

$$\begin{array}{ccc}
 S \subseteq \text{Objects} & \xrightarrow{r_u} & [0, 1] \\
 \downarrow d & & \uparrow @ \\
 \prod_{i=1}^n D_{A_i} & \xrightarrow{f_i, i=1, \dots, n} & [0, 1]^n
 \end{array}$$