

$$\begin{array}{ccccc}
 & & F(\mathrm{cod}(v)) & & \\
 & & \uparrow & \swarrow & \\
 & & \sigma_{F(\mathrm{cod}(v))} & \tau_{F(\mathrm{cod}(v))} & \\
 L & \xrightarrow{\exists! e_{f,g}} & \prod_{X \in \mathrm{ob} \mathcal{J}} F(X) & \begin{array}{c} \xrightarrow{\exists! f} \\ \xrightarrow{\exists! g} \end{array} & \prod_{u \in \mathrm{hom} \mathcal{J}} F(\mathrm{cod}(u)) \\
 & \searrow \psi_{F(\mathrm{dom}(w))} = \sigma_{F(\mathrm{dom}(w))} \circ e_{f,g} & \downarrow \sigma_{F(\mathrm{dom}(w))} & & \downarrow \tau_{F(\mathrm{cod}(w))} \\
 & & F(\mathrm{dom}(w)) & \xrightarrow{F(w)} & F(\mathrm{cod}(w))
 \end{array}$$