

$$\begin{array}{ccccc}
 M_i & \xrightarrow{m_{\varphi(i),i}} & M_{\varphi(i)} & & \\
 & \searrow \alpha_i & \nearrow \beta_i & \searrow \alpha_{\varphi(i)} & \\
 & Q_i & & Q_{\varphi(i)} & \\
 & \xrightarrow{q_{\varphi(i),i}} & & &
 \end{array}$$