$$\text{\# of all salient interactions} = \sum_{S \subseteq N : |S| = m} 1\left(\left|I_S^{AND,1}\right| > \xi\right) + 1\left(\left|I_S^{OR,1}\right| > \xi\right)$$

$$\text{\# of generalized interactions} = \sum_{S \subseteq N : |S| = m} 1\left(\left|I_S^{AND,1}\right| > \xi \text{ and } \left|I_S^{AND,2}\right| > \xi\right) + 1\left(\left|I_S^{OR,1}\right| > \xi \text{ and } \left|I_S^{OR,2}\right| > \xi\right)$$

	$R^{(1)}$	$R^{(2)}$	$R^{(3)}$	$R^{(4)}$	$R^{(5)}$	$R^{(6)}$	$R^{(7)}$	$R^{(8)}$	$R^{(9)}$	$R^{(10)}$
average	1	0.54	0.44	0.23	0.42	0.33	0.25	0	0	0

Figure 1. Generalization rate of interactions of different orders. We put the same shape pattern S into two different contextual board states. We reports the average generalization rate $R^{(m)}$ of m-order interactions, which is averaged over different board states. $R^{(m)} = E\left[\frac{\text{\# of generalized interactions}}{\text{\# of all salient interactions}}\right]$. $\left(I_S^{AND,1}, I_S^{OR,1}\right)$ and $\left(I_S^{AND,2}, I_S^{OR,2}\right)$ denote the AND-OR interaction extracted under the first context and those under the second context, respectively.