

causal-bijection_functionality_wrt_iff^{11,40}

$\forall es:\text{ES}, T, T':\text{Type}, R:(T \rightarrow T' \rightarrow \mathbb{P}), P_1, P_2, Q_1, Q_2:(\text{E} \rightarrow \mathbb{P}), f:(\{e:\text{E} \mid P_1(e)\} \rightarrow \{e:\text{E} \mid Q_1(e)\})$.
 $(\forall e:\text{E}. P_1(e) \Rightarrow (\text{valtype}(e) \subseteq_r T))$
 $\Rightarrow (\forall e:\text{E}. Q_1(e) \Rightarrow (\text{valtype}(e) \subseteq_r T'))$
 $\Rightarrow (\forall e:\text{E}. P_1(e) \iff P_2(e))$
 $\Rightarrow (\forall e:\text{E}. Q_1(e) \iff Q_2(e))$
 $\Rightarrow ((e.P_1(e) \rightarrow e.f(e) \rightarrow e.Q_1(e)) \text{ with } R \iff (e.P_2(e) \rightarrow e.f(e) \rightarrow e.Q_2(e)) \text{ with } R)$