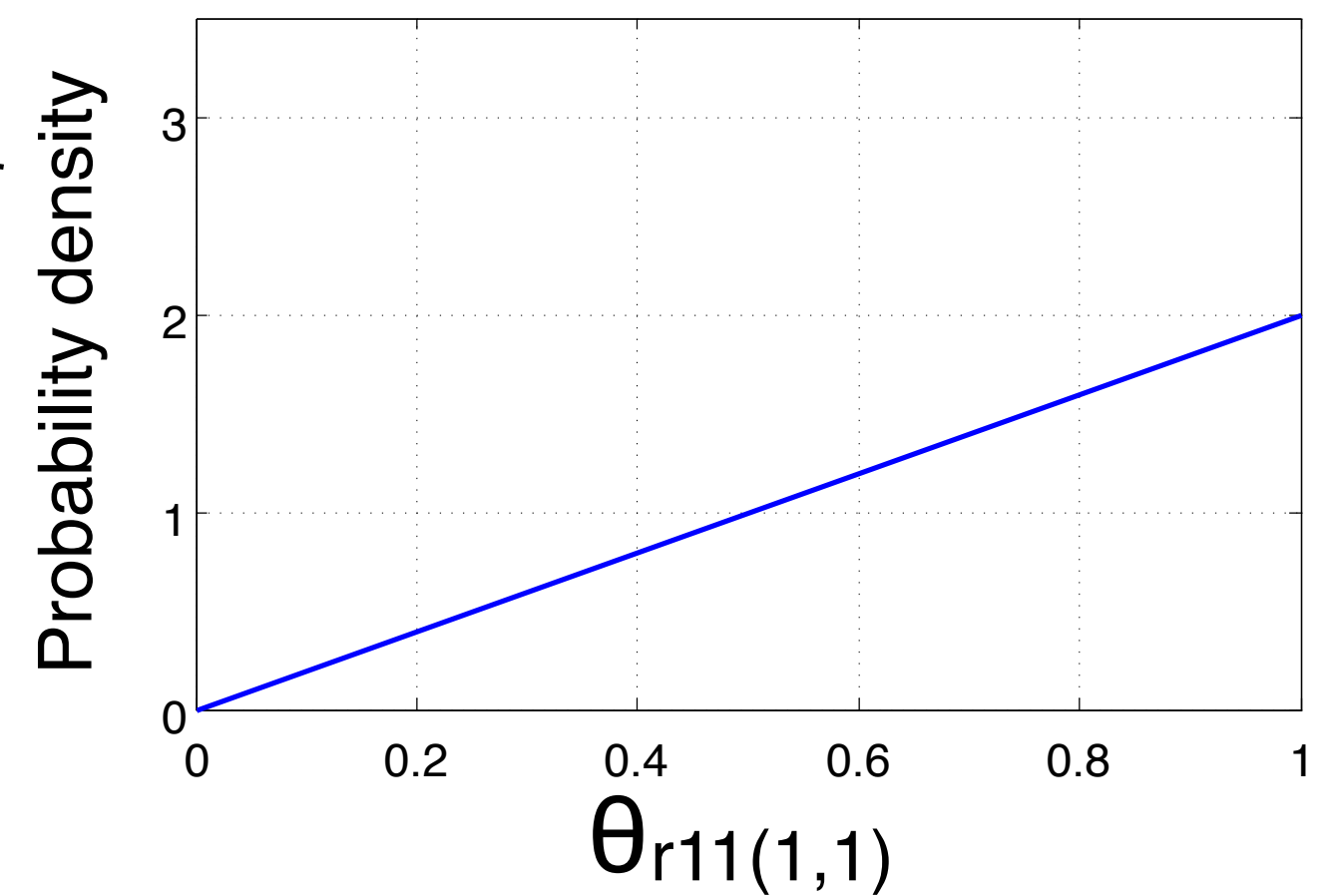
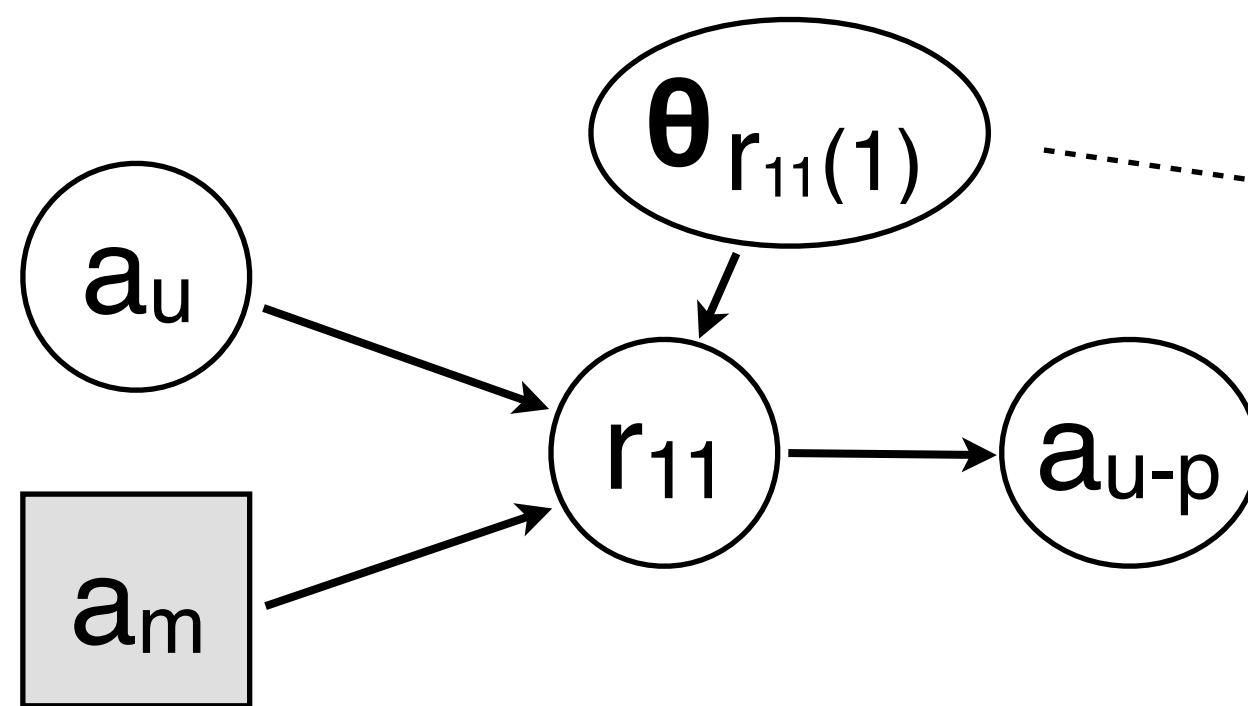


