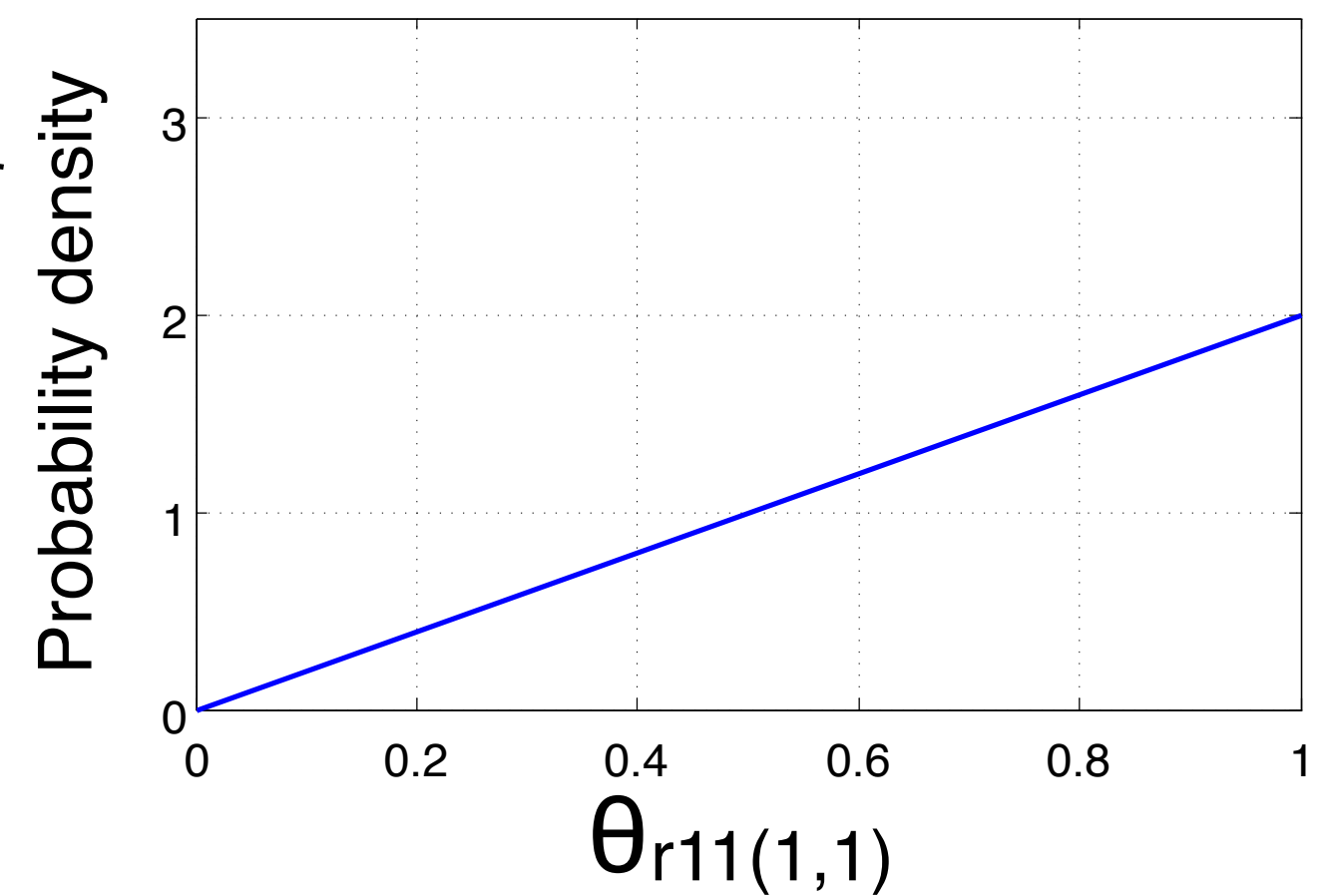
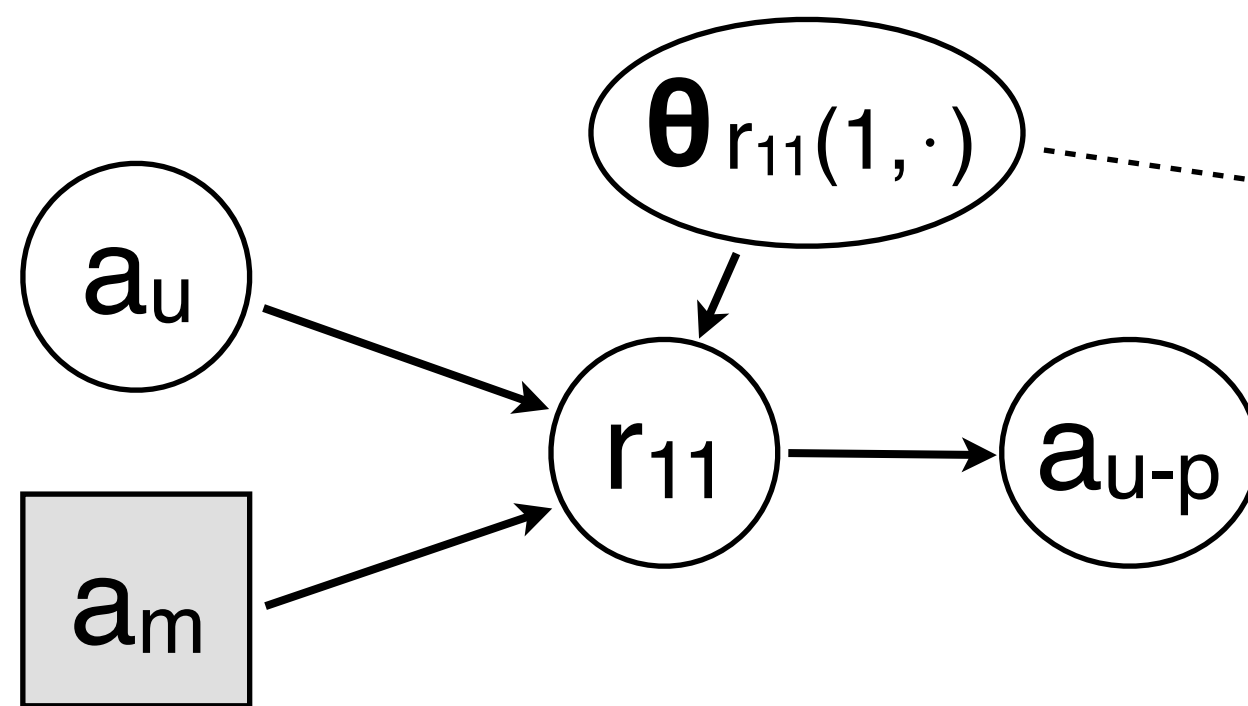


