


## Figure Ideas:

- ✓ 1. Basic graph + valuation (relational model)
  - Illustrate  $\square$ ; as bounded search → show current world  $w$
  - Make vertical, so  $R$  goes "above"  $w$
- ✓ 2. Plausibility model
  - No differe~~nt~~, except now illustrate  $\square$ ; as "best" according to  $R$  (think of  $R$  now as a partial order)
- ✓ 3. Neighborhood model
  - illustrate  $\square$ ; as " $\varphi$  holds in the neighborhood of  $w$ "
- ✓ 4. Standard Neural Network
  - 

make it weighted, show example of classification + animate it!  
(Show the diffusion going through)
  - ↓

highlight the sets that "exceed" a threshold (saturation)
  - ↓

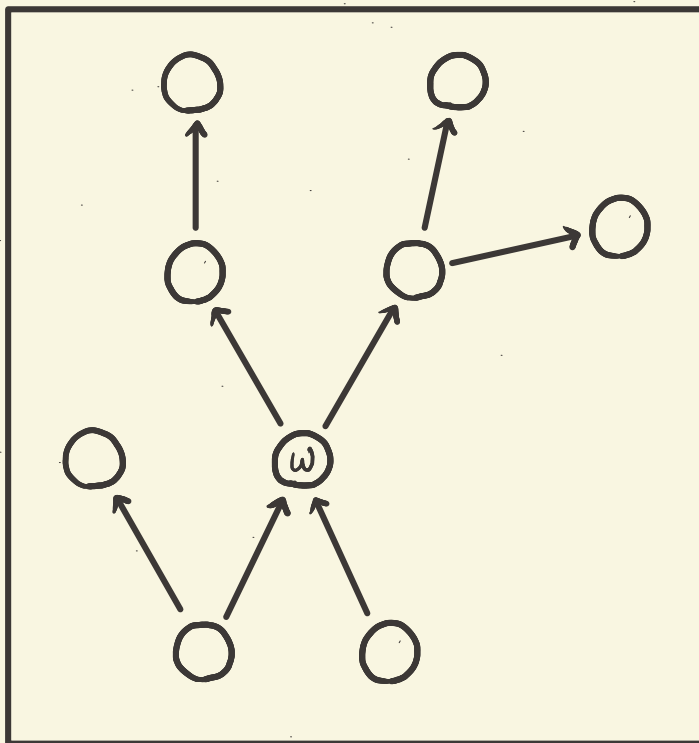
show the totally binary net, without weights.
- ✓ 5. Two cyclic nets, one which terminates + one which doesn't.
- ✓ 6. Animate diffusion in a social network (use Sonja's example, maybe adapted to be similar to NN's.)
- ✓ (No need to animate!) 7. To show  $\text{Sat}(Rel) \subset \text{Sat}(Net)$ , give a net satisfying  $\neg(\square; (\varphi \wedge \psi) \rightarrow (\square; \varphi \wedge \square; \psi))$  (nonmonotonic)
- I think I won't...

(No need to animate!) 8. To show  $\text{Sat}(Net) \subset \text{Sat}(Nbhd)$ , give a Nbhd model satisfying NOT cumulative!
- ✓ 9. Illustrate the weighted Hannes construction, + illustrate  $w \in F_i(S)$  iff  $w \in S$  on  $\geq 1$ , but not all preds  $u$  of  $w$  are in  $S$ .
  - ↙

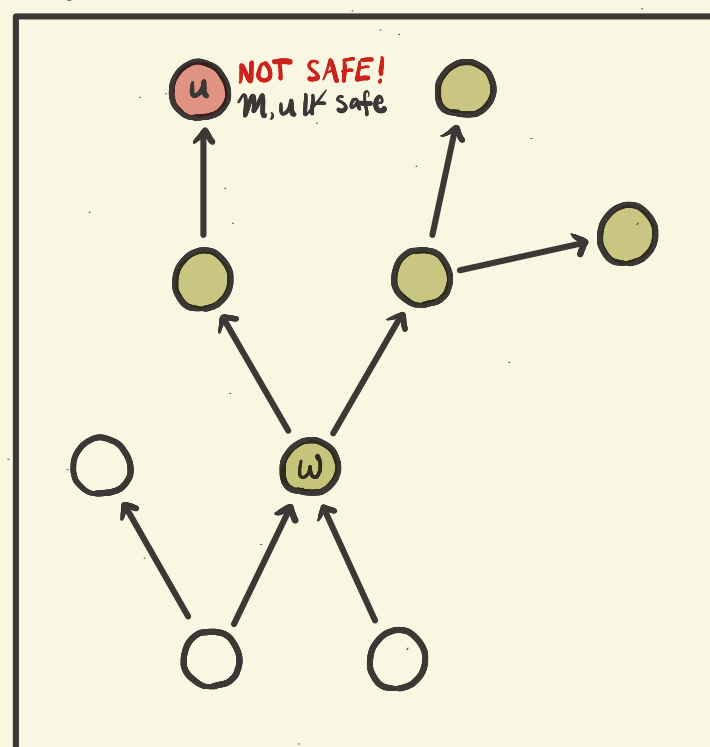
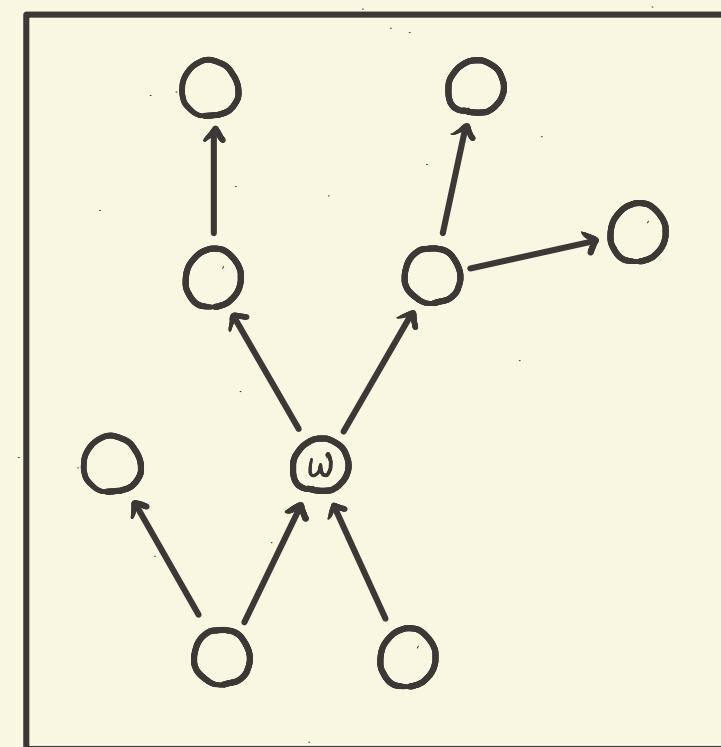
Case where at least 1, show activation animation