$$P(a_u = \text{Request(Forward)}) = 0.6$$

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

$a_m = \text{AskRepeat}$

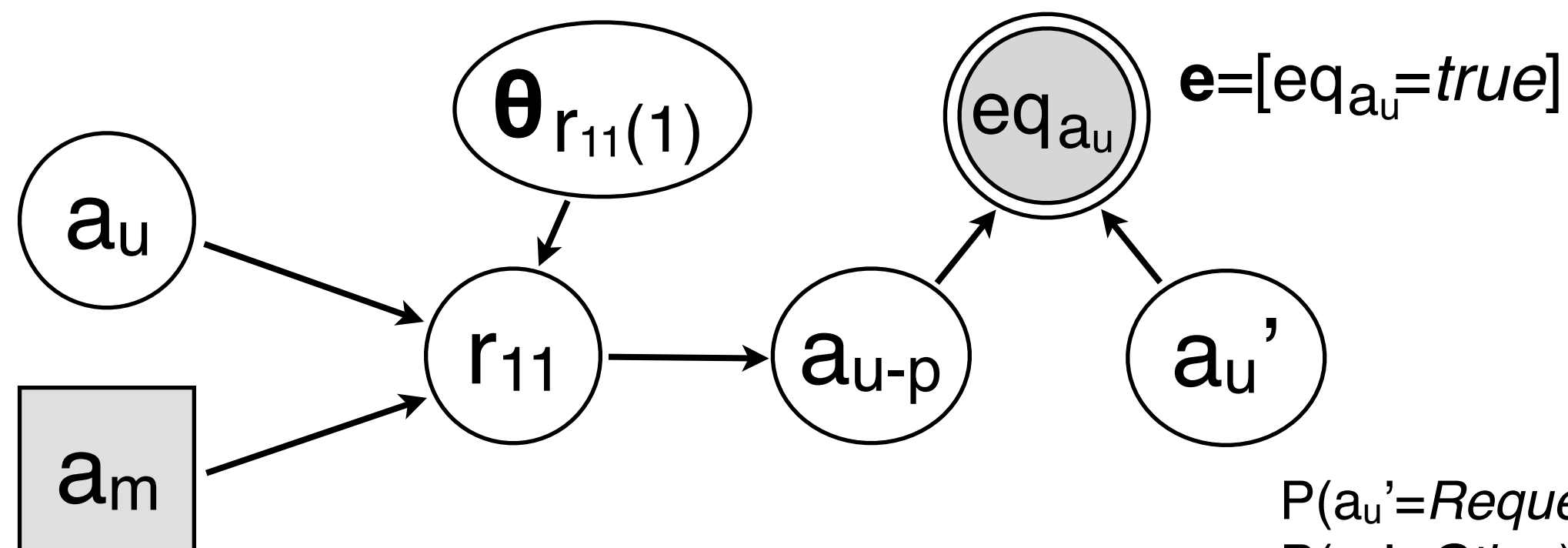


**Step 1:** before observation (prediction)

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

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

$a_m = \text{AskRepeat}$



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

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

