Turkish as a (non)-wh-movement language

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Introduction

(1)
Köpek kim-i kovalı-yor?
dog-NOM who-ACC chase-PROG
‘Who is the dog chasing?’

Within the LF-raising analysis of the wh-in-situ constructions proposed by Huang (1982), the wh-phrase in (1) is assumed to raise to Spec, CP at LF. (2) is the LF rep-

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1 As (i)a’/a’ and (i)b’/b’ illustrate, wh-scrambling also applies to move a wh-phrase over another in a multiple wh-construction. In (i)b’, the Accusative wh-phrase which merges with the V before the subject phrase merges into Spec, VP has scrambled over the nominative wh-phrase to sentence initial position (cf. (i)a’a’ and (i)b’/b’, Göksel and Özsoy’s 2000 examples (13-14)).

(i)a.
KIM kim-i sev-iyor-muş?
Who who-ACC love-PROG-HS-3
‘Who loves whom?’

a’.
*KIM KIM kim-i sev-iyor-muş?
Who who-ACC love-PROG-HS-3
‘Who loves WHOM?’

b.
*KIM-i KIM sev-iyor-muş?
who-ACC WHO love-PROG-HS-3
b’.
?KIM-i kim sev-iyor-muş?
who-ACC who love-PROG-HS-3
‘Who loves WHOM?’

The Accusative wh-phrase licitly appears to the left of the Nominative wh-phrase, as long as no constituent to the right of the wh-phrase that has undergone movement bears stress. To account for the facts of (i-a-b), Göksel and Özsoy (2000) hold that Turkish is a focus field language in which the wh-phrase that moves to sentence initial position is the one that bears stress.
presentation of (1) according to the LF-raising analysis of the wh-in-situ phenomenon.

(2) 
\[
[\text{CP } \text{Kim-i} \quad [\text{IP } \text{köpek } \quad [\text{VP } \text{t}_{i} \quad [\text{VP } \text{t}_{i} \quad \text{kovalh-yor} ]]]]
\]
who-ACC
dog-NOM
chase-PROG

(3) exemplifies an embedded wh-construction in Turkish.

(3) 
\[
[\text{CP } [\text{TP } \text{Aylin } [\text{VP } \text{ne-yi} \quad [\text{VP } \text{t}_{i} \quad \text{ beğen-diğ-i-ni} ]]
-GEN
what-ACC
like-NOM-3POSS-ACC
duy-muṣ]]] / [?/*.]
hear-HS

‘What did Aylin hear Melis likes t_{i}?’ / ‘Aylin has heard what, Melis likes t_{i}.’

(3) is potentially ambiguous between the wide and narrow scope readings of the wh-phrase. The ambiguity is resolved through prosody in Turkish. Falling intonation \[
\]
on the utterance with stress realized on a constituent other than the wh-phrase expresses narrow scope.

(4) 
\[
[\text{TP } \text{Aylin } [\text{VP } \text{PRO } [\text{CP } \text{ne-yi} \quad [\text{TP } \text{Melis-in } [\text{VP } \text{t}_{i} \quad \text{ beğen-diğ-i-ni} ]]
-GEN
what-ACC
like-NOM-3POSS-ACC
öğren-mek ]
learn-INF
ist-iyor]]].
\[
\]
want-PROG

‘Aylin wants to find out what Melis likes/d.’

‘*What does Aylin want to find out that Melis likes/d?’

Wide scope reading of the wh-phrase in (3) is expressed with stress on the wh-phrase and rising intonation \[
\]
on the utterance.

(5) 
\[
[\text{CP } [\text{TP } \text{Aylin } [\text{VP } \text{PRO } [\text{CP } \text{Melis-in } [\text{VP } \text{t}_{i} \quad \text{ beğen-diğ-i-ni} ]]
-GEN
what-ACC
like-NOM-3POSS-ACC
öğren-mek
learn-INF
ist-iyor]]] ?
\]
want-PROG

‘What does Aylin want to find out that Melis likes/d?’