$$P(a_u = \text{Request}(\text{Forward})) = 0.6$$

$$P(a_u = \text{Request}(\text{Backward})) = 0.4$$

$a_m = \text{AskRepeat}$

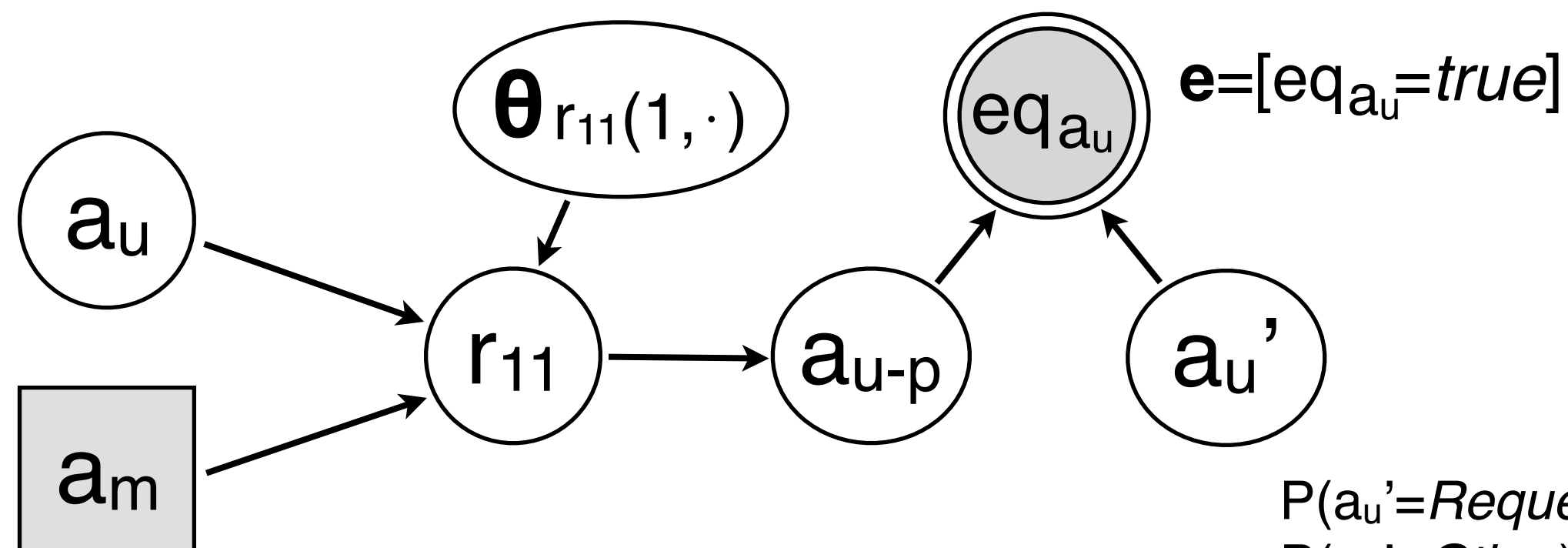


Step 1: before observation (prediction)

