**Definition** (Companion and conjoint). Let **P** and **Q** be posets, and suppose that  $f: \mathbb{P} \to_{\mathbf{Pos}} \mathbb{Q}$  is a monotone map. We define its companion in **DP**, denoted  $\hat{f}: \mathbf{P} \longrightarrow \mathbf{Q}$ , and its *conjoint*, denoted  $\check{f}: \mathbf{Q} \longrightarrow \mathbf{P}$  as

 $\widehat{f}(p^*,q) := f(p) \leq_{\mathbf{0}} q$  and  $\widecheck{f}(q^*,p) := q \leq_{\mathbf{P}} f(p)$ .