‘*Aylin wants to find out what Melis likes/d.’

We take intonation to be an overt Q-element in Turkish which agrees with the wh-feature on matrix C^{0} typing the matrix clause as an interrogative clause in the sense
of Cheng (1999). In constructions in which the wh-phrase has matrix scope, the Q-feature overtly raises to matrix C\(^0\) to mark the whole construction as a root question.

(6a-b) respectively are the LF-representations of the wide and narrow scope readings of the embedded wh-constructions in (4) and (5).

\[(6)a.\]
\[\left[ CP \text{ } ne-\text{-yi}i \right]_{TP} \left[ VP \text{ } ne-\text{-yi}i \right]_{TP} \text{Melis-in} \left[ VP \text{ } ne-\text{Yi}i \right]_{TP} \]
\[\text{-NOM} \text{ } \text{-GEN} \text{ } \text{what-ACC} \]
\[\text{[VP } t \text{ } \text{beğen-diğ-i-ni] } \text{duy-muş}]] / . \]
\[\text{like-NOM-3POSS-ACC } \text{hear-HS} \]

\[b.\]
\[\left[ CP \right]_{TP} \text{Aylin} \left[ CP \text{ } ne-\text{Yi}i \right]_{TP} \text{Melis-in} \left[ VP \text{ } ne-\text{Yi}i \right]_{TP} \left[ VP \text{ } t \text{ } \text{beğen-diğ-i-ni} \right]_{TP} \]
\[\text{-NOM} \text{ } \text{-GEN} \text{ } \text{what-ACC} \]
\[\text{duy-muş}]] / . \]
\[\text{hear-HS} \]

Turkish also licenses constructions in which wh-phrases appear in positions other than their canonical merge positions. Wh-scrambling applies both locally and in long distance, displacing the wh-phrase from its merge position to sentence initial position. (7a-b) illustrate local wh-scrambling. In (7b), the Accusative wh-phrase has crossed over the subject of its local clause, appearing in sentence initial position.\(^2\)

\[(7)a.\]
\[\text{Ayşe } \text{kim-i } \text{gör-müş?} \]
\[\text{who-ACC } \text{see-HS-3} \]

\[^2\text{In a recent analysis of linearization of constituents in wh-constructions in Turkish, Şener (2005) proposed that there is a V-adjacency constraint on wh-phrases is a PF constraint on syntactic representations of wh-constructions. Şener holds that the constraint is transferred to PF via Spell-Out. He further holds that the constraint operates on wh-phrases to yield a configuration in which wh-phrases form an intonational unit with the verb. Şener formulates the Verb Contiguity Condition as follows: “At the level of PF, focused wh-phrases in a question must be exhaustively parsed as forming an intonational unit with the V.” Şener further holds that in multiple wh-constructions wh-phrases display ordering effects. (8a).} \]

\[(8)a.\]
\[\text{Kim } \text{kim-e } \text{vur-du?} \]
\[\text{Who } \text{who-DAT } \text{hit-PAST} \]
\[\text{“Who hit whom?” (Şener, 2005: 14)} \]
\[\text{b.} \]
\[\*\text{Kim-e } \text{kim } \text{vur-du?} \]
\[\text{who-DAT } \text{who } \text{hit-PAST} \]

That a constraint along the lines of Şener’s Verb Contiguity Condition is too strong to capture the linearization facts of a Turkish wh-construction had already been noted by Göksel and Özsoy (2000) who had stated that wh-phrases in Turkish can occur in a pre-verbal position other than the immediately preverbal position as long as the wh-phrase that moves is the stress-bearing constituent in the construction (cf. Göksel and Özsoy, 2001).}
‘Who has Ayşe seen?’

b. Kim-i Ayşe t gör-müş?
WHO-ACC see-HS-3

‘Who has Ayşe seen?’

