Claim I present an argument for a strictly derivational model of syntax based on timing of operations. Empirical evidence comes from opaque interactions of elementary operations that show that internal Merge (IM) must be split into two types: IM to intermediate landing sites and IM to criterial landing sites in a movement chain. The split is motivated by the following observation: When both types of IM are triggered by the same head H, they apply at different points in the derivation. This becomes visible once they interact with Agree: In some languages, IM to criterial landing sites feeds/bleeds Agree initiated by H, whereas IM to intermediate landing sites has the opposite effect, i.e., it counter-feeds/counter-bleeds Agree. This effect can be derived by ordering operation-inducing features on H: One type of IM applies before and the other one after Agree. The general implication is that Agree not only needs to be ordered with respect to Merge; a more fine-grained approach is needed that distinguishes between different types of Merge. This has been shown for Agree (person, number are separate probes) and is shown to be valid for Merge as well. Furthermore, reordering of the operation-inducing features on H predicts a certain range of cross-linguistic variation. Based on the attested variation, I argue for extrinsic ordering.

Assumptions Syntactic structure unfolds step by step in a bottom-up fashion (Chomsky 1995 et seq.). Agree is triggered by probe features [F*], Merge by structure-building features [ ● ] (Sternefeld 2006). Intermediate movement steps are triggered by edge features [X ● ] (Chomsky 2000, 2001). Agree applies under c-command. If a probe does not find a goal, a default value is inserted on the probe (Béjar 2003, Preminger 2011). Traces/copies left by movement are not visible for Agree.

Data Abstract Patterns: (Counter-)Bleeding: A head H triggers φ-Agree and Merge: H {[ ● ], [φ*]]. If an XP that is a potential goal for the probe on H is moved to SpecH before H initiates Agree, Agree between H and the XP is bled because after movement, XP is no longer in the c-command domain of H. Result: default φ-agreement on H. However, in the same language with such bleeding effects, movement of XP to SpecH sometimes does not cause bleeding, i.e., there is full Agree between H and XP (counter-bleeding). The occurrence of bleeding or counter-bleeding with movement is not random; it can be predicted by the type of the landing site SpecH. If SpecH is an intermediate landing site for XP, we get bleeding; if it is a criterial landing site for XP, we get counter-bleeding. Conclusion: Final movement steps apply before Agree is triggered, but intermediate movement steps apply after Agree so that in the latter case the XP is still in the c-command domain of H when it starts probing; it moves only afterwards. How can it be determined without look-ahead whether SpecH is a criterial or an intermediate landing site? These positions can be distinguished by their triggers: The latter is triggered by categorically underspecified structure-building features (edge features, [ ● ]), the former by categorically specified features such as [ ● ● ● ]. These can be order relative to the probe feature on H: {[ ● ● ]} > [φ*] > [ ● ● ]

(Counter-)Feeding: XP intervenes for φ-Agree between a probe H and YP. If XP moves to SpecH before H probes, it feeds Agree between H and YP because it is no longer in H’s c-command domain. However, this only holds if SpecH is a criterial position for XP movement. In the same language, intermediate movement of XP to SpecH does have the opposite effect, i.e. counter-feeds Agree between H and YP (XP behaves as if it still intervenes for Agree although on the surface it does not). Conclusion: Criterial movement steps apply before Agree, whereas intermediate ones apply after Agree (such that the XP is still in the c-command domain of H when it starts probing, it is moved to SpecH only afterwards).

Examples: 1. Anti-Agreement Effect (AAE): In AAE languages (e.g. Berber, Welsh), the verb shows default 3sg(Masc) agreement if the subject is Â-moved to SpecC of the minimal CP (short Â-extraction). If, however, the subject is Â-moved from an embedded clause into a higher clause (long Â-extraction), the verb in the embedded clause shows full agreement with the subject as it does when the subject is not extracted at all (cf. (1); ‘PART’ is invariable). This is opaque: Short Â-movement to SpecC bleeds φ-Agree between C and the Â-moved subject; long extraction of the subject must also make a stop-over in the embedded SpecC (CP is a phase) and it should thus also bleed Agree, but it does not (counter-bleeding). Analysis: The φ-probe is located on C (cf. Ouali 2008, Henderson 2009). Short Â-movement, triggered by [ ● ● ● ] on C, applies before φ-Agree initiated by C. After this movement step, the subject DP is not in the c-command domain of the φ-probe anymore, hence the probe gets a default value (cf. (3)). Â-movement to the embedded SpecC (an intermediate landing site for long Â-movement) is triggered by
an edge feature on C and applies after Agree; when C starts probing, the subject is still in the c-command domain of C and C finds a goal (cf. (2)). Order of features on C: \{[\text{wh}•] \supset [\phi•] \supset [\text{X}•]\}.

