monoidal category. Let $X \in \mathrm{Ob}_{\mathbf{C}}$ be dualizable and let $f \in \mathrm{Hom}(X, X)$. The *trace* of f is the morphism $\mathrm{Tr}(f) \in \mathrm{Hom}(\mathbf{1}, \mathbf{1})$ defined by

Definition (Trace of an endomorphism). Let $\langle \mathbf{C}, \boldsymbol{\otimes}_{\mathbf{C}}, \mathbf{1}_{\mathbf{C}}, \mathbf{br} \rangle$ be a symmetric

$$\mathbf{1} \xrightarrow{\eta_X} X \otimes X^{\vee} \xrightarrow{f \otimes \operatorname{id}_{X^{\vee}}} X \otimes X^{\vee} \xrightarrow{\operatorname{br}} X^{\vee} \otimes X \xrightarrow{\epsilon_X} \mathbf{1}$$