

$$\text{Tr}_{\textcolor{teal}{A}, \textcolor{red}{B}}^{\mathcal{C}}(f) : \textcolor{teal}{A}^{\text{op}} \times \textcolor{red}{B} \xrightarrow{\text{Pos}} \mathbf{Bool}$$

$$\langle \textcolor{teal}{a}^*, \textcolor{red}{b} \rangle \mapsto \bigvee_{c \in \mathcal{C}} f(\langle \textcolor{teal}{a}^*, \textcolor{red}{c} \rangle, \langle \textcolor{teal}{b}^*, \textcolor{red}{c} \rangle).$$