

fmap-L :  $\forall \{sd \ sd'\} \rightarrow L \ sd \rightarrow sd \leq_s sd' \rightarrow L \ sd'$

fmap-L (l-var  $sd^v \ sd^v \leq_s sd$ )  $sd \leq_s sd'$  = l-var  $sd^v$  ( $\leq_s$ -trans  $sd^v \leq_s sd \ sd \leq_s sd'$ )

fmap-L (l-sbrs) \_ = l-sbrs

fmap-S :  $\forall \{sd \ sd'\} \rightarrow S \ sd \rightarrow sd \leq_s sd' \rightarrow S \ sd'$

fmap-S (s-l  $l$ )  $sd \leq_s sd'$  = s-l (fmap-L  $l \ sd \leq_s sd'$ )

fmap-S (s-lit  $lit$ ) \_ = s-lit  $lit$