(8) is an example of long distance wh-scrambling construction.

(8)
\[
[CP NE-YI] [TP Aylin [VP [CP [TP Melis-in [VP ne-yi, what-ACC -NOM -GEN what-ACC [VP t beğen-diğ-i-ni duy-muş]]] / ? like-NOM-3POSS-ACC hear-HS]
\]

*Aylin has heard WHAT Melis likes/d./What has Aylin heard Melis likes/d?*

In (8), scrambling of the wh-phrase out of the embedded clause to the sentence initial position at the matrix clause level has yielded a grammatical structure.

Within the Minimalist Program of Chomsky (1995, 2000, 2001), movement is triggered by an uninterpretable feature of a functional head which needs to be eliminated before the derivation reaches LF. An uninterpretable feature becomes interpretable by means of a checking operation whereby the inherent interpretable feature of an element is attracted by the uninterpretable feature of the functional head through Agree, which checks, and in turn deletes, the uninterpretable feature of the host head. In accordance with minimalist considerations, movement triggered by an uninterpretable feature of a functional head is an obligatory operation, all other instances of displacement being instances of PF movement. Chomsky (1995) holds that an operation which has an effect on output is a syntactic operation. One of the questions that have received much attention within the recent generative literature has been the syntactic nature of scrambling in languages which license constructions in which constituents appear in positions other than their canonical merge positions. Ross’ (1967) seminal work on movement held scrambling to be a stylistic rather than a syntactic rule. Webelhuth (1988) considered scrambling to be movement of the ‘third kind’. Saito (1985) claimed scrambling to be a semantically vacuous optional operation. Miyagawa (1997, 2001, 2003, 2005), on the other hand, has presented arguments to the effect that scrambling is an obligatory operation. For Miyagawa, scrambling is triggered by the focus feature which can percolate to T-head. Mahajan (1990) has revealed the significance of the landing site of the displaced constituent, noting that scrambling can give rise to A-movement effects. Within the

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(5b) is a licit construction under the condition that no constituent to the right of the wh-phrase bears stress (cf. Göksel and Özsoy, 2000).
Minimalist Program. Bošković and Takahashi (1999) have argued that scrambling is the output of external merge whereby constituents reconstruct to their theta positions as a last resort operation. In a recent analysis of scrambling, Saito (2003) has argued that features are interpreted where they are selected.

This paper argues that local and long distance wh-scrambling in Turkish are syntactic operations which apply prior to Spell Out, moving wh-phrases out of their merge position to sentence initial position. It is argued that, contra Saito (2003), wh-scrambling is not a PF-phenomenon in Turkish but a syntactic operation which applies in the computational component of language. The displaced constituent is attracted by an uninterpretable feature of the probe, targeting the specifier position of the relevant head. Locality conditions determine the nature of the displaced wh-phrase being attracted by the closest functional head, T₀ and C₀ respectively. In this sense, Turkish is a wh-movement language in which the wh-phrases remain in-situ only in the absence of the attracting feature. Section Two presents evidence to the effect that wh-scrambling is a syntactic operation; local scrambling has an effect on the binding properties within the construction. Section Three argues for the syntactic nature of long distance wh-scrambling in Turkish in multiple wh-constructions, superiority effect are observed in those cases in which the wh-phrases are constituents of different clauses, otherwise, i.e. in constructions in which the wh-phrases are constituents of the same clause, anti-superiority effects obtain. This is predicted given that wh-scrambling in the latter case is in fact behaving as local scrambling with verb movement within the embedded clause making the two wh-phrases equidistant with respect to movement to the Spec,CP of the containing clause, making it possible for the displaced wh-phrase to successive cyclically move to Spec,CP of the matrix clause. Section Four is the conclusion.

