

Lemma. There is a *covariant functor* $\Pi_f : \mathbf{DP} \rightarrow \mathbf{UPos}$ which maps:

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

$$f : \mathbf{F} \rightarrow_{\mathbf{Pos}} \mathcal{U}\mathbf{R}$$

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