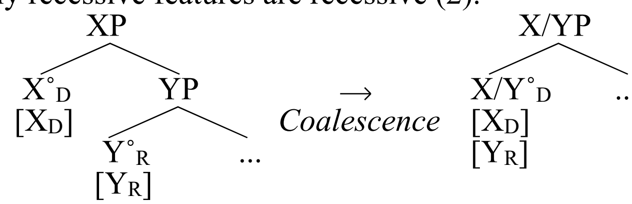
**Prominence-based licensing in head movement and head bundling**

**Introduction** This paper argues that key variable properties of extended projections, available functional structure and head movement paths, are best understood in terms of a prominence-based licensing principle on features. In brief, all functional category features in a language are either *dominant* or *recessive*. During the derivation, all recessive features must be associated with a head that contains a dominant feature. This is achieved by a head bundling operation *Coalescence*. Parametric variation in the structure of extended projections follows from the number and distribution of dominant features, and whether Coalescence is fed by external or internal Merge.

This system of features and operations [1] provides an explanatory trigger for head movement, and [2] predicts the effects the Head Movement Constraint (HMC: Travis 1984). With one further claim that the EPP property is unique to dominant heads, [3] the proposal predicts 'delayed gratification' patterns in which head movement must precede phrasal movement to the same projection (den Dikken 2007), and [4] explains 'unrestricted edge feature' patterns where multiple probes on a single head compete to trigger phrasal movement (Fanselow & Lenertová 2010).

**The Dominance Condition and Coalescence** We define distinctions between *dominant* vs. *recessive category features*, and *dominant* vs. *recessive heads*. Functional category features are lexically specified as being dominant or recessive (subscript $_D$ or $_R$). Whether a head is dominant or recessive depends on its featural composition. Heads that contain at least one dominant category feature are dominant (1). Those that contain only recessive features are recessive (2).

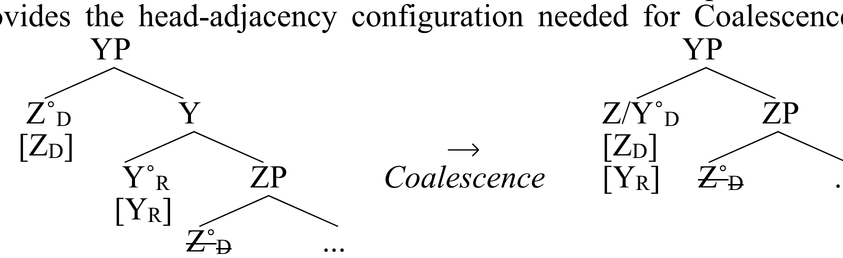
(1) $X/Y^{\circ}_{D}$ $[X_D]$ $[Y_R]$ (2) $X^{\circ}_{R}$ $[X_R]$ (3)




Each category feature enters the derivation on a separate head (Cinque 1999). All heads must contain a dominant feature by the end of the derivation, the *Dominance Condition*. This is the motivation for Coalescence, which applies only in the head-adjacency configuration (3) where a dominant head immediately c-commands a recessive one, and bundles them into one head that inherits all of their features.

