

$$\begin{array}{ccccccc}
 V & \xrightarrow{d} & V & \xrightarrow{f} & W & \xrightarrow{\text{id}} & \\
 \downarrow \text{Phi_B'} & & \downarrow \text{Phi_B} & & \downarrow \text{Phi_C} & & \downarrow \text{Phi_C'} \\
 K^n & \longrightarrow & K^r & \longrightarrow & K^m & \longrightarrow & K^m
 \end{array}$$