG-GEN know-PASS-FN-3.SG man

Intended reading: 'The man who that the architect bribed is known'.

The representation has a resumptive pronoun: not the relativization target, but in the original position of the topicalized element. In other words, the "unmarked strategy", due to its overt Agr, forces the topicalization to be a *Left Dislocation* structure. This is exactly what Koster claims is behind the SSC in better-studied languages like English, German, Dutch etc.: the apparent sentential subject is actually not in canonical subject position, but in a left-dislocated position; *this* is the nature of the island, as dislocated constituents are islands in general.

This is also the nature of the SSC in Turkish: the ill-formedness of the "unmarked strategy" represents the SSC (now in the form of a Left-Dislocation Constraint). The well-formedness of the "marked strategy" with *-(y)An* (which would represent a topicalized, rather than Left-Dislocated, sentential subject) masks the existence of the constraint.

## X. Some independent evidence for sentential (and perhaps other) subjects as topics:

### 1. Non-V-adjacent Wh-elements

Although the best position for wh-elements is left-adjacent to V, overtly Case-marked wh-elements can occur elsewhere, too. Erguvanli's (1984) claim to the contrary and her examples give a clue as to what is going on:

- (46)a. Murat nere -ye git -ti?  
Murat where -DAT go -PAST  
'Where did Murat go?'  
b.\*Nere -ye Murat git -ti?  
where -DAT Murat go -PAST (E.'s (92)a. and b.)

Erguvanlı is right for non-V-adjacent wh-elements that precede the subject; those are quite bad. But non-V-adjacent wh-elements that follow the subject (or which are subjects themselves—irrelevant for our present purposes) are, depending on discourse, pragmatics and intonational factors, acceptable. Best is where the wh-element is V-adjacent:

- (47)a. Murat-a bilet -i **kim** ver -di?  
 Murat-DAT ticket -ACC **who** give -PAST  
 'Who gave the ticket to Murat?'  
 b. Murat bilet -i **kim -e** ver -di?  
 Murat ticket -ACC **who -DAT** give -PAST  
 'To whom did Murat give the ticket?'

However, examples like the following ones can be felicitous, as well:

- (48)a. Murat-a **kim** bilet -i ver -di?  
 Murat-DAT **who** ticket -ACC give -PAST  
 'Who gave the ticket to Murat?'  
 b. Murat **kim-e** bilet -i ver -di?  
 Murat **who -DAT** ticket -ACC give -PAST  
 'To whom did Murat give the ticket?'

- (49) ??/\***kim -e** Murat bilet -i ver -di?  
**who -DAT** Murat ticket -ACC give -PAST

Intended reading: 'TO WHOM did Murat give the ticket?' (i.e. who is such that Murat gave him/her the ticket?)

Crucially, (48)b. is quite acceptable and much better than (49) and certainly than (46)b. This would follow if the (surface) subject is typically in topic position, thus forcing the wh-element into an adjoined topic position, against focal properties of wh-elements. (For speakers who accept [49], there might be a left-peripheral focus/topic position, as has been claimed for some languages.)

## 2. The "Bare SSC" of Sezer (1986)

Sezer (1986): An unmarked (for agreement) sentential subject (i.e. an infinitival sentential subject) cannot serve as the host of a relativization target; infinitival sentential non-subjects can serve as such hosts:

Infinitival sentential non-subject:

- (50)a. Ben<sub>i</sub> [PRO<sub>i</sub> bu yaz sen -i ada -da gör -mek]  
 I this summer you -ACC island-LOC see -INF  
 iste -mi -yor -um  
 want-NEG-PRES.PROG. -1.SG  
 'I do not want to see you on the island this summer'

- b. [Benim<sub>i</sub> [PRO<sub>i</sub> bu yaz **e<sub>i</sub>** ada -da gör -mek]  
 I this summer island-LOC see -INF  
 iste -me -**diğ -im**] adam<sub>i</sub>  
 want-NEG-FN-1.SG man  
 'The man who I do not want to see on the island this summer'

Infinitival sentential subject:

(51)a. [ PRO<sub>arb</sub> geçen yaz sen -i ada -da gör -mek]  
last summer you -ACC island-LOC see -INF  
güzel -di  
nice -PAST

‘It was nice to see you on the island last summer’

Literally: 'To see you on the island this summer was nice'

b. \*[ PRO<sub>arb</sub> geçen yaz e<sub>i</sub> ada -da gör -mek]  
last summer island-LOC see -INF  
güzel ol -an adamı  
nice be -(y)An man

\*‘The man whom it was nice to see on the island last summer’

Literally: 'The man whom to see on the island last summer was nice'

When agreement possible on some synonymous sentential subjects (typically, with "tough-predicates"), result OK:

(52) a. \*[[PRO<sub>arb</sub> e<sub>i</sub> çal -mak] zor ol -an] konçertoı  
play -INF hard be -(y)An concerto

'The concerto which it is hard to play'

Literally: '\*The concerto which to play (it) is hard'

"Correct", "marked strategy" used; yet, result ill-formed. Why?

