

## weak-antecedent-surjections-compose<sup>11,40</sup>

$\forall es:\mathbf{ES}, P, Q, R:(\mathbf{E} \rightarrow \mathbb{P}), f:(\{e:\mathbf{E} \mid P(e)\} \rightarrow \{e:\mathbf{E} \mid Q(e)\}), g:(\{e:\mathbf{E} \mid Q(e)\} \rightarrow \{e:\mathbf{E} \mid R(e)\})$ .  
 $(Q \leftarrow\leftarrow = f == P \ \& \ R \leftarrow\leftarrow = g == Q) \Rightarrow R \leftarrow\leftarrow = g \circ f == P$