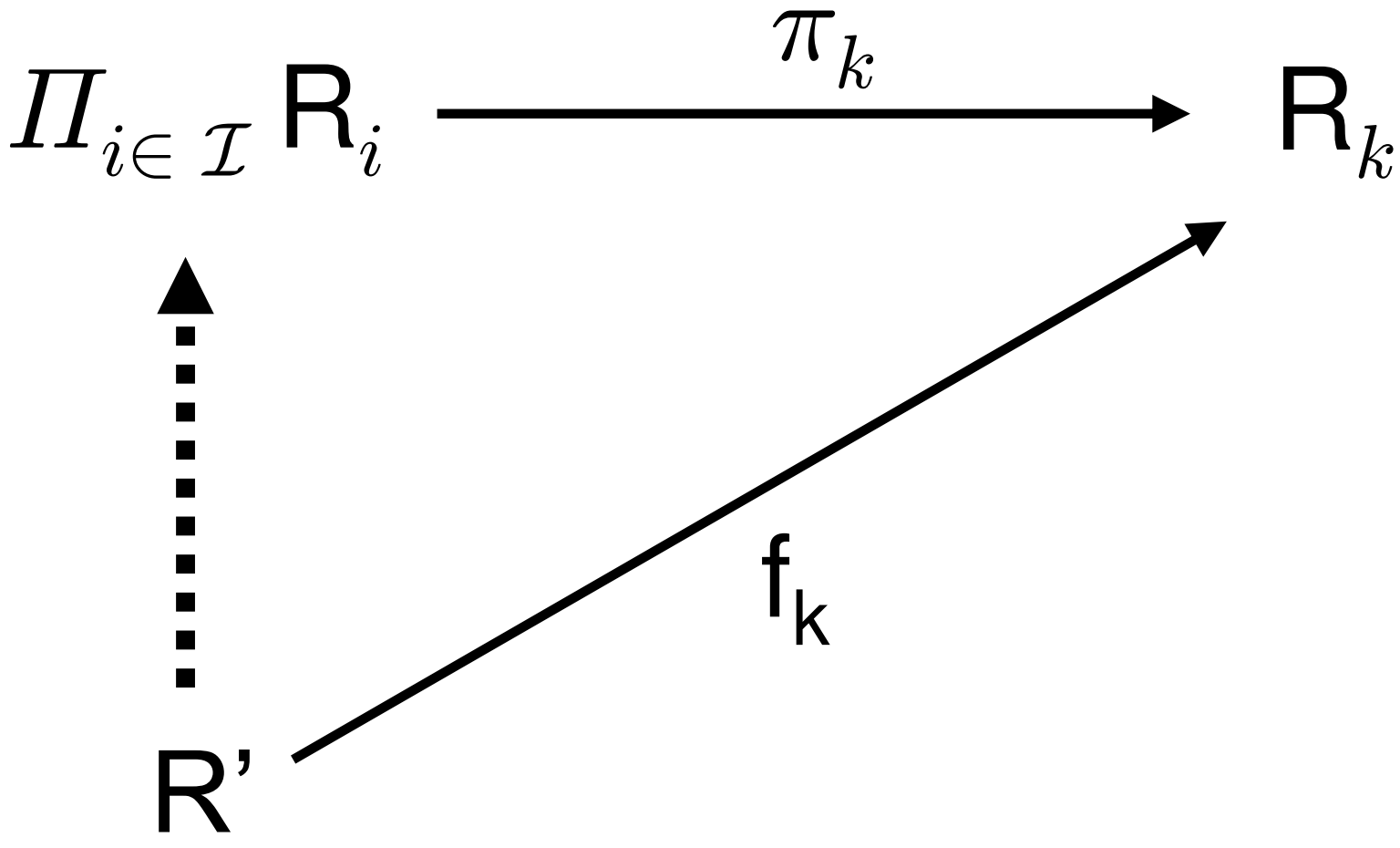
$\Pi_{i \in \mathcal{I}} \mathsf{R}_i$
$\pi_k$
$\mathsf{R}_k$
$\mathsf{f}_k$
R'