# A new perspective on the DBH 

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- Recall: According to the DBH, word order variation in OE (and perhaps Early Germanic more generally) results from competing values for the head parameter for IP and VP, giving rise to the following set of phrase structures:


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(1)a. $I^{0}$ right, $V^{0}$ right: $S-O-V-V_{\text {fin }}$ bæt se biscop [1' ${ }_{\mathrm{Vp}}$ [vp bæt cild up aheafan] $\mathrm{t}_{\mathrm{i}}$ ] wolde $\mathrm{e}_{\mathrm{i}}$ ] that the bishop the child up lift wanted
b. $I^{0}$ left, $V^{0}$ right: $S-V_{f i n}-O-V$
pæt se biscop [!' wolde ${ }_{\mathrm{i}}$ [vp [vp pæt cild up aheafan] $\mathrm{t}_{\mathrm{i}}$ ]]
c. $I^{0}$ left, $\mathrm{V}^{0}$ left: $S-V_{f i n}-V-O$ pæt se biscop [1, wolde $\mathrm{E}_{\mathrm{vp}} \mathrm{t}_{\mathrm{i}}\left[\mathrm{v}_{\mathrm{vp}}\right.$ aheafan up pæt cild ]]]
d. $I^{0}$ right, $V^{0}$ left: $S-V-O-V_{\text {fin }}$ pæt se biscop [1' [vp $\mathrm{t}_{\mathrm{i}}\left[\mathrm{vp}\right.$ aheafan up pæt cild]] wolde $\mathrm{e}_{\mathrm{i}}$ ]

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(1)a. $I^{0}$ right, $V^{0}$ right: $S-O-V-V_{\text {fin }}$ bæt se biscop [1' ${ }_{\mathrm{Vp}}$ [vp pæt cild up aheafan] $\mathrm{t}_{\mathrm{i}}$ ] wolde $\mathrm{e}_{\mathrm{i}}$ ] that the bishop the child up lift wanted
b. $I^{0}$ left, $V^{0}$ right: $S-V_{f i n}-O-V$
pæt se biscop [!' wolde ${ }_{\mathrm{i}}$ [vp [vp pæt cild up aheafan] $\mathrm{t}_{\mathrm{i}}$ ]]
c. $I^{0}$ left, $\mathrm{V}^{0}$ left: $S-V_{f i n}-V-O$
pæt se biscop [1' wolde ${ }_{\mathrm{i}}$ [vp $\mathrm{t}_{\mathrm{i}}\left[{ }_{\mathrm{vp}}\right.$ aheafan up pæt cild ]]]
d. $\quad I^{0}$ right, $V^{0}$ left: $S-V-O-V_{\text {fin }}$
pæt se biscop [1' [vp $\mathrm{t}_{\mathrm{i}}$ [vp aheafan up bæt cild]] wolde $\mathrm{i}_{\mathrm{i}}$ ]

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- Problems:
- Option (1d) seems to be crosslinguistically rare or even absent: *VO-Aux
- In addition to the DBH, rightward movement/extraposition must be assumed to account for orders such as V-Aux-O


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Basic assumptions:

- The root raising parameter (RRP): basic structural difference between OV and VO languages (see above)
- From the RRP it follows that there is a difference between OV and VO languages w.r.t the make-up/size of Spell-out domains (SOD) (i.e., sisters of phase heads that are subject to the operation Transfer):


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(2)

| a. | VO: | SOD1 (VP): (obj) | (V-to-v) |
| :--- | :--- | :--- | :--- |
|  |  | SOD2 (TP): (subj. T v+V) |  |
| b. | OV: | SOD1 (VP): ( $\mathrm{t}_{\mathrm{obj} .}$ ) $)$ (or CP) | (removal of v |
|  |  | SOD2 (TP): (subj. T obj. V) | after inheritance) |

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Additional assumption (linearization at Spell-out):

- Linear order results from the operation Vocabulary Insertion (VI), which supplies syntactic terminal nodes with phonological content.
- VI operates in a bottom-up fashion, starting with the most deeply embedded phase/Spell-out domain.
- Linear order is built incrementally from left to right by adding the outcome of VI at any given stage of the linearization process to the left of the existing string of exponents derived by previous applications of VI.
- Each Spell-out domain is linearized separately; in a subsequent step, the relevant output strings are combined. As a result, Spell-out domains that are linearized earlier appear to the right of Spell-out domains that are linearized later: < SOD ${ }_{\mathrm{n}} \ldots \mathrm{SOD}_{2}, \mathrm{SOD}_{1}>$


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(3) a. LIN applying to SOD1: < $\phi_{1}>$
b. LIN applying to SOD2: $<\phi_{2}, \phi_{1}>$
c. LIN applying to SOD3: $\left\langle\phi_{3}, \phi_{2}, \phi_{1}\right\rangle$
(" $\phi$ " = a string of phonological exponents)

- Immediate result: The most deeply embedded element/phrase is linearized as the rightmost element in linear order (see also Haider 1995 on extraposition).


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- Linearization of a fully head-initially structure (periphrastic tense/transitive verb):
$\begin{array}{lll}\text { (4) a. } & \text { LIN (VP): <obj.> } & \text { S-AUX-V-O } \\ & \text { b. } & \operatorname{LIN}(T P):<\text { subj. T } v+V>+ \text { <obj.> }\end{array}$


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- Linearization of a fully head-final structure (periphrastic tense/transitive verb):
$\begin{array}{lll}\text { (5) a. } & \text { LIN (VP): }<\mathrm{t}_{\text {obj }}> & \text { S-O-V-Aux } \\ & \text { b. } & \text { LIN (TP): }<\text { subj. obj. } V T>+\left\langle\mathrm{t}_{\text {obj. }}>\right.\end{array}$


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- Linearization of a mixed structure: head-initial TP and headfinal VP (periphrastic tense/transitive verb):
$\begin{array}{lll}\text { (6) } & \left.\text { a. } \operatorname{LIN}(V P):<t_{\text {obj. }}\right\rangle & \text { S-Aux-O-V } \\ & \text { b. } & \text { LIN (TP): }\langle\text { subj. T obj. } V\rangle+\left\langle t_{\text {obj. }}\right\rangle\end{array}$


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- Linearization of a mixed structure (FOFC?): head-final TP and head-initial VP (periphrastic tense/transitive verb):
(7) a. LIN (VP): <obj.>
b. $\quad$ LIN (TP): <subj. v+V T> + <obj.>


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- Linearization of a mixed structure (FOFC?): head-final TP and head-initial VP (periphrastic tense/transitive verb):
$\begin{array}{lll}\text { (8) a. LIN (VP): <obj.> } & \text { s-V-Aux-O! } \\ & \text { b. LIN (TP): <subj. } v+V \text { T }>+ \text { <obj.> } & \end{array}$


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- Step-by-step:
(9)a. Linearization of VP: <obj.>
b. Linearization of TP:
i. Spell-out of V (moved to v ): <V>
ii. Spell-out of $T$ (lexical property: head-final): <V Aux>
iii. Spell-out of subj. (specs always to the left): <subj. V Aux>
c. Assembly of SO1 (VP) and SO2 (TP): <subj. V Aux> + <obj.>


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- Upshot: Under these assumptions, VO-Aux orders are not derivable under the DBH; instead, the apparently problematic combination of a head-final TP and a head-intitial VP gives rise to the other 'problematic' order, namely extraposition from an (apparent) OV-base: V-Aux-O!

