Definition (Boolean profunctors). Given two posets **A** and **B**, a *boolean profunctor* from **A** to **B** is a monotone function of the form

$$F : \mathbf{A}^{\mathrm{op}} \times \mathbf{B} \to_{\mathbf{Pos}} \mathbf{Bool}.$$

This is also written as

$$F : \mathbf{A} \nrightarrow \mathbf{B}.$$