$$\begin{array}{c|c}
\mathbf{P}_1 & \xrightarrow{\int_1} & \mathbf{S}_1 \\
f \mid \mathbf{NSet} & \mathbf{NSet} \mid \mathbf{S} \\
\mathbf{P}_2 & \xrightarrow{f} & \mathbf{S}_2
\end{array}$$