Q-R-glues[11,40]

g glues $Ia{:}Qa \; --f{\rightarrow} \; Ib{:}Rb$
$\equiv_{\mathrm{def}}$ $\{Ia\} \leftarrow\leftarrow= g== \{Ib\}$ & g is Qa-Rb-pre-preserving on $\{Ib\}$
  & $\mathrm{Inj}(\{e{:}E| \uparrow(e \in_b Ib)\} \;;E;g)$
  & $(\forall e{:}E(Ib). \; f(g(e)) = Ib(e))$

clarification:

Q-R-glues$(es;Ib\_valtype;g;f;Ia;Qa;Ib;Rb)$
$\equiv_{\mathrm{def}}$ weak-antecedent-surjection$(es;\{Ib\};\{Ia\};g)$ & Q-R-pre-preserving$(es;g;\{Ib\};Qa;Rb)$
  & $\mathrm{Inj}(\{e{:}es\text{-}E(es)| \uparrow(e \in_b Ib)\} \;;es\text{-}E(es);g)$
  & $(\forall e{:}es\text{-}E\text{-interface}(es;Ib). \; f(g(e)) = Ib(e) \in Ib\_valtype)$