↓

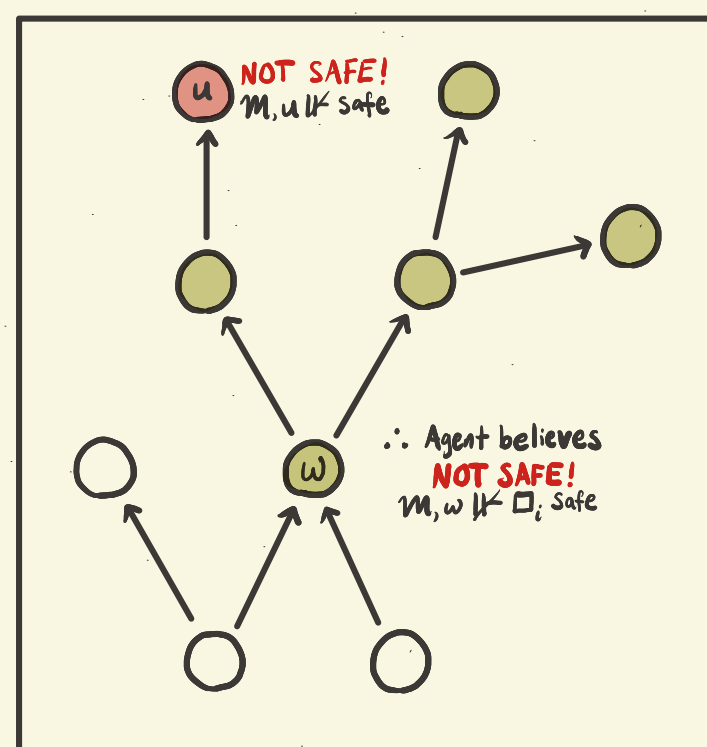
Case where all, show activation anim.



RELATIONAL SEMANTICS ( $\Box_i$  has "believes" reading)

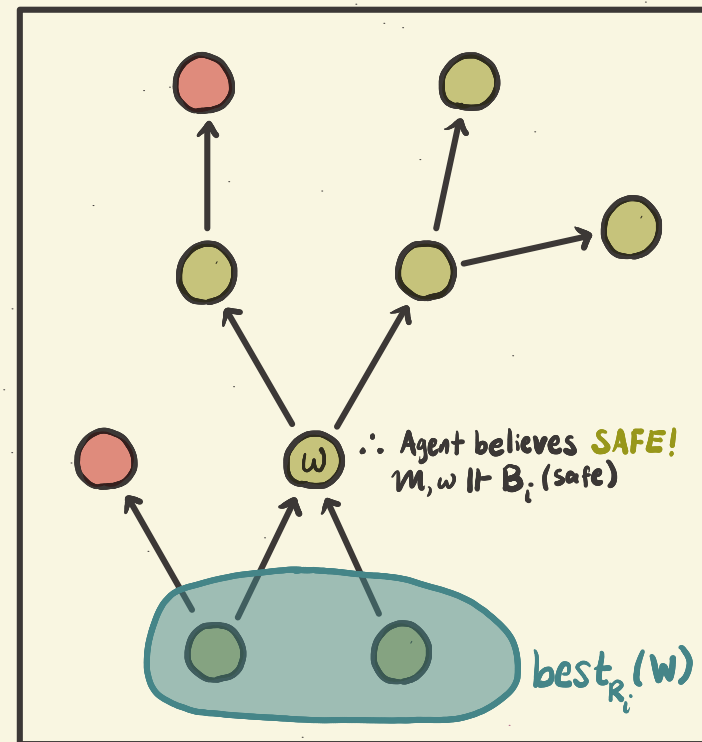
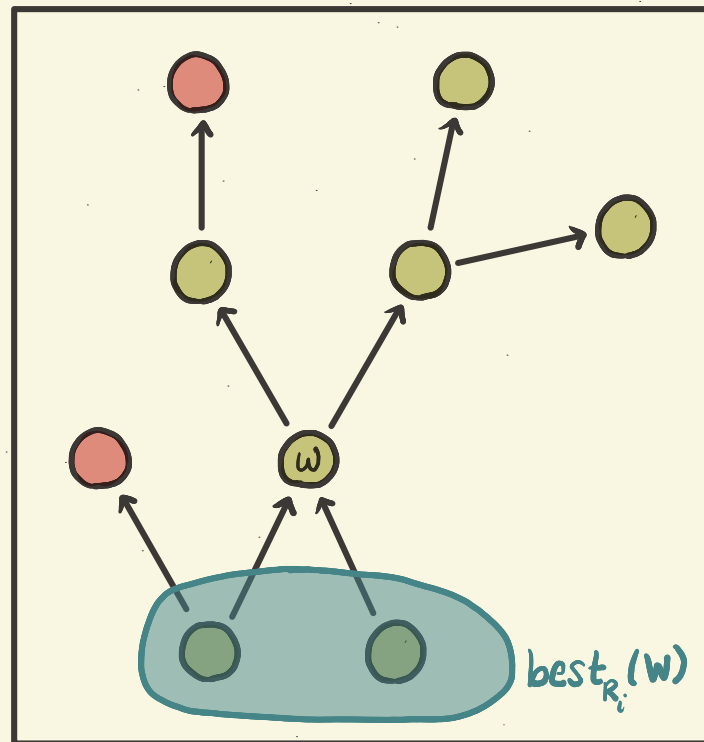
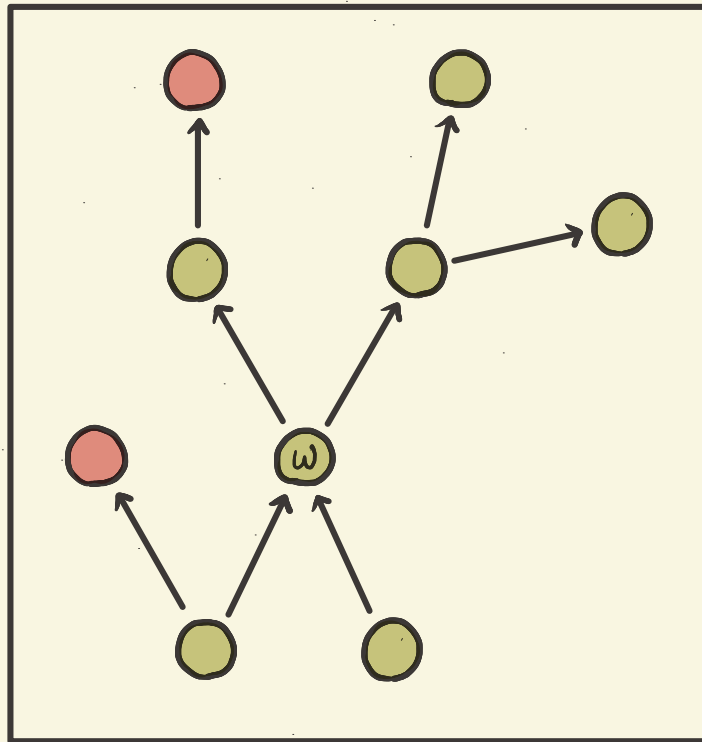


