**Definition** (Semi-functor)
Given two semi-categories $\mathbf{C}$ and $\mathbf{D}$, a *semi-functor* $F : \mathbf{C} \to \mathbf{D}$ from $\mathbf{C}$ to $\mathbf{D}$ is defined by the following constituents and conditions.

Constituents:

i) A map

$$F_{\cdot} : \mathrm{Ob}_{\mathbf{C}} \to \mathrm{Ob}_{\mathbf{D}}.$$

ii) For every pair of objects $X, Y \in \mathrm{Ob}_{\mathbf{C}}$ a map

$$F_{\to} : \mathrm{Hom}_{\mathbf{C}}(X;Y) \to \mathrm{Hom}_{\mathbf{D}}(F_{\cdot}(X);F_{\cdot}(Y)).$$

Conditions:

1. It holds that the functor application to morphisms commutes with category composition:

$$\frac{f : X \to_{\mathbf{C}} Y \quad g : Y \to_{\mathbf{C}} Z}{F_{\to}(f \fatsemi g) = F_{\to}(f) \fatsemi F_{\to}(g)}.$$