

## **locl-pre-preserving-compose<sup>11,40</sup>**

$\forall es:ES, P, Q:(E \rightarrow \mathbb{P}), f_1:(\{e:E \mid P(e)\} \rightarrow \{e:E \mid Q(e)\}), f_2:(\{e:E \mid Q(e)\} \rightarrow E).$   
( $f_1$  is locl-pre-preserving on  $P$  &  $f_2$  is locl-pre-preserving on  $Q$ )  
 $\Rightarrow f_2 \circ f_1$  is locl-pre-preserving on  $P$