NOT SAFE!  
 $\mathcal{M}, u \not\models \text{safe}$   
 "False" Morel

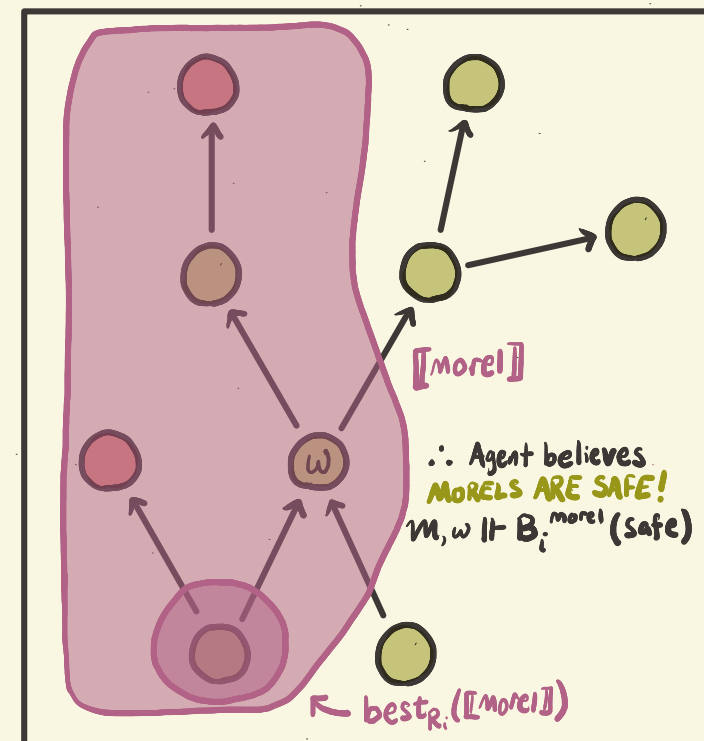
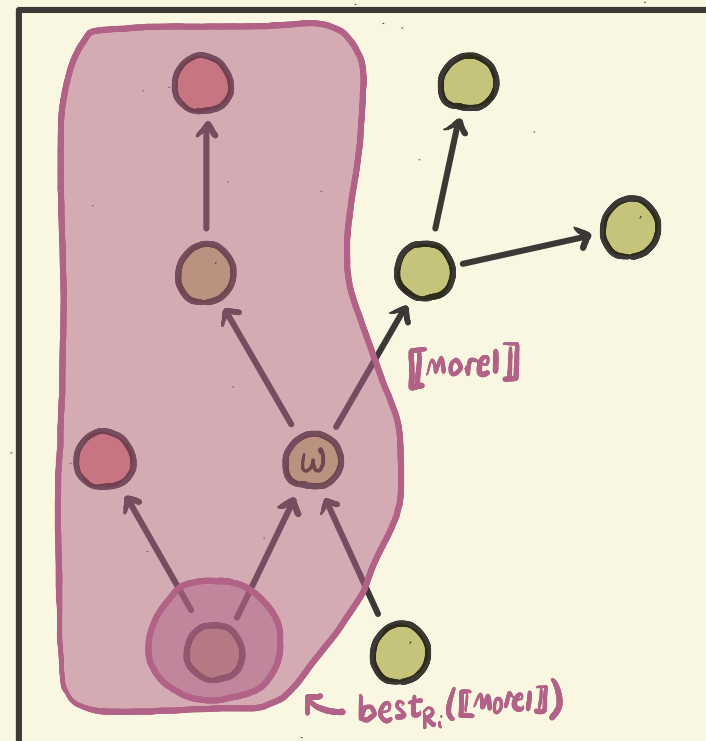
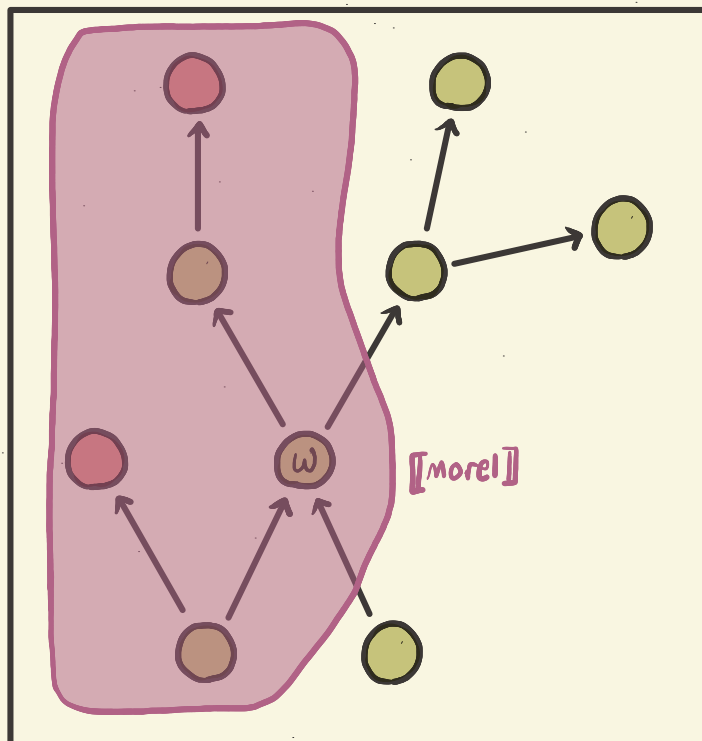


