

$$\begin{array}{ccc}
 X & \xrightarrow{i_X} & U(F(X)) \\
 & \searrow \varphi_0 & \downarrow \varphi \\
 & & U(M)
 \end{array}$$

$$\begin{array}{ccc}
 x & \xrightarrow{\quad} & i_X(x) = x \\
 & \searrow & \downarrow \\
 & & \varphi_0(x) = \varphi(x)
 \end{array}$$