(52)b. [[pro<sub>arb</sub>e<sub>i</sub> çal -ma -sı] zor ol -an] konçertoı  
play -NFN -3.SG hard be -(y)An concerto

Same translation.

The nominal agreement element serves as a type of determiner (cf. Abney 1987, somewhat different for Kornfilt 1984), making the domain it heads "specific". If a subject, such a constituent can be placed in canonical subject position and can also be topicalized. Without that element, the domain is "non-specific" and can neither move to canonical subject position (from its base-generated VP-internal or VP-adjoined position; cf. Koopman & Sportiche 1991), nor can it be topicalized.

The morphological sequence *INF* - *GEN* is ill-formed (although sequences of the infinitive with other cases are fine):

(53)\*[[PRO<sub>arb</sub> bu konçerto-yu çal -mağ -ın] zor ol-duğ -un -u]  
this concerto-ACC play -INF-3.SG hard be -FN-3.SG-ACC  
bil -iyor -um  
know -PRES.PROG. -1.SG



'I know that this concerto is hard to play'

Proposal: This sequence is impossible a consequence of the syntactic impossibility of placing infinitival sentential subjects in *canonical* subject position.

Alternative proposal: The sequence is impossible due to a morpho-phonological constraint. But because of this constraint, the infinitival cannot move to the canonical subject position (where the Genitive is checked), and consequently, it cannot move further to Spec-TopP, i.e. it cannot be topicalized; it must remain in VP-internal (or VP-adjoined) position.

## **XI. Conclusions about Turkish:**

1. Turkish has the SSC, in the form of a Left-Dislocation Island Constraint, as presumably other languages do, too.
2. Turkish is a language with a tendency against resumptive pronouns. The main "relativization strategies", one with, the other without overt subject agreement, as depending on the subject/non-subject status of the relativization target, is a consequence of this property.
3. Sentential subjects are topicalized so as to serve as hosts of relativization targets. This explains Sezer's "Unmarked Sentential Subject Constraint", together with the assumption that infinitival sentential subject are, in some sense, non-specific and can't be topicalized.
4. The "unmarked strategy" is nothing else but the general embedding nominalization pattern, not limited to relative clauses. This is the Elsewhere Case. There is no "object strategy". It cannot be used for subject targets, due to conclusion 2. It also cannot be used for sentential subjects, due to conclusion 1. The "marked strategy" lacking overt agreement is therefore enforced. The "Mother Node Principle" becomes unnecessary, as its effects follow from these general considerations.

## **XII. Speculations about additional correlations:**

Turkish, Turkic, Japanese and a number of other languages are all head-final; they lack (overt) relativization pronouns. In most instances, their RCs lack overt complementizers. Must these properties correlate?

Concentrating on Turkish: Traditionally, it has been claimed that Turkish RCs are "reduced". This has also been claimed recently by Krause (2001), who claims that RCs with Genitive (rather than Nominative) subjects are reduced, in that they are clauses that are "small" in some sense; they are not CPs, and they are not even TPs; they have aspectual projections as the highest functional projections in the clause, and the heads of those projections are unable to license Nominative on their subjects. Via some mechanisms not relevant for us here (e.g. the verb, with its aspectual head, raising into the N head of the RC), Genitive is licensed on the subject.

One issue is how "reduced" these RCs are. *T* is one of the projections, as one can distinguish future and non-future for the nominalized indicatives, and one can distinguish even more tenses, via

complex verb forms with participles. Furthermore, one needs to have a functional projection with an escape hatch, to explain the island effects we have seen. This functional projection might indeed not be CP; say that it is a DP. (Krause has some arguments to show that there is no DP on top of the functional architecture of the modifying clause, but her arguments are not convincing and are in part based on faulty data.) Thus, the architecture of the clause would hardly be smaller than that of regular CPs, and it would be unclear in what way these clauses are reduced.

