

The Persian Object Marker *-ra* and its effect on wh-object fronting

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The main thesis

Theoretical groundings

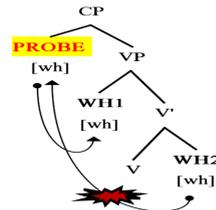
Superiority condition (Chomsky 1973): no rule can involve X, Y in the structure $\dots X \dots [\alpha \dots Z \dots _] WYV \dots$ where the rule applies ambiguously to Z and Y and Z is superior to (m-commands) Y .

Attract closest (Chomsky 1995): α can raise to target K only if there is no legitimate operation β targeting K , where β is closer to K .

Both the *Superiority condition* (SU) and *Attract Closest* (AC) assert that the **C-PROBE** attracts the **CLOSEST** constituent of the relevant type within its c-commanding domain, suggesting that the hierarchically lower phrase, the wh-object, **CANNOT** move over the wh-subject in (1b).

- (1) a. Who bought what?
b. *What who bought ~~what~~?

To delete its unvalued feature [wh], the C-PROBE attracts the wh-subject (WH1) and raises it to the left-periphery. Extraction of the lower wh-phrase (WH2) leads to ungrammaticality.



Superiority effect in Persian

Persian (SOV word order) has optional wh-fronting:

- (2) a. Hasan chi kharid?
Hasan what bought.3s
"What did Hasan buy?"
b. Chi Hasan ~~chi~~ kharid?
What Hasan bought.3s

The wh-object cannot cross the wh-subject:

- (3) a. Ki chi kharid?
Who what bought.3s
"Who bought what?"
b. *Chi ki ~~chi~~ kharid?

-ra (cliticised as *ro*, *-o*, *-a*) enables WH2 to move over WH1 (Lotfi 2003)

- (4) Chi-*ra* ki ~~chi~~ *-ra* kharid?



Question: what is the property of *-ra* that licenses SU and leading to the acceptability of (4)?

-ra is a specificity marker (Karimi 1989, 1990); *-ra* marks presuppositionality (Ghomiishi 1996); *-ra* has topic marking functionality (Windfuhr 1987)

The *-Ra* marked object is d-linked (in the sense of Pesetsky 1987, 2000)

Question:

What is the implementation of AC in Persian given the (optional) movement of WH2 over WH1 in (4)?

Analysis

Pesetsky (2000)

In English, wh-object can cross wh-subject when both wh-phrases are d-linked.

- (5) a. Which person bought which book?
b. Which book which person bought ~~which~~ book?

Pesetsky proposes that in (5b), C-probe first attracts the <<wh-feature>> of WH1 to satisfy AC, and then WH2 "which book" undergoes overt phrasal movement.

Implications:

(4) (*Chi-ra ki ~~chi~~ -ra kharid?*) is unaccounted-for under Pesetsky's analysis because AC blocks the C-probe from seeing WH2 (since WH1 is closer). In Pesetsky's system, a non d-linked WH1 can feature-move, but only in constructions with 3 wh-elements (*what did who give to whom?*). There are only 2 wh elements in (4) and WH1 is not d-linked.

<<Feature movement>> cannot be a solution:

- (6) a. Ostad Hasan-*ra* tashvigh kard in ketab-*ra* be-khanad.
professor Hasan-*ra* persuade did-3s this book-*ra* to read
"The professor persuaded Hasan to read this book"
b. [_{WH1} Ki-*ra*] ostad ~~Ki-*ra*~~ tashvigh kard [_{WH2} chi-*ra*] be-khanad?
who-*ra* professor persuade did-3s what-*ra* to read
"Who did the professor persuade to read what?"
c. * [_{WH2} Chi-*ra*] ostad [_{WH1} ki-*ra*] tashvigh kard ~~Chi-*ra*~~ be-khanad?
what-*ra* professor who-*ra* persuade did-3s to read

(6c) shows that when both WH1 and WH2 are d-linked, only the higher of the two can move overtly. If Pesetsky were right, WH1 ought to be able to feature-move and WH2 undergo phrasal movement.

Similar ungrammaticality with *-ra* marked lexically restricted wh-phrases:

- (7) a. [_{WH1} Kodum daneshju-*ra*] ostad ~~Kodum daneshju-*ra*~~ tashvigh kard [_{WH2} kodum ketab-*ra*] be-khanad?
Which student-*ra* professor persuade did-3s which book-*ra* to read
"Which student did the professor persuade to read which book?"
b. * [_{WH2} Kodum ketab-*ra*] ostad [_{WH1} kodum daneshju-*ra*] tashvigh kard ~~Kodum ketab-*ra*~~ be-khanad?
Which book-*ra* professor which student-*ra* persuade did-3s to read

The grammaticality of (4) and the ungrammaticality of (6c) & (7b) open the way to a different perspective on Superiority.

Starke (2001) & Rizzi (2004)

Anti-identity constraint of Relativized Minimality (RM) Two occurrences of α cannot form a chain in the presence of an intervening element of the same feature class α (when feature class is expressed in terms of bearing morpho-syntactic similarity).