$$P(a_u = \text{Request}(\text{Forward})) = 0.6$$

$$P(a_u = \text{Request}(\text{Backward})) = 0.4$$

$a_m = \text{AskRepeat}$



$$P(a_u' = \text{Request}(\text{Forward})) = 0.7$$

$$P(a_u' = \text{Other}) = 0.2$$

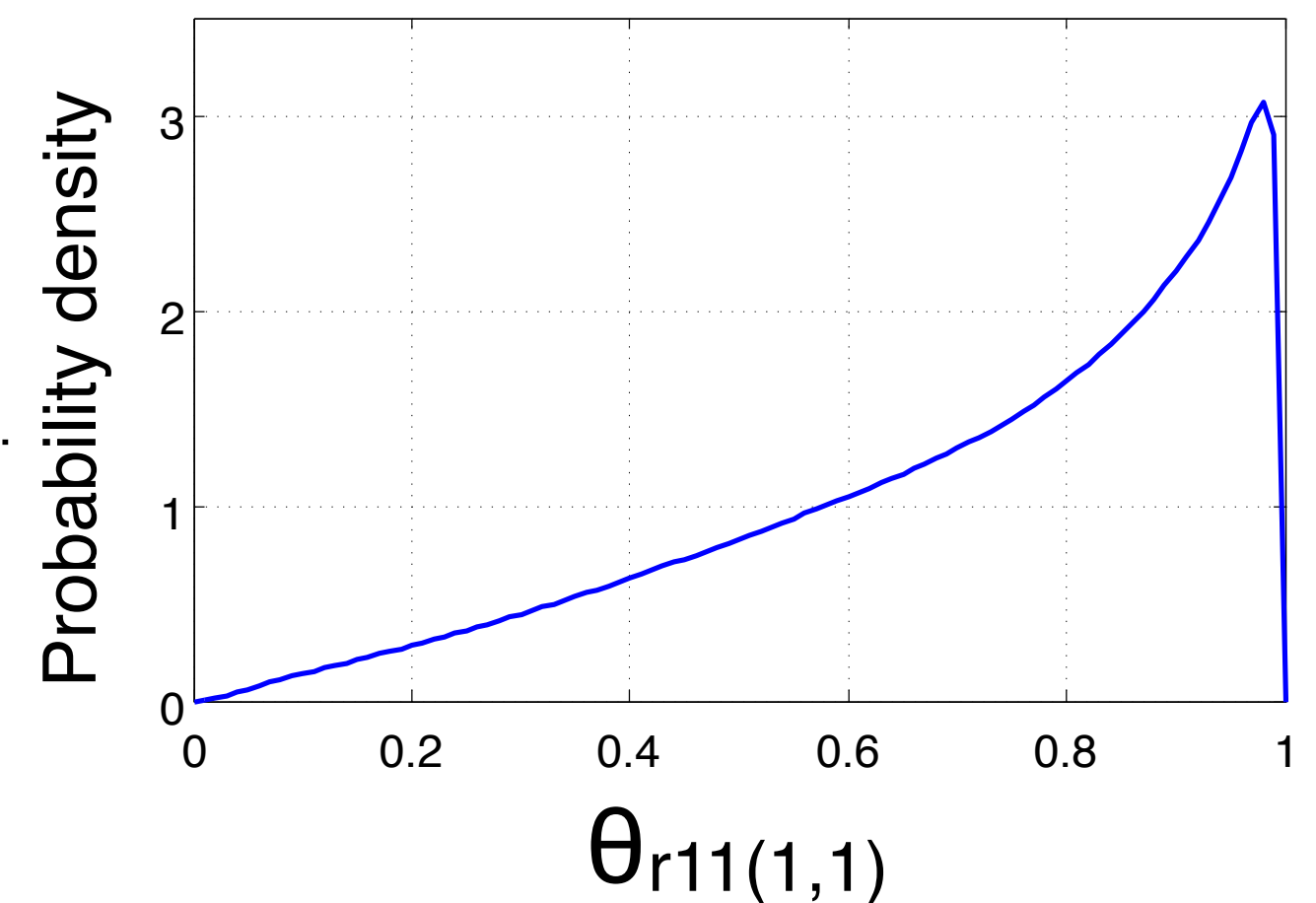
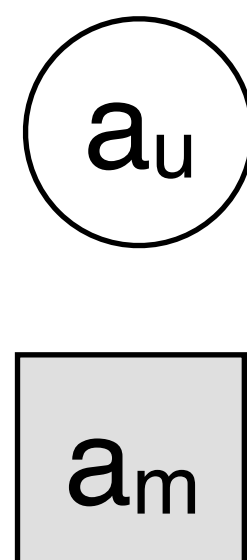
$$P(a_u' = \text{Request}(\text{Backward})) = 0.2$$

Step 2: upon observation of new user input

$$P(a_u = \text{Request}(\text{Forward})) = 0.9$$

$$P(a_u = \text{Request}(\text{Backward})) = 0.1$$

$a_m = \text{Move}(\text{Forward})$



Step 3: after pruning and integration of evidence