

Derivational Timing and the A/A-bar Distinction in Syntax

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1. Claim The main goal of this talk is to introduce and argue for a new approach to the A/A-bar distinction in syntax that relies on derivational timing (with Riemsdijk & Williams (1981) as a remote predecessor). The central tenet is that the A/A-bar distinction reduces to the question of whether a given movement step precedes (“A”) or follows (“A-bar”) an interacting (Agree or Merge) operation – and thus to whether c-command is, or is not yet, available at the relevant stage of the derivation. The timing of movement vis-à-vis other operations follows the *derivational clock* (Williams (2011)).

2. Premise A theory of the A/A-bar distinction must meet four requirements, in a way that is compatible with basic minimalist assumptions. First, it must clarify how A and A-bar positions can be properly identified (the *classification* challenge). Second, it must specify what the consequences of being in an A/A-bar position are for other, interacting syntactic operations (the *interaction* challenge). Third, it must account for mixed patterns that resist a categorical characterization as A or A-bar; see, e.g., Webelhuth (1992) on short and intermediate scrambling in German (‘Webelhuth’s paradox’), Lee & Santorini (1994), Ko (2018), Kim & Müller (2025) on long-distance scrambling in Korean, and van Urk (2015) on fronting in Dinka (the *mixed patterns* challenge). Fourth, it must be able to handle variation both between and within languages; see, e.g., Müller & Sternefeld (1994) on scrambling and weak crossover in German (the *variation* challenge).

3. State of the art Four kinds of approaches can be distinguished. (i) *Classical* approaches are based on designated A/A-bar positions (Chomsky (1981), Déprez (1989), Mahajan (1990)). (ii) Some extensions of these approaches envisage a *third type of position* (Chomsky (1993), Webelhuth (1995)). (iii) More recent approaches based on *composite probes* (van Urk (2015), Colley & Privoznov (2020), Scott (2021), Chen (2023), Katochoritis & Lohninger (2025), Kouneli (2025)) postulate the option of combined ϕ (A) and operator (A-bar) features in landing sites of movement; this has been further refined by permitting reference of interacting operations to either one or all A/A-bar features (Lohninger (2024)). (iv) In *shell-based* approaches (Safir (2019), Bošković (2024), Hewett (2024)), the A/A-bar distinction is reduced to the question of whether c-command is possible; A-bar movement effects are due to additional shell structure on top of the moved item that is acquired, counter-cyclically, in the course of movement, and that blocks c-command.

Closer inspection reveals that none of the existing approaches successfully addresses all four challenges. Thus, the *classification* problem persists with all existing theories, including shell-based and composite probe approaches (employing DP/NP vs. XP and ϕ vs. operator, respectively). In fact, additional issues arise with composite probes since ϕ -features do not regularly occur in several types of positions with A properties – e.g., in base positions of DP arguments, in scrambling positions in Korean, and in very local scrambling positions in German; these problems require additional assumptions (van Urk (2015), Miyagawa (2010)). Similarly, whereas the *interaction* problem is successfully addressed in shell-based approaches (the question reduces to whether c-command is available or not), it is not convincingly solved in the other three approaches. In classical and third-type approaches, grammatical constraints must be sensitive to special kinds of c-command (A/A-bar). In composite probe approaches, designated LF translation rules must be postulated, where A and A-bar movement involve quantification over individuals and choice functions, respectively (van Urk (2015), based on Sauerland (1998)). Also, the generalized choice function approach to A-bar movement is far from innocuous semantically; it makes wrong predictions for all non- $\{\exists, \forall\}$ quantifiers. Next, whereas third-type approaches may successfully address the *mixed patterns* challenge, the other three approaches fail in this domain. Even composite probe approaches can only cover a subset of the attested mixed patterns (like a co-occurrence in Dinka of bound variable licensing (A) and lack of DP intervention (A-bar)); they cannot derive cases that would demand incompatible quantification strategies (like bound variable and parasitic gap licensing in German). Note that explaining mixed patterns away by postulating two separate movement operations (Mahajan (1990)), or claiming homogeneous A or A-bar behaviour after all (Fanselow (2001), Müller (1995)) is not an option for scrambling in German (Lee & Santorini (1994), Abels (2015), Heck & Himmelre-

ich (2017), Salzmann (2024)). Finally, since the classification of A/A-bar positions is categorical throughout, none of the existing approaches has anything to say about *variation*.

