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

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