Definition (Intersection of design problems). Given design problems $f: A \rightarrow B$ and $g: A \rightarrow B$, their *intersection* is denoted $(f \land g): A \rightarrow B$, defined by:

$$(f \land g) : A^{op} \times {}^{\mathbf{B}} \rightarrow_{\mathbf{Pos}} \mathbf{Bool}$$

 $\langle a^*,b\rangle\mapsto f(a^*,b)\wedge g(a^*,b),$ and represented as in \ref{a} .