4. Proposal Initial indeterminacies will invariably arise in cases where more than one operation can in principle be carried out at a given stage of the derivation. Given that all syntactic operations obey an earliness requirement (Pesetsky & Torrego (2001)), such indeterminacies must be resolved. For some cases, specificity may suffice (Urk & Richards (2015), Amato (2023), Newman (2024)). However, in general, a resolution of initial determinacies arguably requires imposing orders among operations (Heck & Müller (2013), Assmann et al. (2015), Georgi (2017), Murphy & Puškar (2018)). Interestingly, such an independently required resolution of initial indeterminacies regarding the application of some Move (internal Merge) operation O_i and some other (Agree or external Merge) operation O_j automatically gives rise to *feeding* and *bleeding* of O_j by O_i if O_i applies before O_j (“A”), and *counter-feeding* and *counter-bleeding* of O_j by O_i if O_i applies after O_j (“A-bar”). This implies that the O_j operations interacting with movement (O_i) take place in the syntax. Suppose that all syntactic operations are feature-driven: *Move* is triggered by [\bullet F \bullet] features that look for a matching [F] category (Collins & Stabler (2016), Zyman (2018), Šereikaitė (2021), Newman (2024), Müller (2025)); *Agree* is triggered by probe features [\ast F: \square \ast] that look for a matching goal providing a value for the probe. Crucially, I will assume that Agree underlies *anaphoric binding* – Agree_[\ast B(inding)I(ndex): \square \ast] – and *bound variable pronoun licensing* – Agree_[\ast BI:n \ast] (Reuland (2001), Hicks (2009), Murugesan (2022)); that such Agree operations are upward (Baker (2008), Wurmbrand (2012), Zeijlstra (2012), Himmelreich (2017), Murphy & Puškar (2018)); and that they involve probe/goal relations between two XPs (Clem (2022)). The resulting approach addresses both the classification (A vs. A-bar: presence vs. absence of moved DP) and the interaction (A vs. A-bar: c-command vs. no c-command) problems in a maximally simple way. However, it so far leaves open what independent property an early or late presence of a moved item in the landing site is correlated with. I contend that canonical clusterings of effects associated with A/A-bar movement are derived by the *derivational clock* (Williams (2011)): The higher a target position for movement is in the clausal spine, the later it is reached. Finally, intermediate movement steps to phase edges behave exactly like the eventual target positions with respect to A/A-bar properties since the features triggering intermediate and final steps are identical (Abels (2012), Georgi (2014), Deal (2014)).

5. Case Studies Against this background, I address the A/A-bar properties of three movement types exhibiting mixed patterns and, in some cases, variation among speakers, viz., scrambling to VP/vP in German, long-distance scrambling to CP in Korean, and fronting to CP in Dinka. In all these cases, the respective movement operation (O_i) can be shown to precede some interacting operations (O_j) but follow others. As a consequence of the derivational clock, the lower a target position of a given movement operation O_i is, the more likely it is that O_i precedes some O_j in a given language; and vice versa for higher target positions. The interaction scenarios that will figure prominently in the three case studies are (i) licensing of *reflexives* (Move must precede Agree_[\ast BI: \square \ast]); (ii) licensing of *bound variable pronouns* (Move must precede Agree_[\ast BI:n \ast]); (iii) licensing *reconstruction* (Agree_[\ast BI: \square \ast], Agree_[\ast BI:n \ast] must precede Move); (iv) licensing of *parasitic gaps* (Merge_{CP-Adv} must precede Move to permit Predicate Modifaction (Heim & Kratzer (1998)) in a strictly cyclic version of Nissenbaum’s (2000) approach); and (v) licensing of *plural agreement spreading* in Korean (Agree_[\ast : \square \ast]).

6. Outlook The central result of this talk thus is that the A/A-bar distinction does not exist as a primitive of grammar. The effects follow from the order of Move and Agree (or Merge) operations, which determines whether c-command is or is not available: “A” ← *early*, “A-bar” ← *late*. The order of movement operations adheres to the derivational clock: *early* ← *low*, *late* ← *high*. This way, the four main challenges can all be overcome; still, open questions remain. For one thing, it is unclear whether something similar to the derivational clock can also be established for the interacting O_j operations. For another, the present analysis covers interacting O_j operations as in (i)-(v), but remains silent on some other O_j operations that have been identified in the literature. In some cases, there are good reasons for this (improper movement suggests independent Williams Cycle accounts (Williams (2003), Abels (2007), Keine (2020)); information-structural effects are independent of the A/A-bar distinction); in others, this is perhaps less obvious (DP intervention effects).

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