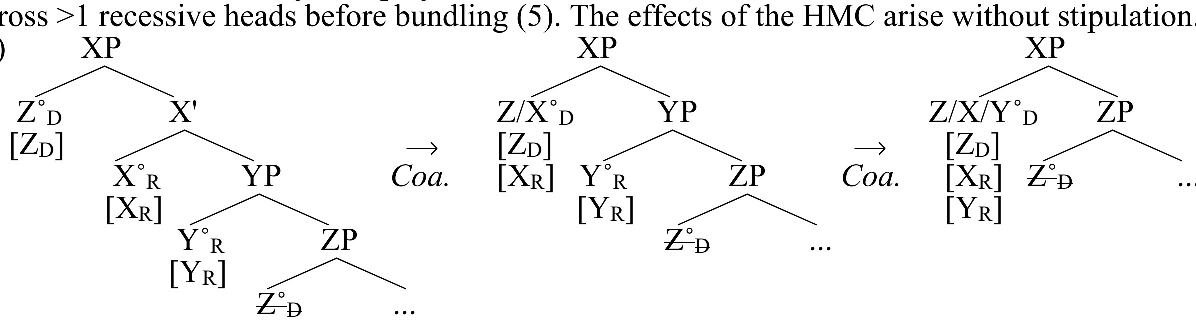
**Head movement** Head movement takes place when internal Merge and Coalescence are used to satisfy the Dominance Condition. First, a lower dominant head $Z^{\circ}_{D}$ is moves to the specifier of a recessive head $Y^{\circ}_{R}$. This provides the head-adjacency configuration needed for Coalescence, which creates a bundled $Z/Y^{\circ}_{D}$ head (4). Given Category Percolation (Keine *to appear*), neither step can alter category labels within an extended projection.

(4)




Under natural assumptions that internal Merge attracts the closest dominant head and that Coalescence can apply iteratively when its environment is met, the base and target positions of a moved head must be in adjacent projections in the final structure, even if the dominant head moves across >1 recessive heads before bundling (5). The effects of the HMC arise without stipulation.

(5)




**Delayed gratification and unrestricted edge features** Phrasal movement to the specifier of a projection occurs if and only if its head (i) participates in probe-goal agreement [~~*u*F~~] … [F] and (ii) has the EPP property, as in configuration (6).

(6) [$_{\mathrm{XP}}$ X°$_{\mathrm{D}}$ … [ … ZP … ]] → [$_{\mathrm{XP}}$ ZP [$_{\mathrm{X'}}$ X°$_{\mathrm{D}}$ … [ … ~~ZP~~ … ]]
[X$_{\mathrm{D}}$, EPP] [F] [F] [X$_{\mathrm{D}}$, EPP]
[~~*u*F~~] [~~*u*F~~]

I propose that only (but not all) dominant heads have [EPP]. With the ancillary assumption that uninterpretable features are not immediately deleted upon checking (Pesetsky & Torrego 2000), this permits a new explanation for 'delayed gratification' and 'unrestricted edge feature' patterns.

In 'delayed gratification' effects, phrasal movement occurs only if head movement to the same target projection has taken place (den Dikken 2007, a.o.). This arises under the following conditions (illustrated with schematic Romance-style V-to-T movement): A recessive head with a [*u*F] probe agrees with a goal (7a). The closest dominant head moves (7b), triggering Coalescence (7c). Phrasal movement takes place now that the [~~*u*F~~] probe and [EPP] are on the same head (7d).

(7) a. [$_{\mathrm{TP}}$ T°$_{\mathrm{R}}$ [$_{\mathrm{VP}}$ DP [$_{\mathrm{V'}}$ V°$_{\mathrm{D}}$ … ]]] *Agree*
[T$_{\mathrm{R}}$, ~~*u*φ~~] [φ] [V$_{\mathrm{D}}$, EPP]

b. [$_{\mathrm{TP}}$ V°$_{\mathrm{D}}$ [$_{\mathrm{T'}}$ T°$_{\mathrm{R}}$ [$_{\mathrm{VP}}$ DP [$_{\mathrm{V'}}$ ~~V°$_{\mathrm{D}}$~~ … ]]] *V-to-Spec,T movement*
[V$_{\mathrm{D}}$, EPP] [T$_{\mathrm{R}}$, ~~*u*φ~~] [φ]

c. [$_{\mathrm{TP}}$ V/T°$_{\mathrm{D}}$ [$_{\mathrm{VP}}$ DP [$_{\mathrm{V'}}$ ~~V°$_{\mathrm{D}}$~~ … ]]] *Coalescence*
[V$_{\mathrm{D}}$, EPP] [φ]
[T$_{\mathrm{R}}$, ~~*u*φ~~]

d. [$_{\mathrm{TP}}$ DP [T' V/T°$_{\mathrm{D}}$ [$_{\mathrm{VP}}$ ~~DP~~ [$_{\mathrm{V'}}$ ~~V°$_{\mathrm{D}}$~~ … ]]] *Phrasal movement*
[φ] [V$_{\mathrm{D}}$, EPP]
[T$_{\mathrm{R}}$, ~~*u*φ~~]

