

$$\mathbb{E} A_1 \rightarrow B_1 [a_1, Q_1] \mathbb{E} A_2 \rightarrow B_2 [a_2, Q_2] \hat{=} \mathbb{E} A_1 \cup A_2 \rightarrow B_1 \cup B_2 [a_1, a_2, Q_1 + Q_2]$$