

$$\begin{array}{ccc}
 \mathbb{D}(X, Y) & \xrightarrow{G_{X, Y}} & \mathbb{C}(GX, GY) \\
 & \searrow \varepsilon_X^* & \downarrow \cong \\
 & & \mathbb{D}(FGX, Y)
 \end{array}$$