- i. $\alpha \dots \alpha \dots \alpha$ (Identity)
ii. $\alpha \dots \beta \dots \alpha$ (disjunction)
iii. $\alpha \beta \dots \alpha \dots \alpha \beta$ (proper inclusion of the intervener)

According to RM, while an intervener with disjoint featural specification (ii) or with a featural specification properly included in the specification of the target (iii) are well-formed, the identity of the intervener and the target (i) gives rise to a violation of (featural) RM.

Assuming that *-ra* enriches the wh-object with [+D] feature, RM correctly predicts not only the ungrammaticality of (4) but also the ungrammaticality of (6c) & (7b).

wrt (4), the feature set of the intervener, WH1, is properly included (iii) in the feature set of the extractee, WH2:

Ki [_{wh}] Chi-*o* [_{wh, +D}]



wrt (6c) & (7b), the feature set of the intervener, WH1, is identical (i) to the feature set of the extractee, WH2:

Ki-*ra* [_{wh, +D}] Chi-*ra* [_{wh, +D}]



Kodum daneshju-*ra* [_{wh, +D, +LS}] Kodum ketab-*ra* [_{wh, +D, +LS}]

Where did we go from here? In Persian, the [+D] feature is equated with the suffix *-ra*, independently of whether the wh-element is lexically restricted or not. In order to distinguish the role of *-ra* and the role of the lexical restriction, we ran an **EXPERIMENT**.

Grammaticality judgment task

Objective and design

Objective: Assessing the respective role of lexical restriction and d-linking resulting from *-ra* in the acceptability of wh-object extraction out of weak island/non-island environments. (**Note:** the reason we tested weak-islands was the gradient nature of these sentences in order to clearly tease apart the role of *-ra* and lexical restriction.)

Methodology: Online grammaticality judgment task via Ixet Farm in Iran (<http://spellout.net/ibexfarm/>)

Participants: 40 native speakers

Procedure: Presentation of a complete sentence one at a time, asking each participant to rate the sentences on the 1-7 point Likert Scale with no time pressure

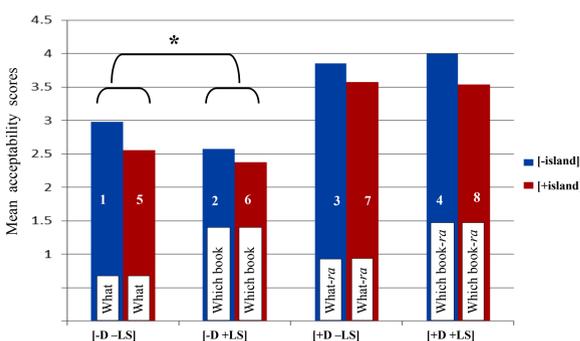
Materials: 64 test items randomly scattered across 64 fillers of grammatical and ungrammatical sentences

Materials

Table 1: English translation of the Persian test items in the 8 experimental conditions: [+D] = d-linking; [+LS] = lexical specification; [-ISL] = island

	[-ISL]	[+ISL]
[-D] [-LS]	What do you wonder (think) he bought?	What do you wonder (think) who bought?
[+D] [-LS]	What- <i>ra</i> do you wonder (think) he bought?	What- <i>ra</i> do you wonder (think) who bought?
[-D] [+LS]	Which book do you wonder (think) he bought?	Which book do you wonder (think) who bought?
[+D] [+LS]	Which book- <i>ra</i> do you wonder (think) he bought?	Which book- <i>ra</i> do you wonder (think) who bought?

Main results:



Island: ($\beta = -0.340, t = -7.818, p < .001$)
D: ($\beta = 1.119, t = 25.700, p < .001$)
LS: ($\beta = -0.121, t = -2.778, p = .001$)
D*LS: ($\beta = 0.344, t = 3.955, p < .001$)

Pairwise comparisons:
(1) = (2) < (3) = (4)
(5) = (6) < (7) = (8)

Figure 1: Distribution of acceptability scores in the 8 experimental conditions.

= Significant effects of island, d-linking, and lexical restriction

= A significant interaction between d-linking and lexical restriction

> Non-*ra* sentences in [-D -LS] received higher ratings than in [-D +LS] conditions

> No significant difference between [+D -LS] and [+D +LS] conditions, suggesting that lexical restriction had no ameliorating effect whatsoever on *ra*-marked sentences

Discussion and conclusion

= [D] feature had the major impact on the acceptability of the sentences containing island—the presence of [D] feature on the wh-extractee improved the acceptability to the point that was close to the non-island sentences

= Although the [D] feature considerably improved the acceptability, the presence of the wh-intervener was proved to be significant, suggesting that the [wh] feature is a criterial feature (in the sense of Rizzi 1997) which creates a (weak)-island that impedes wh-extraction

= The results indicate that non-*ra* marked AND lexically restricted wh-phrases received the lowest acceptability judgments—the presence of lexical restriction is contingent on the presence of the [D] feature which must be licensed when extracting a wh-object out of weak-islands

= RM and its fine-grained featural approach could adequately account for the observed data in Persian, i.e., when the wh-extractee is enriched with an additional [D] feature, the wh-object is allowed to cross over the wh-subject.

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