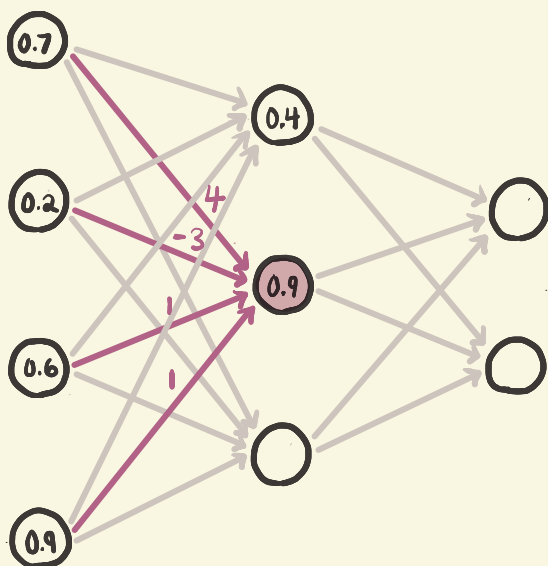
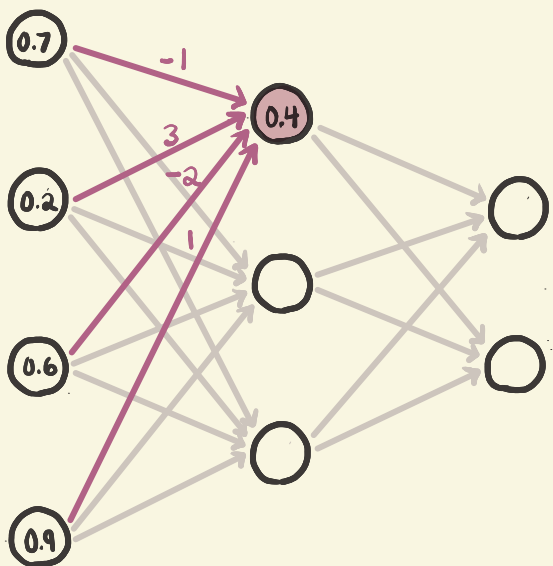
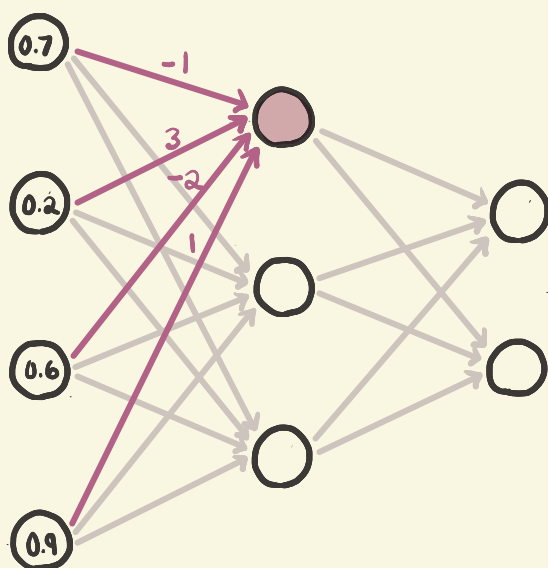
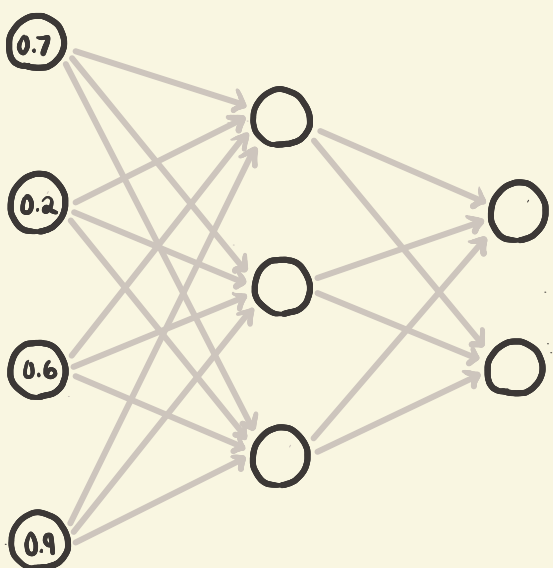
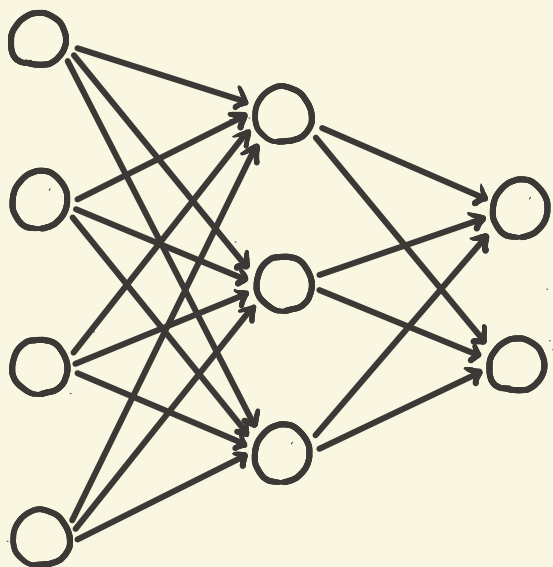
$\therefore$  Agent believes  
 NOT SAFE!  
 $\mathcal{M}, w \not\models \Box_i \text{ Safe}$

