

$$\begin{array}{l} \textbf{.1} A,A',S,S' \textit{Optic} \int^{M:\mathbb{C}} \mathbb{C}(S,M\otimes A)\times \mathbb{C}(M\otimes A',S') \textit{Profunctor} \\ \textbf{.2} \Phi((A,A'),(S,S')) = \int^{M:\mathbb{C}} \mathbb{C}(S,M\otimes A)\times \mathbb{C}(M\otimes A',S') \textit{Hom} A,S'A',S \end{array}$$

$$\mathbb{A},\mathbb{B}(\mathbb{A}\times\mathbb{B})^{op}\cong \mathbb{A}^{op}\times\mathbb{B}^{op}$$

$$Profunctor$$

$$\textbf{.3} \text{ ()} M:\mathbb{C}\rightarrow \mathbb{C}(M,\eta,\mu)$$

$$\eta:Id_C\Rightarrow M$$

$$\mu:M\circ M\Rightarrow M$$

$$\mathrm{Profunctor}$$

$$\textbf{.4} \text{ ()} \textit{Profunctor} \, M:\mathbb{C}\nrightarrow \mathbb{C}(M,\eta,\mu)$$

$$\mu:M\Diamond M\Rightarrow M$$

$$\eta:\mathbb{C}(-,-)\Rightarrow M$$

$$\begin{array}{l} \textbf{.5} \Phi:\mathbb{C}^{\mathfrak{op}}\times\mathbb{C}\nrightarrow \mathbb{C}^{\mathfrak{op}}\times\mathbb{C} \\ \textbf{.6} \end{array}$$

$$\Phi\Diamond\Phi((A,A'),(T,T'))\langle l,r,l',r'\rangle\langle N\otimes l,N\otimes r,l',r'\rangle$$

$$S.S'$$