

Lemma. There is a *contravariant functor* $\Pi_r : \mathbf{DP} \rightarrow \mathbf{LPos}$ which maps:

1. An object (poset) of \mathbf{DP} to the same object (poset) in \mathbf{LPos} .
2. A morphism $\text{dp} \in \text{Hom}_{\mathbf{DP}}(\mathbf{F}; \mathbf{R})$ to the morphism $g \in \text{Hom}_{\mathbf{LPos}}(\mathbf{R}; \mathbf{F})$,
where:

$$g : \mathbf{R} \rightarrow \mathcal{L}\mathbf{F}$$

$$r \mapsto \{f \in \mathbf{F} \mid \text{dp}(f, r) = \top\}.$$