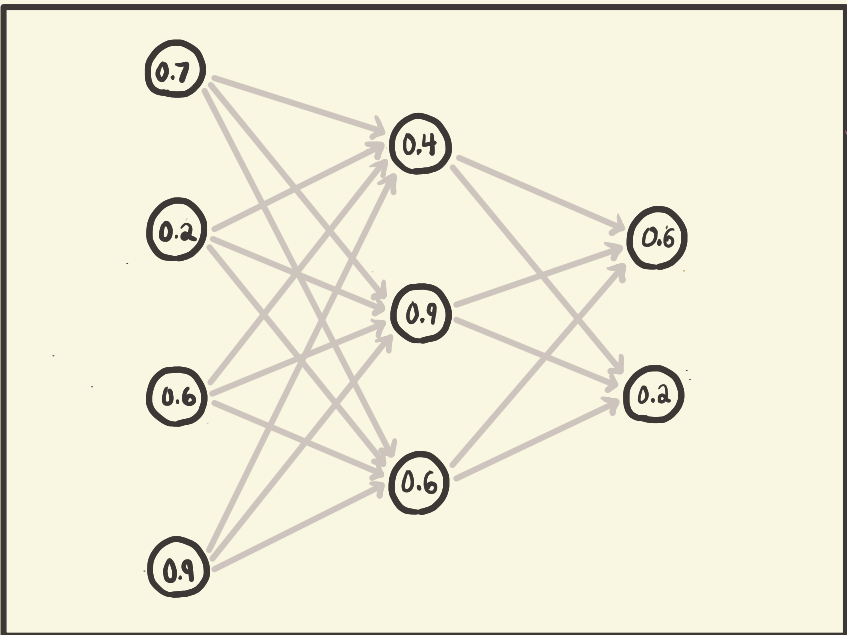
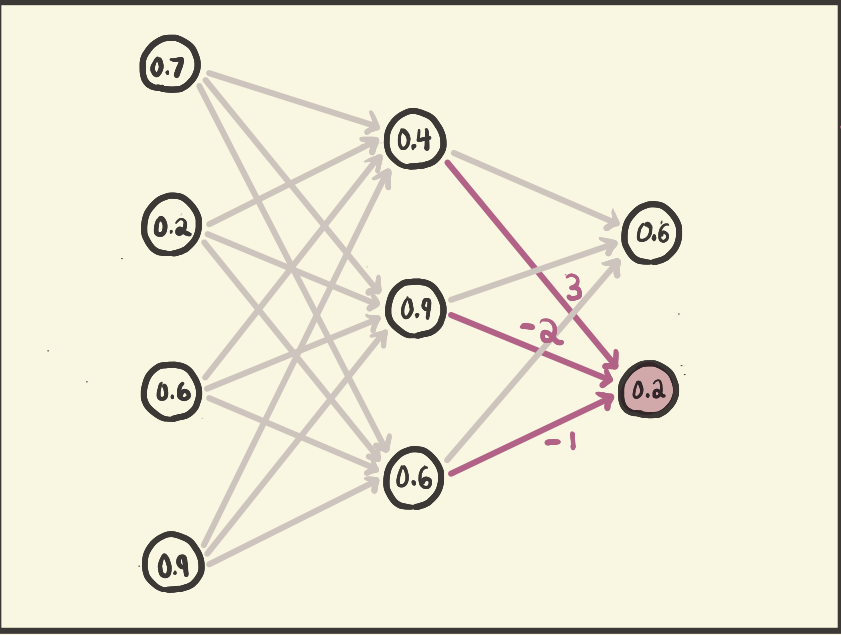
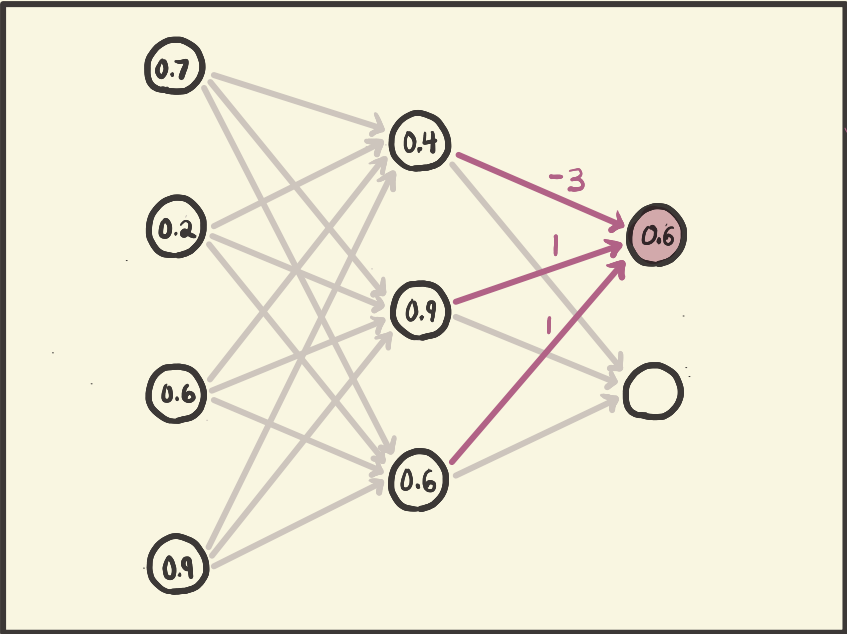
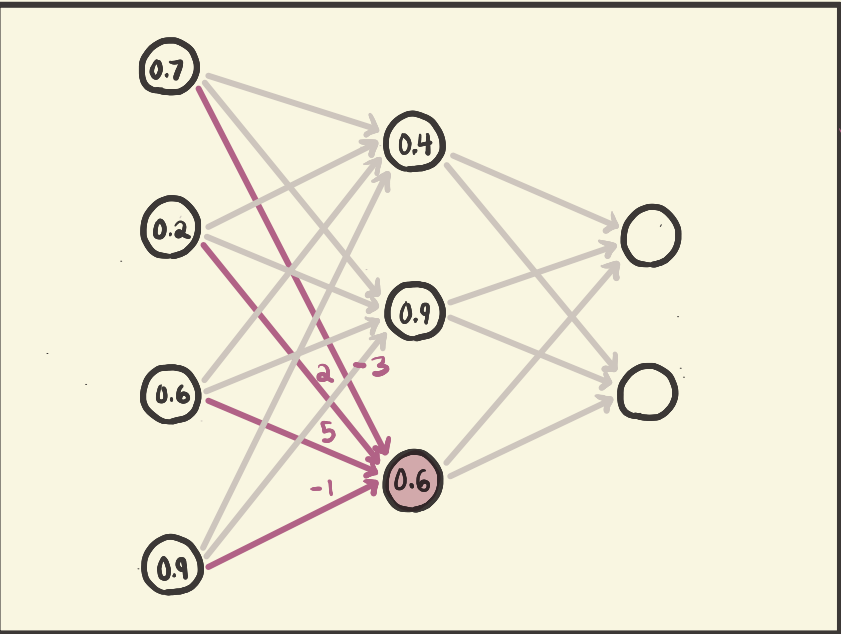
PLAUSIBILITY SEMANTICS ( $\Box_i$  has "typicality" reading, but we can express belief  $B_i$  + cond belief  $B_i$ )



