

$$\mathcal{V}^{-}\mathcal{V}\subset \mathfrak{H}\times \mathfrak{H} \text{ equ-rel}$$

$$h\sim \mathfrak{h}\Leftrightarrow {}^h\mathcal{V} = {}^{\mathfrak{h}}\mathcal{V}$$

$$\mathcal{V}^{-}\mathcal{V}|_{\mathfrak{h}} = \frac{\mathcal{V}^{-}\mathcal{V}|_{\mathfrak{h}}}{h\in \mathfrak{h}}$$

$${}^{\mathcal{V}^{-}\mathcal{V}|_{\mathfrak{h}}}\mathcal{V}_{\mathfrak{Z}} = {}^h\mathcal{V} \text{ well-def}$$

$$\begin{array}{ccc} \mathfrak{h} & \xrightarrow{\mathcal{V}} & \mathfrak{k} \\ \text{on} \downarrow & \nearrow \mathcal{V}_{\mathfrak{Z}} \text{ inj} & \uparrow \text{in} \\ \mathfrak{h} \sqsubset \mathcal{V}^{-1}\mathcal{V} & \xrightarrow[\text{bij}]{\tilde{\mathcal{V}}} & {}^{\mathfrak{h}}\mathcal{V} \end{array}$$

$$\overline{\mathcal{V}^{-}\mathcal{V}}^{-} = \mathcal{V}^{-}\mathcal{V} \text{ symm}$$

$$\mathcal{V} \text{ \textit{uberall def}} \Rightarrow I_{\mathfrak{h}} \subset \mathcal{V}^{-}\mathcal{V} \text{ refl}$$

$$\mathcal{V} \text{ \textit{eind}} \Rightarrow \mathcal{V}\mathcal{V}^{-} \subset I_{\mathfrak{k}} \Rightarrow \underbrace{\mathcal{V}^{-}\mathcal{V}}\underbrace{\mathcal{V}^{-}\mathcal{V}} = \mathcal{V}^{-}\underbrace{\mathcal{V}\mathcal{V}^{-}}\mathcal{V} \subset \mathcal{V}^{-}I_{\mathfrak{k}}\mathcal{V} = \mathcal{V}^{-}\mathcal{V} \text{ trans}$$

$$h:\mathfrak{h} \in \mathcal{V}^{-}\mathcal{V} \Leftrightarrow \bigvee_{\mathfrak{k}} \left\{ \begin{array}{l} h:\mathfrak{k} \in \mathcal{V} \\ \mathfrak{k}:\mathfrak{h} \in \mathcal{V}^{-} \end{array} \right. \Rightarrow h:\mathfrak{k} \in \mathcal{V} \ni \mathfrak{h}:\mathfrak{k} \Rightarrow {}^h\mathcal{V} = \mathfrak{k} = {}^{\mathfrak{h}}\mathcal{V} \Rightarrow {}^h\mathcal{V} = {}^{\mathfrak{h}}\mathcal{V} \Rightarrow \mathcal{V}_{\mathfrak{Z}} \text{ well-def}$$

$${}^{\mathcal{V}^{-}\mathcal{V}|_{\mathfrak{h}}}\mathcal{V}_{\mathfrak{Z}} = {}^{\mathcal{V}^{-}\mathcal{V}|_{\mathfrak{h}}}\mathcal{V}_{\mathfrak{Z}} \Rightarrow {}^h\mathcal{V} = {}^{\mathfrak{h}}\mathcal{V} \Rightarrow h\sim \mathfrak{h} \Rightarrow \mathcal{V}^{-}\mathcal{V}|_h = \mathcal{V}^{-}\mathcal{V}|_{\mathfrak{h}} \Rightarrow \mathcal{V}_{\mathfrak{Z}} \text{ inj}$$

$${}^{\mathcal{V}^{-}\mathcal{V}|_{\mathfrak{h}}}\mathcal{V}_{\mathfrak{Z}} = {}^{\mathfrak{h}}\mathcal{V} \Rightarrow \tilde{\mathcal{V}}_{\mathfrak{Z}} \text{ bij}$$