

$$\begin{array}{ccccccc}
X & \xrightarrow{v_X} & V_X & \xrightarrow{u_X} & U_X & \xrightarrow{\delta_X} & \\
\parallel & & \downarrow & & \downarrow l_X & & \\
X & \xrightarrow{v'_X} & V'_X & \xrightarrow{u'_X} & U'_X & \xrightarrow{\delta'_X} & \\
\parallel & & \downarrow & & \downarrow r_X & & \\
X & \xrightarrow{v_X} & V_X & \xrightarrow{u_X} & U_X & \xrightarrow{\delta_X} &
\end{array}$$

$$\begin{array}{ccc}
Q(U_X) & \xrightarrow{Q(U_f)} & Q(U_Y) \\
Q(l_X) \downarrow \sim & & \sim \downarrow Q(l_Y) \\
Q(U'_X) & \xrightarrow{Q(U'_f)} & Q(U'_Y) \\
Q(r_X) \downarrow \sim & & \sim \downarrow Q(r_Y) \\
Q(U_X) & \xrightarrow{Q(U_f)} & Q(U_Y)
\end{array}$$