Monads

$$M : \mathbf{1} \to [\mathscr{C}, \mathscr{C}]$$

$$\eta : \mathtt{Id} \to M$$

$$\mu : M \circ M \to M$$

Monoid-Graded Monads

$$(E,0,+) \qquad \eta : \text{Id} \to M_0$$

$$M : E \to [\mathscr{C}, \mathscr{C}] \quad \mu_{e_1,e_2} : M_{e_1} \circ M_{e_2} \to M_{e_1+e_2}$$