$$F(M \otimes^{\mathcal{M}} C, N) \to F(M, C \otimes^{\mathcal{N}} N)$$

$$\downarrow \qquad \qquad \downarrow$$

$$G(M \otimes^{\mathcal{M}} C, N) \to G(M, C \otimes^{\mathcal{N}} N)$$