

$$\begin{array}{ccc}
 h^A(X) & \xrightarrow{h_{\text{co}}(\phi)(x)} & h^{A'}(X) \\
 \downarrow h^A(\psi) & \swarrow \epsilon \quad f : A \rightarrow X & \searrow \epsilon \quad f \circ \phi : A' \rightarrow X \\
 h^A(Y) & \xrightarrow{h_{\text{co}}(\phi)(y)} & h^{A'}(Y) \\
 & \swarrow \epsilon \quad \psi \circ f : A \rightarrow Y & \searrow \epsilon \quad \psi \circ f \circ \phi : A' \rightarrow Y \\
 & & \downarrow h^{A'}(\psi)
 \end{array}$$