

$$\begin{array}{ccc}
 \mathbf{E} & \xrightarrow{\tau_a} & \mathrm{hom}(Fa, Ga) \\
 \tau_{a'} \downarrow & \swarrow \tau_f & \downarrow G(f)_* \\
 \mathrm{hom}(Fa', Ga') & \xrightarrow{F(f)^*} & \mathrm{hom}(Fa, Ga')
 \end{array}$$