Moreover: the verbs in these RCs have their full argument structure realized, and adjuncts can show up, as well; this is not so with true reduced RCs, such as the following:

(54) \*an [early every morning from his home to school with his friends running] child

Speaker-oriented adverbs such as *probably*, which are located in the higher levels of the clausal architecture, can show up in Turkish RCs. "High" modals, such as ability, can show up, as well. These verbs can also be passivized. Again, in a regular reduced RC, this would not be possible:

(55) \*a [by his mother loved] child

All of these are fine in Turkish:

(56) [her sabah ev -in-den okul -a arkadaş-lar-ı -yla koş-an] bir çocuk  
 every morning home-3.SG-ABL school-DAT friend-PL-3.SG-with run-RelPart. a child  
 'A child who runs early every morning from his home to school with his friends'

(57) [[[pro<sup>i</sup> anne -si<sup>i</sup>] tarafından] sev-il -en] bir çocuk  
 mother -3.sg. by love-Pass. -RelPart. a child  
 'a child loved by his/her mother'

(58) [Oya-nın herhalde sev-e -me -diğ -i] bir insan  
 Oya-GEN probably love-ABIL -NEG -FN-3.SG a person  
 'A person who Oya probably cannot love'

Suppose, then, that these clauses are not CPs; they are DPs, or *nPs* (cf. Kornfilt 2006). I have claimed that the D or *n*-head hosts the nominal Agreement morphology. Just as C has to agree in its features with whatever moves into its associated specifier position, the D or *n* has to agree with such an element, as well. Relative pronouns might be incompatible with *Agr*; as a matter of fact, *Agr* itself might be a kind of clitic-like pronominal element, thus barring relative pronouns from its associated specifier position. Under such an analysis, Turkish RCs would not be reduced, but rather simply nominal, and otherwise fully articulated.

Incidentally, Krause claims that such "reduced RC"s (in her view) with Genitive subjects are not limited to head-final languages and/or head-final constructions; she claims that head-initial reduced

RCs are found, as well, and she cites Hiaki and Toba Batak in this context. These constructions would need to be reanalyzed to verify this claim.

Japanese RCs are not nominalized; they are fully tensed, while being head-final. This means that either this particular correlation between head-final RCs and nominalized modifying clauses does not exist, or else Japanese is an exception to an otherwise solid generalization, or perhaps Japanese RCs are non-finite, although they appear to be finite. Food for thought.

Finally, there is another approach to head-final RCs that does posit (slightly) reduced structure, based on a particular derivation, and certain assumptions:

Kayne (1994) proposes a universal syntactic phrase structure, where heads follow their specifiers and precede their complements. Movement is leftwards. A complement or adjunct that precedes a head has landed in its position as a result of leftward movement.

Relative clauses involve leftward movement of the "target" of relativization into Spec/CP; the CP ("Complementizer Phrase", the modifying clause in the construction), in turn, is the complement of the D in a DP (=Determiner Phrase). English:

(59)[DP [D<sup>0</sup> the] [CP [NP book]<sub>i</sub> [C'[C<sup>0</sup> that] [IP Jane stole [e ]<sub>i</sub>]]]]

In right-headed languages like the Turkic languages a similar derivation would take place—but an additional step is necessary: the IP-complement (IP=Inflectional Phrase) of C moves to the specifier position of the higher DP. The last movement yields pre-nominal modification; the structure would be as follows (with English morphemes):

(60)[DP [IP Jane stole [e ]<sub>i</sub>] [D<sup>0</sup> the] [CP [NP book]<sub>i</sub> [C'[C<sup>0</sup> that] [e]<sub>j</sub>]]]]

An additional assumption is that an overt C cannot be stranded; thus, in such languages, the C cannot be overt:

(61)[DP [IP Jane stole [e ]<sub>i</sub>] [D<sup>0</sup> the] [CP [NP book]<sub>i</sub> [C'[C<sup>0</sup> e] [e]<sub>j</sub>]]]]

Some independent evidence in favor of this derivation:

(62) [Oya-nın kütüphane-den e<sub>i</sub> çal -dığ -ı]<sub>IP=AgP</sub> **bu** eski kitap<sub>i</sub>  
 Oya-Gen. library -Abl. steal -FN-3.sg. **this** old book  
 'this old book that Oya stole from the library'

This would make the explicit prediction that in head-final RCs, one would never find a complementizer; this is reminiscent of Keenan's (1985) generalization:

(63) "Pre-N relatives never display a complementizer that is identical to the normal complementizer of sentential complementation." (Keenan 1985: 160)

Some traditional and descriptive work on Turkish has posited that the nominalizer -*DIK*, which I have glossed as *FN* (for Factive Nominalization) actually does function as a complementizer—this receives justification from the fact that, just as different kinds of C elements are selected for by certain matrix predicates, -*DIK* versus -*ma* (i.e. the non-factive nominalizer) are also selected for. In addition, if we assume neither a CP, nor a DP with a specifier that can act as an escape hatch, dominates the clausal functional architecture of Turkish RCs, we lose any explanation for the island facts that we have seen. But if -*DIK* is a complementizer, then the unmarked modifying clauses with -*DIK* in Turkish non-subject RCs constitute a counterexample to Keenan's generalization in (63).

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