Lemma. Given $\mathbf{d}, \mathbf{e}, \mathbf{g}, \mathbf{h} \in \mathrm{Hom}_{\mathbf{DP}}(\mathbf{P}; \mathbf{Q})$ one has:

$$\frac{\mathbf{d} \preceq_{\mathbf{DP}} \mathbf{e} \qquad \mathbf{g} \preceq_{\mathbf{DP}} \mathbf{h}}{(\mathbf{d} \vee \mathbf{g}) \preceq_{\mathbf{DP}} (\mathbf{e} \vee \mathbf{h})}$$