

Question What's $A^w(\mathbb{1}_n)$ homotopy, where homotopy means that each strand is "transparent to itself".

This can be interpreted in two ways:

$$\begin{array}{c} i \\ \diagdown \\ \diagup \\ i \end{array} = \begin{array}{c} i \\ \diagup \\ \diagdown \\ i \end{array} \Rightarrow \text{[diagram of two crossings with arrows] } + \text{[diagram of two crossings with arrows]} = 0$$

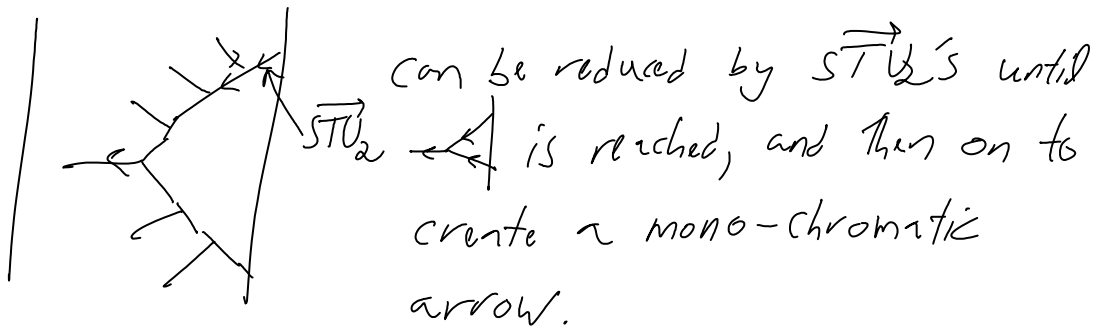
"self-flatness"

and

$$\begin{array}{c} i \\ \diagdown \\ \diagup \\ i \end{array} = \begin{array}{c} \diagdown \\ \diagup \end{array} \Rightarrow \text{[diagram of a crossing with arrows]} = 0$$

"Full v-homotopy"

Full v-homotopy implies no repeating colours on trees:



\Rightarrow There are also no wheels.

Question Is there a w-Habegger-Lin theory?
A theory of basis-conjugating automorphisms of the reduced free group?