

**Lemma.** There is a *functor*  $\Pi_f : \mathbf{DP} \rightarrow \mathbf{Pos}_{\mathcal{U}}$  which maps:

1. An object (poset) in  $\mathbf{DP}$  to the same object (poset) in  $\mathbf{Pos}_{\mathcal{U}}$ .
2. A morphism  $d \in \mathbf{Hom}_{\mathbf{DP}}(\mathbf{F}; \mathbf{R})$  to the morphism  $h_d \in \mathbf{Hom}_{\mathbf{Pos}_{\mathcal{U}}}(\mathbf{F}; \mathbf{R})$ ,  
where:

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

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