2. Wh-scrambling as A-/A′-movement

Wh-phrases that have undergone short and long distance scrambling in Turkish exhibit different properties with respect to the familiar diagnostics proposed by Mahajan (1990) distinguishing between A-/A′-scrambling. Locally scrambled wh-phrases exhibit A-movement properties, while wh-phrases that have undergone long distance scrambling behave as A′-moved constituents. A wh-phrase that has locally scrambled to sentence initial position can repair a weak cross over violation, licitly binding an anaphor in the subject phrase. A long distance scrambled wh-phrase, on the other hand, cannot. This distinction in the binding properties of local and long distance wh-scrambling we take as evidence that local wh-scrambling is A-movement while long distance is A′-movement.

That local scrambling of a wh-phrase to sentence initial position exhibits properties typical of A-movement in the sense of Mahajan (1990) is evinced by the fact that constructions in which a wh-phrase that has locally scrambled to sentence initial position licitly repairs weak cross over violations. The anaphor in the subject phrase
of such constructions can be bound by the moved wh-phrase, as the grammaticality of (9c) in contrast to the ungrammaticality of (9b) illustrates.

(9)a. 
\[[TP \text{Kim}_1[VP \text{pro}_1 \text{anne-si}_1-ni \text{ara-dı}]]? \text{mother-3POSS-ACC call-PAST} \text{who} \text{'Who called his mother?'} \]

b. 
\[*[TP \text{pro}_1 \text{Anne-si}_1[VP \text{kim}_1-i \text{ara-dı}]]? \text{mother-3POSS who-ACC call-PAST} \text{'Who did his mother call?'} \]

c. 
\[[TP \text{Kim}_1-i[TP \text{pro}_0 \text{anne-si}_i [CP \text{ara-dı}]]]? \text{mother-3POSS call-PAST who-ACC} \text{'Who did his mother call?'} \]

In (9c) scrambling of the potential antecedent to the presubject position has given rise to a construction in which the WCO effect is repaired, obviating a Condition A violation. Such constructions are evidence that local wh-scrambling has applied before the derivation is sent to Spell Out in Turkish, i.e. local wh-scrambling is a syntactic operation in Turkish.

As (10a-b) illustrate, a long distance scrambled wh-phrase cannot repair a weak cross over effect in Turkish.

(10)a. 
\[TP \text{pro}_0 \text{anne-si}_i [CP [TP \text{Zeynep-in kim}_1-i \text{gör-düğ-ü} ]-nü say-PAST] \text{self-3POSS who-ACC see-NOM-3POSS-ACC} \text{söyle-di} ]? \text{'Who did her mother say that Zeynep saw?'} \]

b. 
\[*[CP \text{kim}_1-i[TP \text{pro}_0 \text{anne-si}_i [CP[TP \text{Zeynep-in kim}_1-ü] -nü see-NOM-3POSS-ACC who-ACC gör-düğ-ü] -nü söyle-di ]]? \text{'Who did her mother say that Zeynep saw?'} \]

In the next section, evidence will be presented from multiple wh-phrase constructions to the effect that long distance wh-scrambling is in fact a syntactic operation, not a PF phenomenon in Turkish. It will be shown that with respect to a number of
other diagnostics distinguishing between a syntactic operation and an operation that
is not part of the computational system of language, long distance wh-scrambling
exhibits properties that are typical of a construction in which displacement has taken
place within the syntax. The distinction between the binding properties of a short
and long distance scrambled wh-phrase will hence be shown to be the outcome of
the difference in the nature of the landing site of the scrambled wh-phrases in the
two instances respectively.

3. Long distance wh-scrambling as a syntactic operation
The evidence to the effect that long distance wh-scrambling is a syntactic operation
is presented by the (anti-)superiority effects exhibited by multiple wh-constructions
in which scrambling has applied to displace a wh-phrase from its merge position. In
multiple wh-constructions in which the two wh-phrases are constituents of the same
(embedded) clause, scrambling exhibits anti-superiority effects. In multiple wh-con-
structions in which the two wh-phrases are constituents of the different clauses, on
the other hand, scrambling of a wh-phrase observes superiority effects, an indication
that wh-scrambling is a syntactic, not a PF, operation.

