

$$\underline{\text{H-L}} \binom{\mathbb{N}}{\mathcal{V}} \cap \underline{\text{L-H}} \binom{\mathbb{N}}{\mathcal{U}} = \emptyset$$

$$\underline{\text{L-H}} \binom{\mathbb{N}}{\mathcal{U}} \cap \underline{\text{H-L}} \binom{\mathbb{N}}{\mathcal{V}} = \emptyset$$

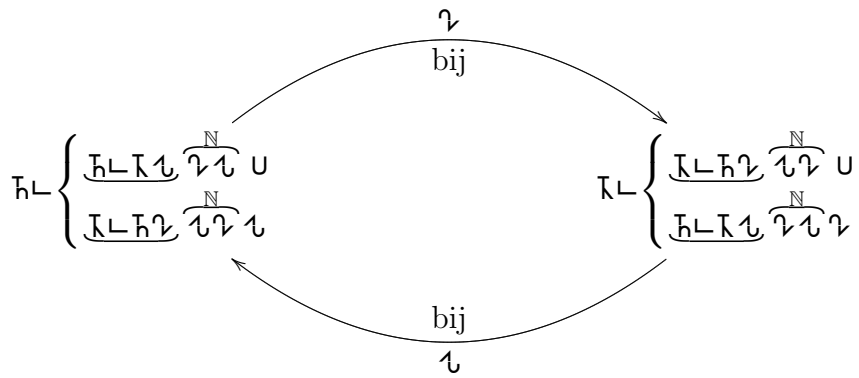
$$\zeta \bigvee_h^{\text{H-L}} \bigvee_k^{\text{L-H}} h \binom{m}{\mathcal{V}} = k \binom{n}{\mathcal{U}} = k \binom{n}{\mathcal{V}}$$

$$\begin{cases} m \leq n & \xRightarrow{\text{inj}} h = k \binom{n-m}{\mathcal{V}} = k \binom{n-m}{\mathcal{U}} \in \text{L} \zeta \\ m > n & \xRightarrow{\text{inj}} k = h \binom{m-n}{\mathcal{V}} = h \binom{m-n-1}{\mathcal{U}} \mathcal{V} \xRightarrow{\text{inj}} h = h \binom{m-n-1}{\mathcal{U}} \mathcal{V} \in \text{H} \zeta \end{cases}$$

$$\underline{\text{H-L}} \binom{\mathbb{N}}{\mathcal{V}} \xrightarrow[\text{bij}]{\mathcal{V}} \underline{\text{H-L}} \binom{\mathbb{N}}{\mathcal{V}} \mathcal{V}$$

$$\underline{\text{L-H}} \binom{\mathbb{N}}{\mathcal{U}} \mathcal{U} \xleftarrow[\text{bij}]{\mathcal{U}} \underline{\text{L-H}} \binom{\mathbb{N}}{\mathcal{U}}$$





$$hLk1 \subset hLk1 \overbrace{21}^N$$

$$\overbrace{kLh2}^N \supset kLh2$$

$$hLk1 \overbrace{21}^N 21 = hLk1 \overbrace{21}^N \cap k1$$

$$\overbrace{kLh2}^N 12 = \overbrace{kLh2}^N \cap h2$$

$$h2 \in \overbrace{kLh2}^N \Rightarrow \bigvee_k^{kLh2} h2 = k \overbrace{12}^n \xrightarrow{k \notin h2} n > 0 \Rightarrow h2 = k \overbrace{12}^{n-1} 12 \in \overbrace{kLh2}^N 12$$