

$$\begin{array}{ccc}
 G(F(C)) & \xrightarrow{\psi_C} & C \\
 G(h) \downarrow & & \downarrow f \\
 G(F(C')) & \xrightarrow{\psi'_C} & C'.
 \end{array}$$

$$\begin{array}{ccc}
 G(F(C)) & \xrightarrow{\psi_C} & C \\
 G(F(f)) \downarrow & & \downarrow f \\
 G(F(C')) & \xrightarrow{\psi'_C} & C'.
 \end{array}$$