

**Definition** (Twisted arrow category). Given a category  $\mathbf{C}$ , we denote its *twisted arrow category* by  $\text{Tw}(\mathbf{C})$ . This is a category which is composed of:

1. *Objects*: Arrows (morphisms) in  $\mathbf{C}$ .
2. *Morphisms*: A morphism between two arrows  $f : X \rightarrow Y, g : Z \rightarrow W$  is given by the pair of arrows  $\langle h, i \rangle$  such that the following diagram commutes:

