How to Derive Non-Logophoric Backward Binding for Stative Location Verbs

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Backward Binding

▸ Typically, antecedents of anaphoric expressions must c-command them. This is (part of) the classical formulation of Principle A of the binding theory.

(1)   a.   Sally wanted $John_i$ to kick $himself_i$.

        b.   * Sally wanted $himself_i$ to kick $John_i$.

▸ **Backward binding** refers to cases when this requirement is apparently flouted, and an anaphoric expression is bound by a DP below it.

▸ Such configurations have been noted previously for stative psych-verbs, as well as periphrastic psych predicates and more complex psych constructions [1, 2, 3, 4, a.o.]

(2)   a.   Each $other_i$'s constituents annoy the $politicians_i$.

        b.   Each $other_i$'s parents make every $couple_i$ nervous.

        c.   Those nasty pictures of $himself_i$ shattered $John_i$'s fragile ego.

Previous Accounts

▸ **Structural** approaches posit that binding can be licensed at intermediate steps in the derivation of a sentence, and that one such step in the derivation of sentences like the above satisfies the c-command requirement. Belletti & Rizzi [1], Pesetsky [3], and Cheung & Larson [5, 6] take this kind of approach.

▸ **Logophoric** approaches posit that certain contexts allow the c-command requirement to be relaxed. In particular, anaphoric expressions that refer to **animate perspective takers**, and only these, may be exempt. Landau [4], Zlogar & Charnavel [7], and Charnavel & Sportiche [8] take this kind of approach.

(3)   Anonymous posts about $herself_i$ on the Internet hurt $Lucy_i$'s feelings.   [9]'s (4b)

(4)   * Anonymous posts about $itself_i$ on the Internet hurt the $camera_i$'s sales.   [9]'s (4a)

▸ Backward binding in psych contexts is always amenable to a logophoric approach, since psych contexts invoke experiencers, which are by definition animate perspective takers. This has led to the dominant theory of the most noted existing cases of backward binding being the logophoric approach.

▸ Can backward binding occur outside psych contexts?

New Cases: <u>Non-Logophoric</u> Backward Binding

▸ The logophoric approach requires antecedents of backward-bound anaphors to refer to animate perspective takers. Any case where a backward-bound anaphor refers to something inanimate cannot be accounted for with a logophoric approach. Consider the following:

(5)   a.   % A picture of $itself_i$ blocked every $monitor_i$.

        b.   % Each $other_i$'s lids completely covered the $pans_i$.

        c.   % At Mandelbrot's beach, miniature replicas of $itself_i$ surround every sand $castle_i$.

▸ For some speakers, these are judged grammatical. Since the anaphors in these cases do not refer to animate perspective takers, they must be genuine cases of **structural backward binding**.
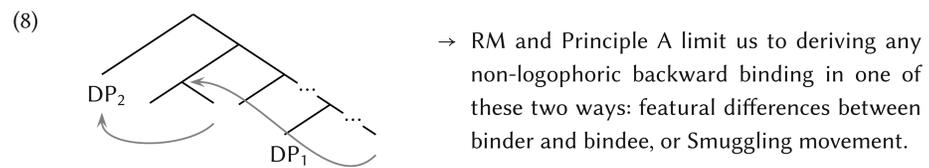
Two Assumptions

▸ Relativized Minimality: *[Y ... X ... t_Y] if X and Y have identical (relevant) features.   [10]

▸ Principle A: (Non-exempt) anaphors are bound by a local c-commanding DP.

Two Ways to Derive Structural Backward Binding

▸ Call the binder DP_1, and the DP containing the anaphor DP_2. Principle A means that a step in any licit derivation will involve DP_1 (asymmetrically) c-commanding DP_2. (Non-logophoric) backward binding is defined as when DP_2 moves to a position that c-commands DP_1.

(6)   (7)

▸ If DP_1 and DP_2 have the same set of features relevant to the probe that triggers movement, (7) will violate Relativized Minimality as previously defined. One way to avoid this is to simply say that DP_1 and DP_2 have different feature sets, so that DP_1 won't intervene.

▸ The other way of avoiding this uses Smuggling movement [11]. DP_2 can move past DP_1 as part of a larger phrase without violating RM, and then move out of that phrase as the closest target for a higher movement operation:

(8)

→ RM and Principle A limit us to deriving any non-logophoric backward binding in one of these two ways: featural differences between binder and bindee, or Smuggling movement.

① Particle Verbs: Idiosyncratic Case Assignment ✓

▸ Crucial data distinguishing the two approaches comes from stative location particle verbs: a particle can appear either before or after the verb.

(9)   A picture of $itself_i$ **covered up** every $pail_i$.

(10)   A picture of $itself_i$ **covered** every $pail_i$ **up**.

