

# *Laws of Form* Reference

## Axioms

$$\overline{p|p|} = \quad \text{(Position J1)}$$

$$\overline{pr|qr|} = \overline{p|q|}r \quad \text{(Transposition J2)}$$

## Consequences

$$\overline{a|} = a \quad \text{(Reflexion C1)}$$

$$\overline{ab|}b = \overline{a|}b \quad \text{(Generation C2)}$$

$$\overline{a} = \overline{a} \quad \text{(Integration C3)}$$

$$\overline{a|b|}a = a \quad \text{(Occultation C4)}$$

$$aa = a \quad \text{(Iteration C5)}$$

$$\overline{a|b|}\overline{a|b|} = a \quad \text{(Extension C6)}$$

$$\overline{a|b|c|} = \overline{ac|b|c|} \quad \text{(Echelon C7)}$$

$$\overline{a|br|cr|} = \overline{a|b|c|}\overline{a|r|} \quad \text{(Modified transposition C8)}$$

$$\overline{a|r|}\overline{b|r|}\overline{x|r|}\overline{y|r|} = \overline{r|ab|}\overline{rxy|} \quad \text{(Crosstransposition C9)}$$

## Corollaries

$$\overline{p|p} = \overline{a} \quad \text{(J1.1)}$$

$$\overline{p|pq|} = \quad \text{(J1.2)}$$

$$\overline{pr|qr|} = \overline{\overline{p|q|}r|} \quad \text{(J2.1)}$$

$$\overline{a}a = a \quad \text{(B2)}$$

$$\overline{a|} = \quad \text{(C3.1)}$$

$$\overline{ab|a|} = \overline{a|} \quad \text{(C4.1)}$$

$$\overline{a|b|}\overline{ab|} = \overline{b|} \quad \text{(C6.1)}$$

$$\overline{a|b|ab|} = b \quad \text{(Robbins C6.2)}$$

$$\overline{a|br|} = \overline{a|b|}\overline{a|r|} \quad \text{(C8.1)}$$

$$\overline{a|r|}\overline{x|r|} = \overline{r|a|}\overline{rx|} \quad \text{(C9.1)}$$

### General theorems

$$\overline{\overline{a_1 r} \mid \overline{a_2 r} \mid \dots \mid \overline{a_n r}} = \overline{\overline{a_1} \mid \overline{a_2} \mid \dots \mid \overline{a_n}} \mid r \quad (\text{J2}^*)$$

$$\overline{\overline{a_1 r} \mid \overline{a_2 r} \mid \dots \mid \overline{a_n r}} = \overline{\overline{\overline{a_1} \mid \overline{a_2} \mid \dots \mid \overline{a_n}}} \mid r \quad (\text{J2.1}^*)$$

$$\overline{\overline{\overline{a_n b} \mid \dots \mid \overline{a_2} \mid \overline{a_1}}} \mid b = \overline{\overline{\overline{a_n} \mid \dots \mid \overline{a_2} \mid \overline{a_1}}} \mid b \quad (\text{C2}^*)$$

$$\overline{\overline{a} \mid \overline{b_1 r} \mid \overline{b_2 r} \mid \dots \mid \overline{b_n r}}} = \overline{\overline{a} \mid \overline{b_1} \mid \overline{b_2} \mid \dots \mid \overline{b_n}}} \mid \overline{\overline{a} \mid \overline{r}} \quad (\text{C8}^*)$$

$$\begin{aligned} & \overline{\overline{\overline{\overline{a_1} \mid \overline{r}} \mid \overline{\overline{a_2} \mid \overline{r}}} \mid \dots \mid \overline{\overline{a_n} \mid \overline{r}}} \mid \overline{\overline{x_1} \mid \overline{r}} \mid \overline{\overline{x_2} \mid \overline{r}} \mid \dots \mid \overline{\overline{x_m} \mid \overline{r}}} \\ &= \overline{\overline{r} \mid \overline{a_1 a_2 \dots a_n} \mid \overline{r x_1 x_2 \dots x_m}} \end{aligned} \quad (\text{C9}^*)$$

For all even  $n \geq 2$ :

$$\overline{\overline{\overline{\overline{a_n} \mid \dots \mid \overline{a_2} \mid \overline{a_1}}} \mid \overline{a_n} \mid \overline{a_{n-1}} \dots \overline{a_3 a_1} \mid \dots \mid \overline{a_4} \mid \overline{a_3 a_1} \mid \overline{a_2} \mid \overline{a_1}}} \quad (\text{C7.1}^*)$$

and

$$\begin{aligned} & \overline{\overline{\overline{\overline{a_{n+1}} \mid \overline{a_n} \mid \dots \mid \overline{a_2} \mid \overline{a_1}}} \mid \overline{a_{n+1} a_{n-1}} \dots \overline{a_3 a_1} \mid \overline{a_n} \mid \overline{a_{n-1}} \dots \overline{a_3 a_1} \mid \dots \mid \overline{a_4} \mid \overline{a_3 a_1} \mid \overline{a_2} \mid \overline{a_1}}} \\ &= \overline{\overline{a_{n+1} a_{n-1}} \dots \overline{a_3 a_1} \mid \overline{a_n} \mid \overline{a_{n-1}} \dots \overline{a_3 a_1} \mid \dots \mid \overline{a_4} \mid \overline{a_3 a_1} \mid \overline{a_2} \mid \overline{a_1}}} \end{aligned} \quad (\text{C7.2}^*)$$