

$$\begin{array}{ccc}
 & \prod_{i \in J} F_i & \\
 \pi_k \swarrow & & \searrow f \\
 F_k & \xleftarrow{\pi'_k} \prod_{u:j \rightarrow k} F_k &
 \end{array}$$

$$\begin{array}{ccc}
 \prod_{i \in J} F_i & \xrightarrow{\quad g \quad} & \prod_{u:i \rightarrow k} F_k \\
 \pi_i \downarrow & & \downarrow \pi'_k \\
 F_i & \xrightarrow{\quad F(u) \quad} & F_k
 \end{array}$$