(1a) man tamghart ay y-zri-n M. c. man tamghart ay nna-n qa t-zra

\text{which woman C 3SG.M-see-PRT M.}

\text{which woman C said-3PL that 3SG.FEM-saw Mohand?}

b. *man tamghart ay t-zra M.

\text{which woman C 3SG.FEM-saw M.}

\text{‘Which woman did they say saw Mohand?’}

\text{(AAE in Berber (Ouhalla 1993))}

2. Defective Intervention: Icelandic shows opacity on T: \text{\phi-Agree between T and the subject of an embedded infinitive is blocked if an experiencer (Exp) intervenes. In dialect B (Holmberg & Hroarsdottir 2003), EPP-movement of Exp to SpecT feeds Agree between T and the subject, whereas a wh-moved Exp blocks Agree, as if Exp is not moved at all. Assume that wh-movement to SpecC makes a stop-over in SpecT (cf. e.g. Chomsky 2004, Richards 2011). Since EPP-movement of Exp to this position feeds Agree, we expect feeding with wh-movement as well, but that does not occur (counter-feeding). Analysis: EPP-driven IM of Exp to SpecT applies before Agree, hence Exp does not intervene anymore when T probes (cf. (5)). Edge feature-driven IM of the wh-Exp to SpecT (intermediate landing site) applies after Agree, hence Exp still intervenes when T probes (cf. (4)). Order of features: T \{[\text{wh}•] \supset [\phi•] \supset [\text{X}•]\}.

\text{Movement to SpecC makes a stop-over in SpecT. And hence, the Icelandic data are indeed opaque: the wh- and EPP-moved Exps go through the same position SpecT but have different consequences for Agree.}

The same kind of argument is valid for the AAE: There are also languages where both long and short \text{-movement bleed Agree. This cannot be explained if long \text{-movement does not make a stop-over in the embedded SpecC (the DP would still be in the c-command domain of the embedded C, as has sometimes been claimed for the AAE languages of the Berber type (cf. e.g. Cheng 2006). Further opaque data of the same abstract pattern are found e.g. with possessor case/agreement in Uralic and topologicalization in Mayan.}

\text{Variation Four permutations of probe and IM-triggering features are expected: P1. both types of \text{IM apply before Agree, P2. both types of IM apply after Agree; P3. non-edge feature-driven IM applies before Agree which applies before edge feature-driven IM. P4. edge feature-driven IM applies before Agree, the other type of IM applies after Agree. However, P4 is not attested for any of the studied phenomena (\text{= 3/4 pattern}). Variation in AAE: In Trentino (Brandi & Cordin 1989), both short and long \text{-movement bleeds full agreement (\text{=P1}), in French neither of them bleeds Agree (\text{=P2}). Variation in intervention: In Icelandic B / Romance, both an EPP- and a wh-moved experiencer feeds Agree (\text{=P1}), in Icelandic dialect C (Sigurðsson & Holmberg 2008) neither movement type feeds Agree (\text{=P2}). Since P1 and P2 are the exact opposite of one another, extrinsic ordering of operation-inducing features on a head H is needed to account for the attested variation: Neither of the Principles that have been argued to determine rule ordering intrinsically (Elsewhere Principle, Obligatory Precedence Principle, cf. Pullum 1979) can predict an order O and its opposite, in particular not the Cycle because the triggers are located on the same head, i.e. within the same Cycle. P4 seems to be absent. This may be due to specificity: The more specific IM-triggering feature is discharged first. Since edge features are categorically underspecified, in contrast to criterial IM-triggers, the latter must apply before the latter, barring P4.}

\text{Conclusion Opague interaction of Agree and IM show that there are two types of IM that may apply at different points relative to Agree. The present analysis (i) crucially relies on timing of elementary operations and thus provides an argument for a strictly derivational syntax (e.g. Řezáč 2004); (ii) presupposes that criterial and intermediate movement steps are not triggered by the same features.}