▸ Assumption: particles occur within a phrase headed by the verb (e.g., [12]).

▸ Principle A will mean that a parse with the relevant properties of the structure in (11) will be a part of the derivation.

(11)   (12)
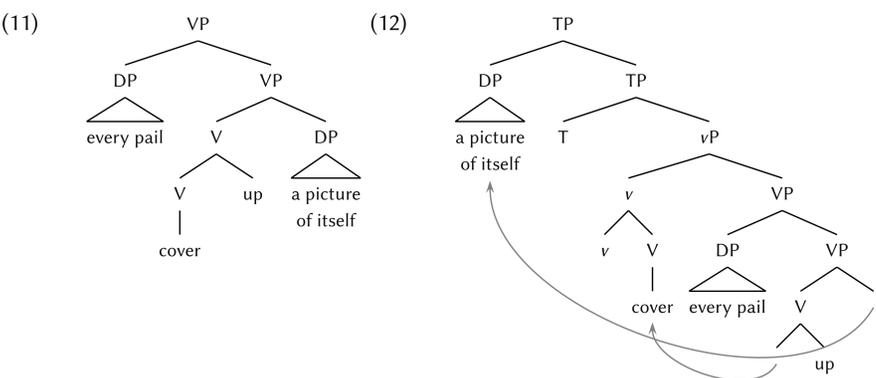
▸ (12) will violate RM if *every pail* and *a picture of itself* have the same relevant features.

▸ Following [1], we could say that this is avoided because the verb assigns lexical accusative Case to *every pail*.

▸ Pre- and post-object particles are derived in (12) by whether the bigger V or the smaller V moves to v.

② Particle Verbs: Smuggling ✗

▸ To smuggle *a picture of itself* past *every pail*, we must minimally move VP to Spec,vP, (13).

▸ The particle moves with VP, meaning that only pre-object *up* is derived. Deriving post-object *up* would mean moving *every pail* higher than vP, and moving V higher than that.

(13)   (14)
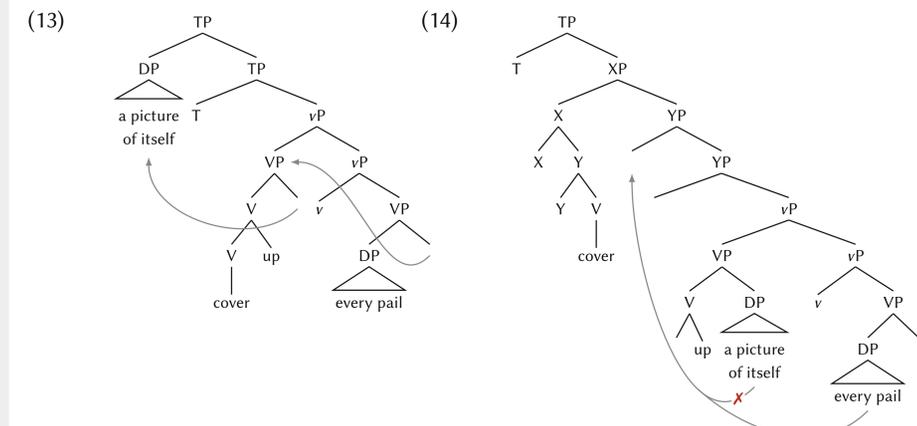
▸ As (14) shows, after VP has moved, *a picture of itself* cannot move to Spec,YP, since it must ultimately surface in Spec,TP. To avoid a violation of RM, *a picture of itself* must have a different feature set from *every pail*—exactly as in the lexical case assignment approach.

→ **In sum, the smuggling approach requires positing ad hoc functional projections and movement, while offering no advantage over the alternative approach.**

Implications & Next Steps

▸ Structural backward binding has been noted before in passives. Both approaches shown here have been used to explain this [13, 11].

(15)   Each other's noses were hit *(by the girls).

▸ In passives, the presence of the overt preposition *by* achieves the same effect as what is here attributed to lexical accusative case.

▸ Suppose stative location verbs involve a hidden preposition responsible for assigning case: *cover → over*, *surround → around*, and so on, which is pronounced as part of the verb. Exactly how to implement this idea structurally remains to be worked out.

▸ Speakers who do not accept backward binding in these sentences might not break down the verbs as V+P in their grammar.

▸ This could extend to psych contexts: [4] argues that stative psych verbs involve covert prepositions. We thus might want to analyze stative psych backward binding not as logophoric, but in the same way as stative location verbs. This would potentially explain why **agentive** uses of psych and location verbs disallow backward binding, a puzzle for logophoric approaches.

(16)   * Each $other_i$'s friends deliberately annoyed the men_i.   (cf. [2, 3])

(17)   * A replica of $itself_i$ quickly covered every $robot_i$ with a sheet.

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