

$$\begin{array}{ccccc}
 \mathcal{HOM}(Y, Z) \otimes \mathcal{HOM}(X, Y) & \xrightarrow{\quad \varphi \quad} & \mathcal{HOM}(X, Z) & & \\
 & \searrow \scriptstyle \varphi' & & & \\
 \mathcal{HOM}(Y, Z) \otimes \mathcal{HOM}(X, Y) \otimes X & \xrightarrow{\quad \quad} & Z & & \\
 & \nearrow \scriptstyle \varphi'' & & & \\
 \mathcal{HOM}(X, Y) \otimes X & \xrightarrow{\quad \varphi'' \quad} & \mathcal{HOM}(\mathcal{HOM}(Y, Z), Z) & & \mathcal{HOM}(Y, Z) \\
 \downarrow & & \uparrow & & \downarrow \\
 \mathcal{HOM}(X, Y) & \xleftrightarrow{\quad \quad} & Y & \xleftrightarrow{\quad \quad} & \mathcal{HOM}(Y, Z)
 \end{array}$$