Definition (Full and faithful functors). A functor $F: \mathbb{C} \to \mathbb{D}$ is *full* (respectively *faithful*) if for each pair of objects $X, Y \in \mathbb{C}$, the function

$$F: \operatorname{Hom}_{\mathbf{C}}(X;Y) \to \operatorname{Hom}_{\mathbf{D}}(F(X);F(Y))$$
 is surjective (respectively injective).