

$$\begin{array}{ccccc}
 & D & & D & & F(A) & & A \\
 & \swarrow u & \searrow f & \swarrow u & \searrow f & \downarrow F(h) & & \downarrow h \\
 F(A) & \xrightarrow{\quad F(h) \quad} & F(A') & & F(A') & & A'
 \end{array}$$