Definition (Coproduct operator $\oslash$). For $h_1, h_2 : F \to \mathcal{A}R$, define

$$h_1 \oslash h_2 : F \to \mathcal{A}R,$$

$$f \mapsto \operatorname*{Min}_{\preceq_R} \left(h_1(f) \cup h_2(f) \right).$$