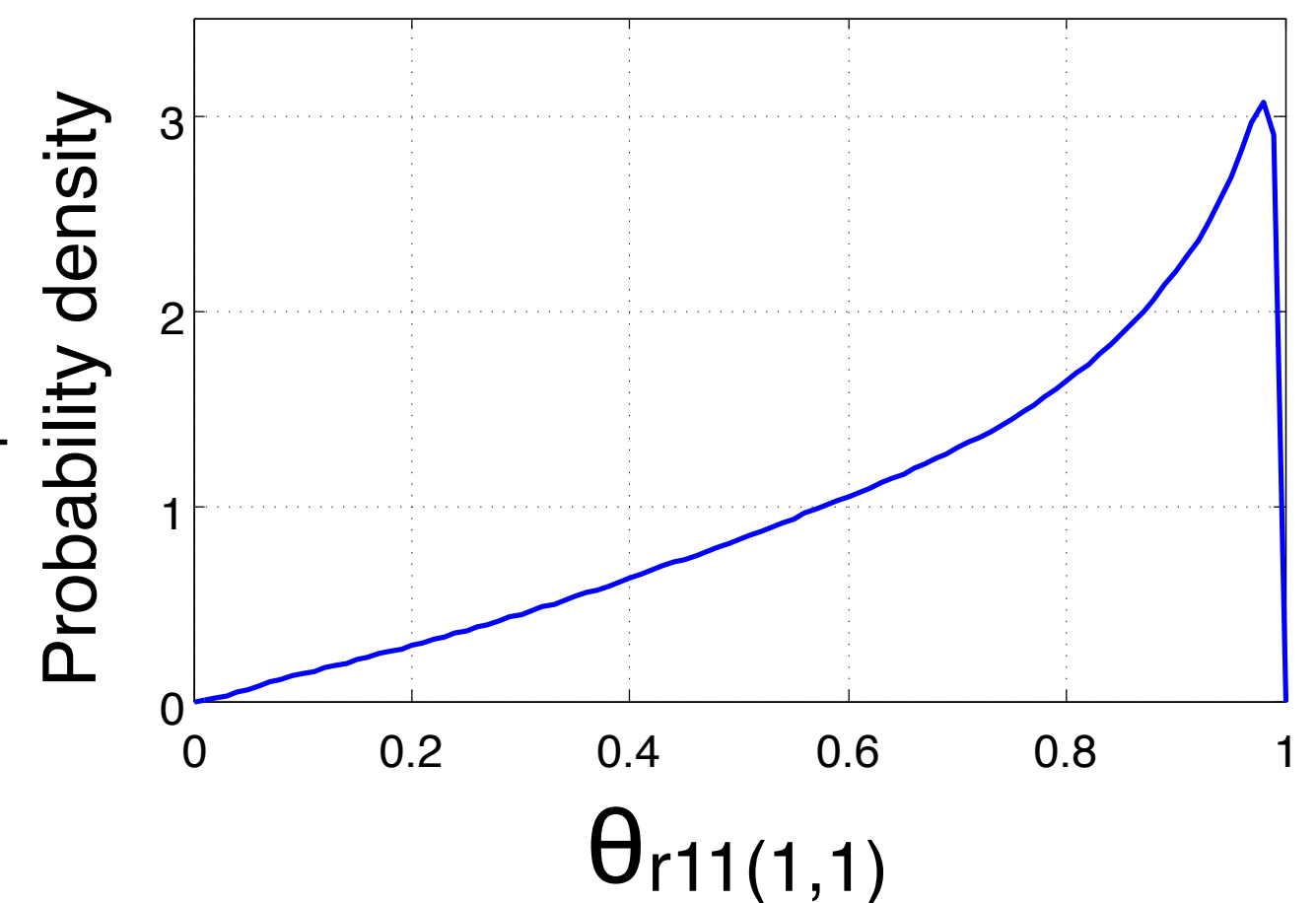
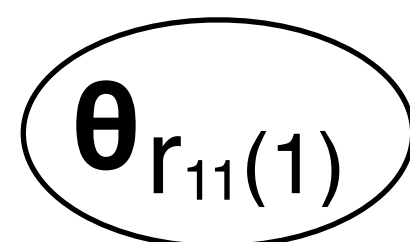
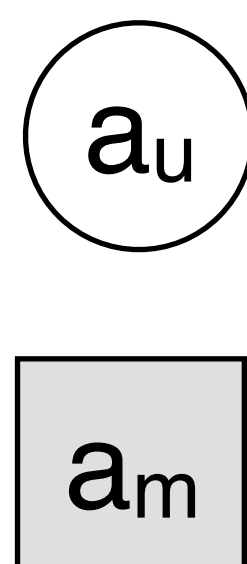
$$P(a_u' = \text{Request(Backward)}) = 0.2$$

**Step 2:** upon observation of new user input

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

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

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



**Step 3:** after pruning and integration of evidence