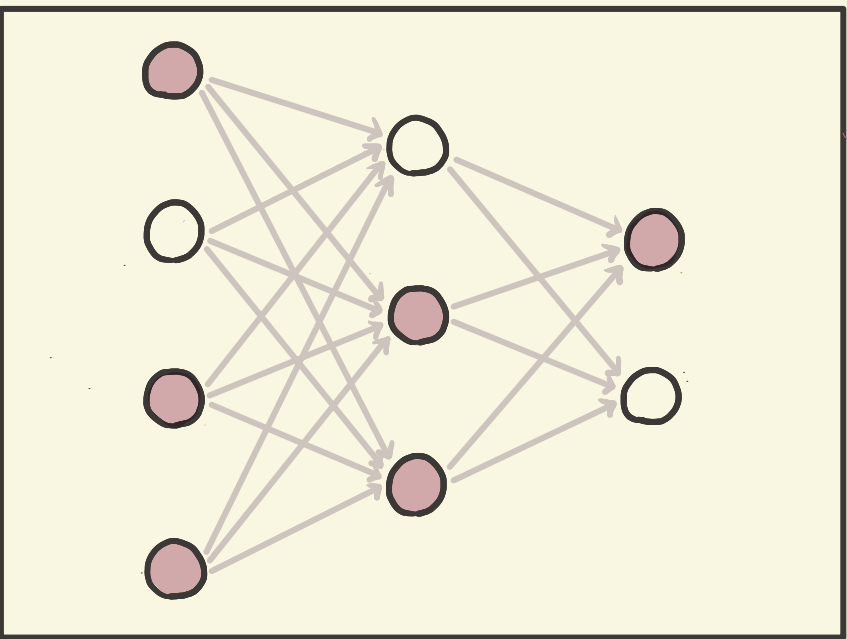
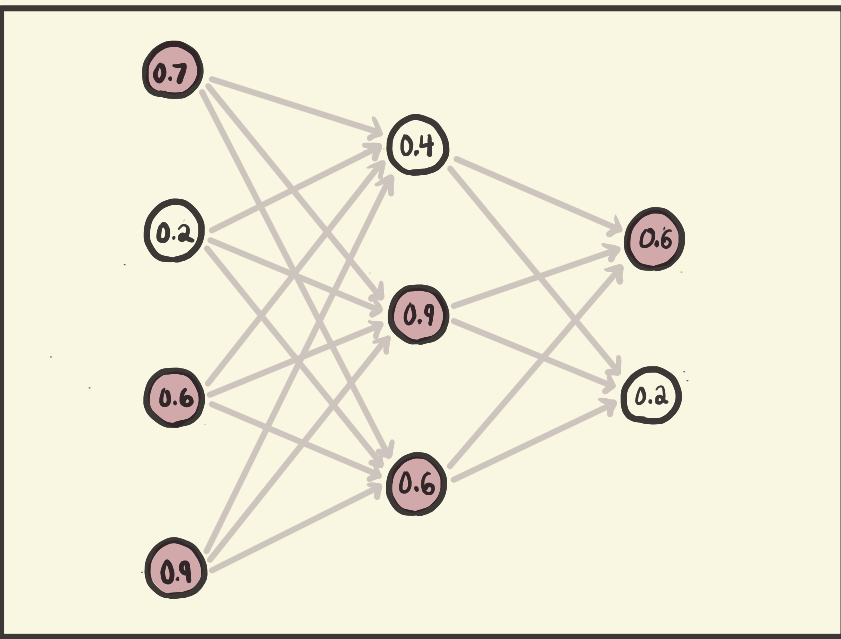
Conditional Belief:

