$$\begin{array}{c|cccc}
(a,2) & \longrightarrow & a & \longrightarrow \\
\emptyset + \mathbf{A} & & \longrightarrow & \mathbf{A} \\
Id_{\emptyset} + f \downarrow & & \downarrow f \\
\emptyset + \mathbf{A}' & & \longrightarrow & \mathbf{A}' \\
\downarrow f & \downarrow f \\
(f(a),2) & \longmapsto & f(a)
\end{array}$$