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