In 'unrestricted edge feature' effects, movement to a specifier position can be driven by multiple probes, but not simultaneously. This arises when multiple probes associated with different recessive category features surface on one dominant head. To illustrate, in German V2 clauses the first position hosts either a given information topic, contrastive focus, or pragmatically unmarked subject (Fanselow & Lenertová 2010). Prior to verb movement, the German C-domain contains recessive Topic°$_{\mathrm{R}}$, Focus°$_{\mathrm{R}}$, and Finiteness°$_{\mathrm{R}}$ heads (Rizzi 1997), each associated with a probe (8). At this stage, each probe can be checked by agreement, but cannot yet trigger phrasal movement.

(8) [$_{\mathrm{TopP}}$ Top°$_{\mathrm{R}}$ [$_{\mathrm{FocP}}$ Foc°$_{\mathrm{R}}$ [$_{\mathrm{FinP}}$ Fin°$_{\mathrm{R}}$ [$_{\mathrm{InflP}}$ … V°$_{\mathrm{D}}$ ]]]]
[Top$_{\mathrm{R}}$, ~~*u*Top~~] [Foc$_{\mathrm{R}}$, ~~*u*Foc~~] [Fin$_{\mathrm{R}}$, ~~*u*D~~] [V$_{\mathrm{D}}$, EPP]

In V2 clauses, the Dominance Condition is satisfied by movement of V°$_{\mathrm{D}}$ followed by Coalescence, creating the structure (9). Assuming no priority restrictions on which probe triggers movement in concert with [EPP], either topic-, focus-, or subject-movement can take place in the next step, deriving the 'unrestricted edge feature' pattern. In embedded clauses with a complementizer, *dass* corresponds to an externally Merged dominant head without [EPP]. All probes remain checked, but no movement takes place.

(9) Top/Foc/FinP
Top/Foc/Fin/V°$_{\mathrm{D}}$ InflP
[V$_{\mathrm{D}}$, EPP] … ~~V°$_{\mathrm{D}}$~~ …
[Topic$_{\mathrm{R}}$, ~~*u*Top~~]
[Focus$_{\mathrm{R}}$, ~~*u*Foc~~]
[Fin$_{\mathrm{R}}$, ~~*u*D~~]

**Conclusion** Head movement and head bundling can be understood as operations that "prune" tree structure by combining weak branches of the tree with stronger ones. The Dominance Condition and Coalescence account for a range of properties of head movement that have challenged previously proposed feature systems (cf. Dékany 2018).

**Select References** **[1]** Cinque, G. 1999. *Adverbs and functional heads: a cross-linguistic perspective*. Oxford: OUP. **[2]** Dékány, É. 2018. Approaches to head movement: a critical assessment. *Glossa* 3: 65. 1-43. **[3]** den Dikken, M. 2007. Phase extension: Contours of a theory of the role of head movement in phrasal extraction. *Theoretical Linguistics* 33.1–41. **[4]** Fanselow, G. and D. Lenertová. 2010. Left peripheral focus: mismatches between syntax and information structure. *NLLT* 29. 169–209. **[5]** Keine, S. To appear. *Selective opacity*. *LI*. **[6]** Pesetsky, D. and E. Torrego. 2001. T-to-C Movement : Causes and Consequences. *Ken Hale: A life in language*, ed. M. Kenstowicz, 355–426. Cambridge, MA: MIT Press. **[7]** Rizzi, L. 1997. The fine structure of the left periphery. *Elements of Grammar*, ed. L. Haegeman, 281–337. Dordrecht: Kluwer. **[8]** Travis, L. 1984. Parameters and effects of word order variation. PhD diss., MIT.