The Variables:

$$\begin{pmatrix} b_1\backslash a_1 & x_{12} & x_{13} \\ y_{12} & b_2\backslash a_2 & x_{23} \\ y_{13} & y_{23} & b_3\backslash a_3 \end{pmatrix}, \quad \xi_-, \alpha_-, \beta_-, \eta_-.$$

We short "x_1" for either of x_{12}, x_{23} and "x_2" for x_{13}. Weights are intuitive on yb and 3-complementary on ax: wt: $b \to 0$, $y_1 \to 1$, $y_2 \to 2$, $a \to 3$, $x_1 \to 2$, $x_2 \to 1$. Weights are 3-complementary on the dual (greek) variables.

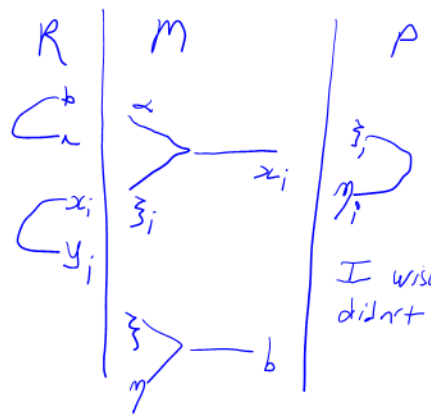
In $m[ij \to k]$**:**

At $\epsilon = 0$: $\dots, \xi_1\eta_1 b, \xi_2\eta_2 b, \xi_1'\xi_1'' x_2, \eta_2\xi_1 y_1, \alpha\xi_i x_i \dots$

At ϵ/ϵ^2: $\dots, \xi_1\eta_1 a, \xi_2\eta_2 a, \dots$

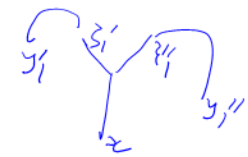
In $\Delta[i \to jk]$**:**

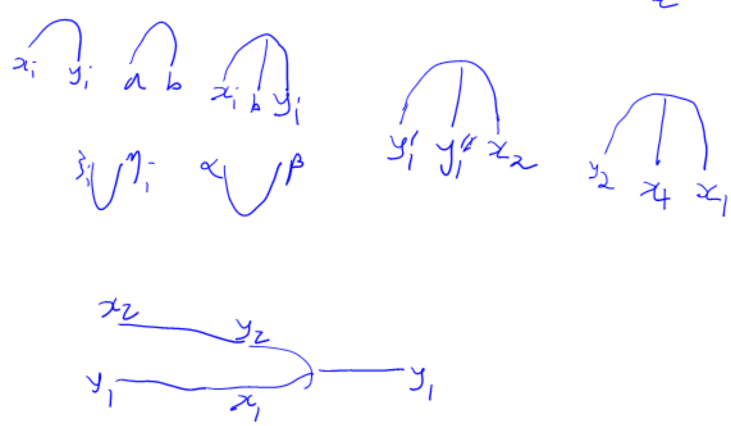
At $\epsilon = 0$: $\dots, \eta_i b y_i, \dots$



I wish we didn't need ρ!

The right wing perspective:





Def For $f \in \mathbb{Q}[z_i]$ let $\delta(f) = n \cdot \deg_z f - 2\,\mathrm{wt}\, f$

Claim δ is non-decreasing under gl_n morphisms.

Def For $\phi \in \mathbb{Q}[\zeta_i, z_i]$ let $\delta(\phi) =$

E.g. In $ybax$,

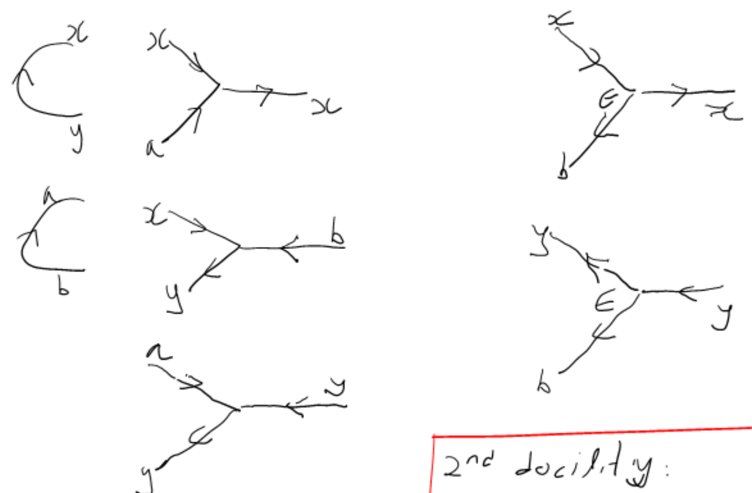
$\delta(a) = -1 \quad \delta(ab) = 0 \quad \delta(ab^n) = 2n$

$\delta(x) = 0 \quad \delta(e^x) = 0$

In sl_3

$(x_1, x_1) \longmapsto [x_1, x_1] = x_2$

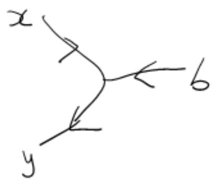
$\delta = -2 \qquad \delta = 1$



	upper	lower
latin	outgoing a, x	incoming y, b
greek	incoming α, ξ	outgoing η, β

$\boxed{\text{2nd docility: } \deg_{\text{outgoing}} \le k+1}$

3^{rd} condition: $\begin{pmatrix}\text{outgoing}\\ \text{co-weight}\end{pmatrix} \le \begin{pmatrix}\text{incoming}\\ \text{weight}\end{pmatrix} + n \cdot k$ or



Task: Explain the finiteness of $\sum x_i y_i + \sum_{i,j \ge 0} x_{i+j} y_i y_j$

b	0	y_0
xy	1	$y_1 x_1$
a	2	x_2