

$$\begin{array}{ccc}
 \mathbf{Sets}_{[\bullet]}^{\mathbb{C}^{\text{op}}} \times \mathbb{C}[-] & \begin{array}{c} \xrightarrow{\text{Hom}(y(-), \bullet)} \\ \updownarrow \eta_{\bullet, -} \\ \xrightarrow{\bullet(-)} \end{array} & \mathbf{Sets}
 \end{array}$$

$$\begin{array}{ccccc}
 (F, C) & & \text{Hom}(y(C), F) & \xleftrightarrow{\eta_{F, C}} & F(C) \\
 \downarrow (\theta, h) & & \downarrow \text{Hom}(y(h), \theta) & & \downarrow \theta(h) \\
 (G, D) & & \text{Hom}(y(D), G) & \xleftrightarrow{\eta_{D, G}} & G(D)
 \end{array}$$