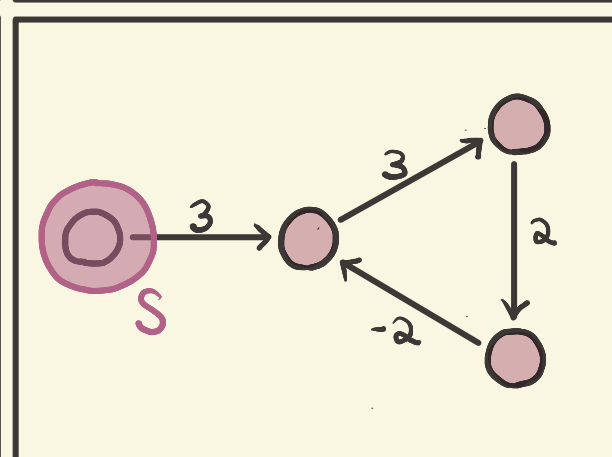
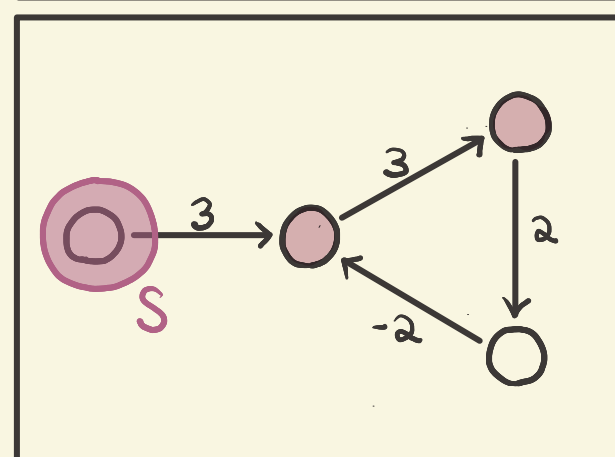
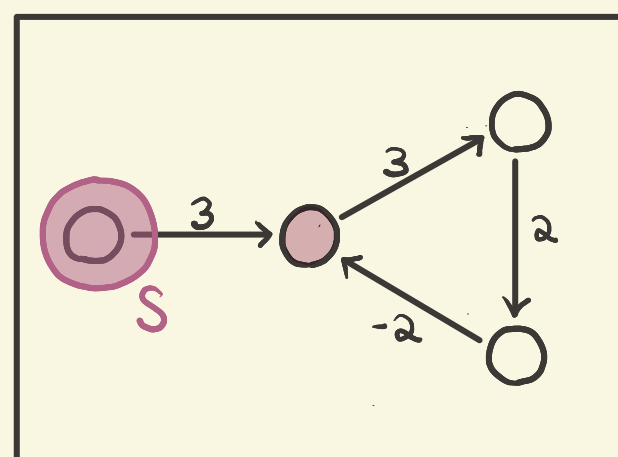
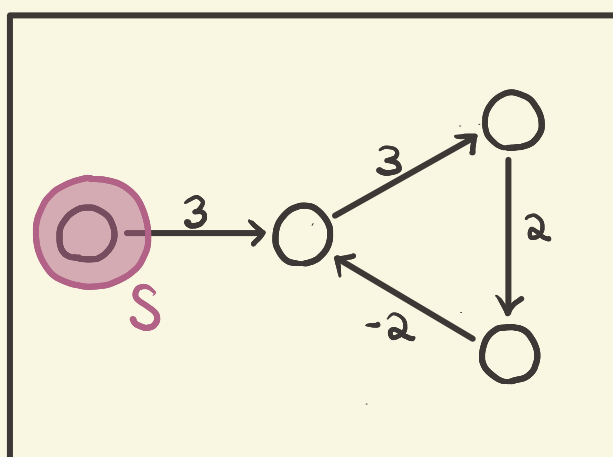
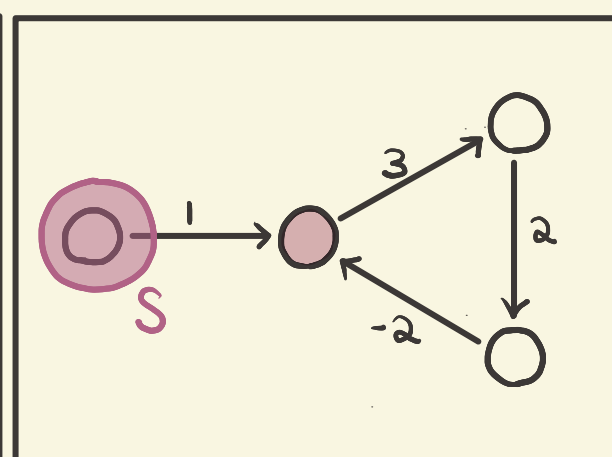
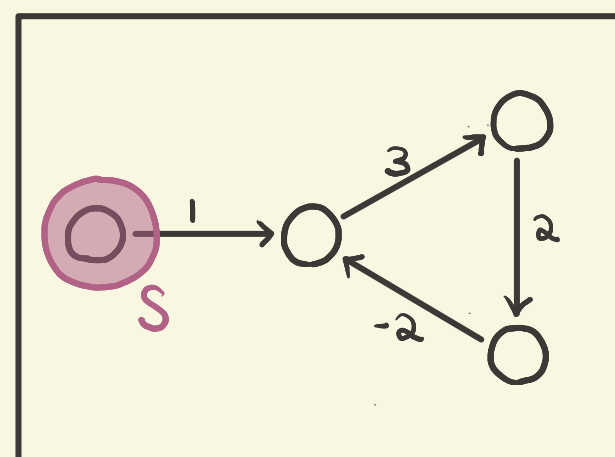
