

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 $d \in \mathbf{Hom}_{\mathbf{DP}}(\mathbf{F}; \mathbf{R})$ to the morphism $h_d \in \mathbf{Hom}_{\mathbf{UPos}}(\mathbf{F}; \mathbf{R})$,
where:

$$h_d : \mathbf{F}^{\text{op}} \rightarrow_{\mathbf{Pos}} \langle \mathcal{U}\mathbf{R}, \subseteq \rangle$$

$$f^* \mapsto \{r \in \mathbf{R} \mid d(f^*, r) = \top\}.$$