3.1. Scrambling and multiple wh-constructions
(11) and (12) respectively illustrate multiple wh- constructions in which the two wh-
phrases are constituents of the embedded clause and those in which the two wh-
phrases are constituents of different clauses.

(11) Sen [\text{CP} \text{kim-in}_{i} [\text{VP} \text{kim-i} \text{t}_{i} \text{gör-düğ-ü-nü}]] \text{duy-du-n?}
you who-GEN WH-ACC see-NOM-3POSS-ACC hear-PAST-2SG
‘Who did you hear ti saw who?’

(12) [\text{Aylin} \text{[kim-e} \text{Zeynep-in} \text{kim-i} \text{gör-düğ-ü-nü}] \text{sor-du?}
who-DAT who-GEN who-ACC see-NOM-3POSS-ACC ask-PAST
‘Whom did Aylin ask ti Zeynep saw who?’ /
‘Who did Aylin ask whom Zeynep saw who?’

As (13a-b) illustrate, a wh-phrase in an embedded clause can undergo long distance
scrambling in Turkish, moving out of its containing clause to sentence initial position.

(13)a. \[\text{CP} [\text{TP} \text{Aylin} [\text{VP} [\text{CP} [\text{TP-Melis-in} [\text{VP} ne-yi}_{i} [\text{VP} \text{t}_{i} \text{beğen-diğ-i-Ni}]]
-GEN what-ACC like-NOM-3POSS-ACC] \]
duy-muş]) / [./*?]

hear-HS

‘Aylin has heard what Melis likes \( ti \). / *What did Aylin hear Melis likes \( ti \)?’

b. 

\([CP \text{ NE-Yi} \ [TP \ Aylin \ [VP \ [CP \text{ TP Melis-in} \ [VP \ \text{beğen-diğ-i-ni} \ \text{duy-muş}]]]] / ?\]

hear-HS

‘*[CP[TP] Aylin has \( [CP [VP \ \text{WHAT} [CP \text{ TP Melis } [CP \ [TP \ \text{t like-NOM-3POSS-ACC}}}])]]].’ / ’*[CP What has \( [TP \ Aylin \ [VP \ \text{heard} [CP \ [TP \ \text{Melis } [CP \ [TP \ \text{t like-NOM-3POSS-ACC}}}])]]]]?’

What is significant is that long distance \( \text{wh} \)-scrambling is possible only in those cases in which the \( \text{wh} \)-phrase takes matrix scope. (14) in which the prosody of the construction indicates that the \( \text{wh} \)-phrase has narrow scope is ungrammatical.

(14)

*[CP Ne-yi [TP Aylin [VP [PRO [CP [TP Melis-in [VP ne-yi [TP \text{t like-NOM-3POSS-ACC}}] \ \text{duy-du-n?]]]}] / ./*?\]

‘*Aylin wants to find out what Melis likes/d.’

‘What does Aylin want to find out that Melis likes/d?’

The ungrammaticality of (14) is evidence that a long distance scrambled \( \text{wh} \)-phrase does not reconstruct to its base position in Turkish. Given that in Turkish embedded \( \text{wh} \)-constructions rising intonation functions as overt Q-particle typing the matrix clause as an interrogative clause, its absence in (14) indicates that the construction is an indirect question. The fact that (14) is ungrammatical is evidence that a \( \text{wh} \)-phrase with narrow scope does not scramble out of its own clause.

3.2. (Anti)-superiority and long distance \( \text{wh} \)-scrambling

Significantly, in scrambling out of multiple \( \text{wh} \)-constructions, anti-superiority effects are exhibited when the two \( \text{wh} \)-phrases are constituents of the same clause.

(15)a. 

