Lemma. For any $\mathbf{P}, \mathbf{Q} \in \mathrm{Ob}_{\mathbf{DP}}$, the design problem $\mathrm{br}_{\mathbf{P},\mathbf{Q}} : \mathbf{P} \times \mathbf{Q} \nrightarrow \mathbf{Q} \times \mathbf{P}$ given by

$$\mathrm{br}_{\mathbf{P},\mathbf{Q}}(\langle a_1, b_1 \rangle^*, \langle b_2, a_2 \rangle) := (a_1 \preceq_{\mathbf{P}} a_2) \wedge (b_1 \preceq_{\mathbf{Q}} b_2)$$

constitutes the braiding operation for a symmetric monoidal structure on $\langle \mathbf{DP}, \otimes, \{\bullet\} \rangle$. In other words, $\langle \mathbf{DP}, \otimes, \{\bullet\}, \mathrm{br} \rangle$ is a symmetric monoidal category.