

The "other" permutation associated with v-braids

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From talk by
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$$vB_n = \langle \overset{\text{braiding}}{\sigma_i}, \overset{\text{perm}}{\tau_i} \rangle / \text{rels}$$

$$vB_n \xrightarrow{vs} S_n \text{ by } \sigma_i \mapsto 1, \tau_i \mapsto (i, i+1)$$

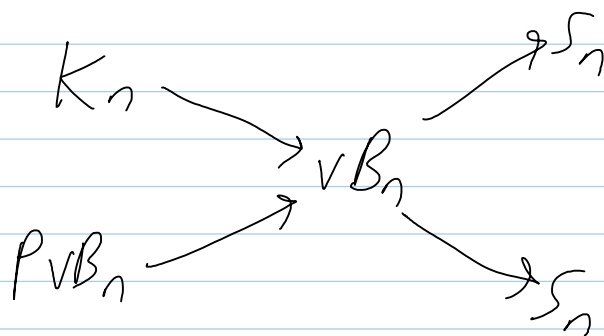
"vertical smoothing map"

$$K_n = \ker(vs)$$

generated by v-conjugates of \times ?

$$\text{So } \sigma_{ij} \mapsto (ij)$$

$$\begin{aligned} \sigma_{12} \sigma_{13} \sigma_{23} &\mapsto (12)(13)(23) = (13) \\ &\quad (23)(13)(12) = (13) \end{aligned}$$



Q. What is $\text{proj } K_n$?

Probably 0, as the relations have non-trivial Abelianization.