

**Definition** (Profunctors). Given two categories **C** and **D**, a *profunctor* from **C** to **D** is a functor of the form

$$F : \mathbf{C}^{\mathrm{op}} \times \mathbf{D} \rightarrow_{\mathbf{Cat}} \mathbf{Set}.$$

This is also written as

$$F : \mathbf{C} \multimap \mathbf{D}.$$