Sen [CP \text{ kim-in} \ [VP \text{ t gör-düğ-ü-nü}]] duy-du-n? you who-gen see-NOM-3POSS-ACC hear-PAST-2SG

‘Who did you hear \( t \) saw who?’

b. 

[CP \text{ Kim-i} \ [TP \text{ sen [VP \text{ t gör-düğ-ü-nü}]]}] duy-du-n]

[CP \text{ Kim-i} \ [TP \text{ sen [VP \text{ t gör-düğ-ü-nü}]]}] duy-du-n]?
Wh-ACC you who-GEN see-NOM-3POSS-ACC hear-PAST-2SG

‘Who did you hear Aylin saw t?’

The anti-superiority effect in (15) is due to the fact that Turkish licenses clause internal scrambling of wh-phrases. In this sense (15) does not constitute a violation of the wh-island constraint. The movement of the embedded verb to V-to-v-to-T within its own clause makes the subject and object wh-phrases equi-distant with respect to movement to Spec,CP of the embedded clause. The Accusative-marked wh-phrase hence can move to SPEC, CP of its own clause from where it can successive cyclically move to SPEC,CP of the matrix clause.

Crucially, superiority obtains in those cases in which scrambling applies to a multiple wh-construction in which the wh-phrases are not constituents of the same clause. In such cases it is the wh-phrase in the higher clause that scrambles.

(16)a. [TP Aylin [vP kim-e [CP [TP Zeynep-in [vP kim-i gör-düğ-ü]-nü ask-PAST sor-du?]

‘Whom did Aylin ask t Zeynep saw who?/Who did Aylin ask whom Zeynep saw t?’

b. *[CP Kim-i [TP Aylin [vP kim-e [CP[Zeynep-in kim-i gör-düğ-ü]-nü ask-PAST sor-du?]

see-NOM-3POSS-ACC

‘Whom did Aylin ask t Zeynep saw who?/Who did Aylin ask whom Zeynep saw t?’

c. [Kim-e Aylin [kim-e [Zeynep-in kim-i gör-düğ-ü-nü ask-PAST sor-du?]

‘Whom did Aylin ask t Zeynep saw who?/Who did Aylin ask whom Zeynep saw t?’

The asymmetry between the (anti-)superiority effects of the multiple wh-constructions in (15) as opposed to those in (16) is due to the fact that in the former the displaced wh-phrase undergoes local scrambling crossing over the subject of its own clause before it scrambles to the presubject position of the higher clause. The anti-
superiority effect of long distance wh-scrambling in (15) is licensed by the availability of local scrambling which crosses the wh-constituent of the embedded clause within its own clause. In (16), however, the two wh-phrases are not in the same local domain, therefore superiority obtains. Long distance wh-scrambling abides by the Minimal Link Condition, evidence that it is a syntactic, not a PF, operation.

4. Conclusion
We take the above facts of long distance wh-scrambling to indicate that long distance wh-scrambling in Turkish constitutes an instance of overt wh-movement in which the scrambled wh-phrase moves into an operator position. We take this position to be Spec,CP of the matrix clause from where the long distance scrambled wh-phrase sets up a semantically significant operator-variable relation, binding its trace/lower copy in the merge position, moving successive cyclically through the intermediary specifiers to matrix Spec,CP. In (16), the wh-object first scrambles over the wh-subject of its own clause undergoing local scrambling. It then moves to Spec,CP of its own clause, followed by movement to Spec,CP of the matrix clause under feature matching with the Q-feature of the matrix C.

Given that long distance targets Spc,CP, the A’-properties exhibited by long distance scrambling observed in examples (2-4) are then due to the A’-nature of the position in which the the displaced constituent occurs. Long distance scrambling is hence not a PF-phenomenon but an operation that applies in syntax. Wh-scrambling, local and long distance, is thus movement to a specifier position, albeit of different heads.

References
Cheng

Huang, J. 1982. Move wh in a language without wh-movement? The Linguistic Review 1, 369-416,


