

$$\begin{array}{ccc}
\mathrm{Hom}(X, X) & \xrightarrow{\nu_X} & F(X) \\
\downarrow - \circ f & & \downarrow Ff \\
\mathrm{Hom}(Y, X) & \xrightarrow{\nu_Y} & F(Y)
\end{array}$$