

$$\begin{array}{ccc}
 T_p^* \mathcal{M} & \xleftarrow{f_p^*} & T_{f(p)}^* \mathcal{N} \\
 \downarrow & & \downarrow \\
 \{p\} & \xrightarrow{f|_{\{p\}}} & \{f(p)\}
 \end{array}$$