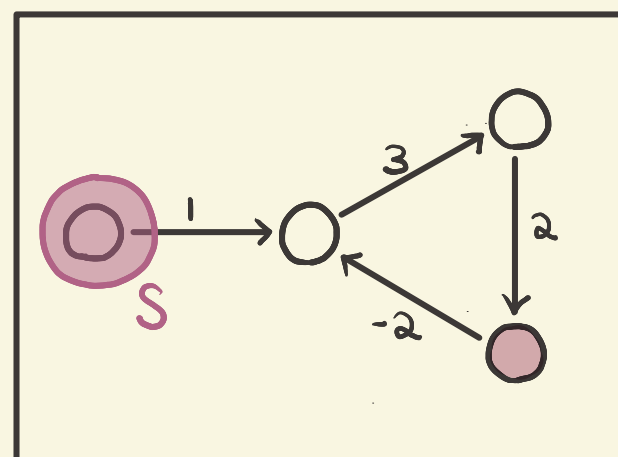
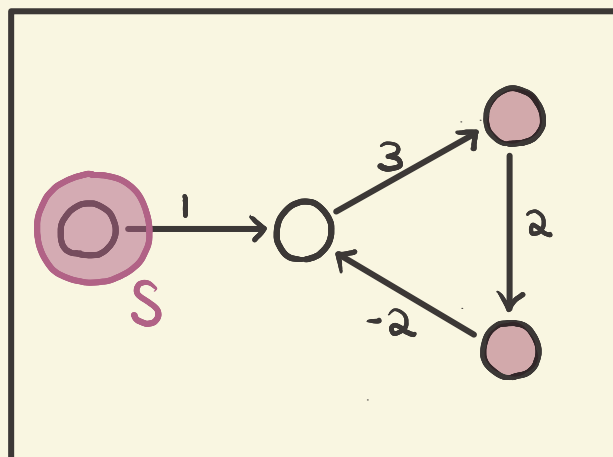
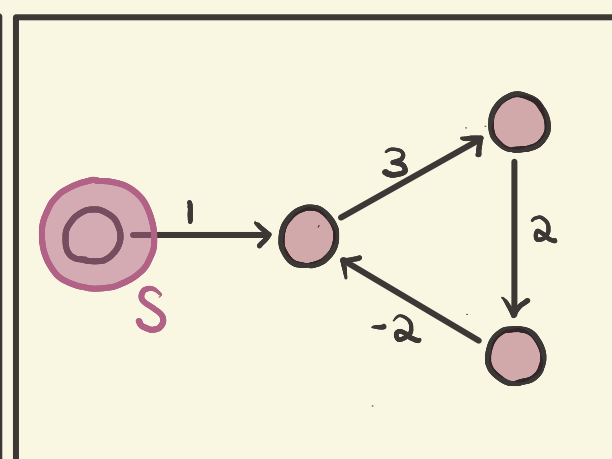
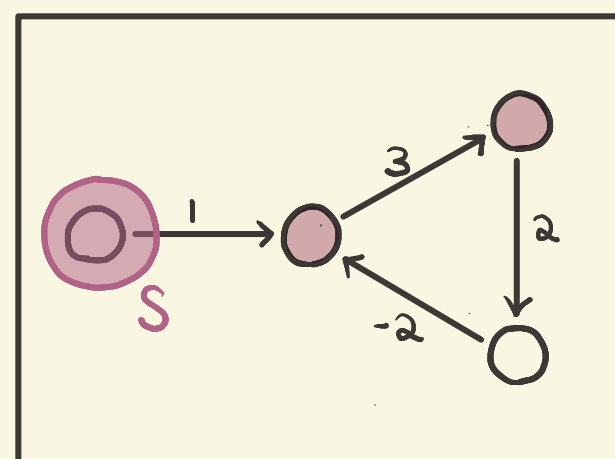
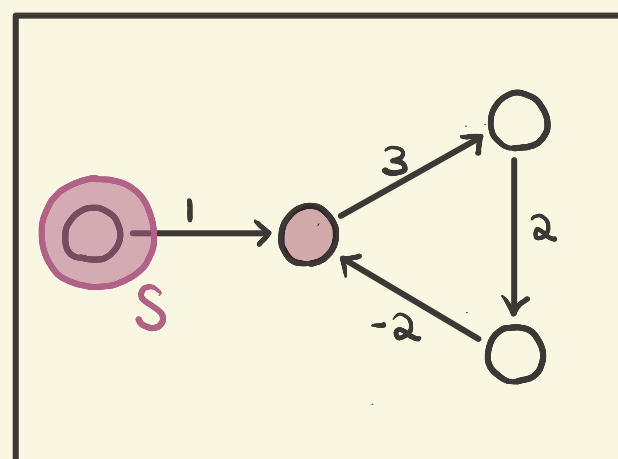
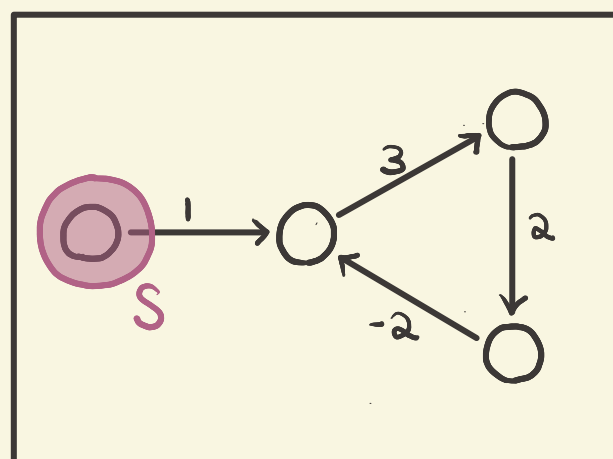
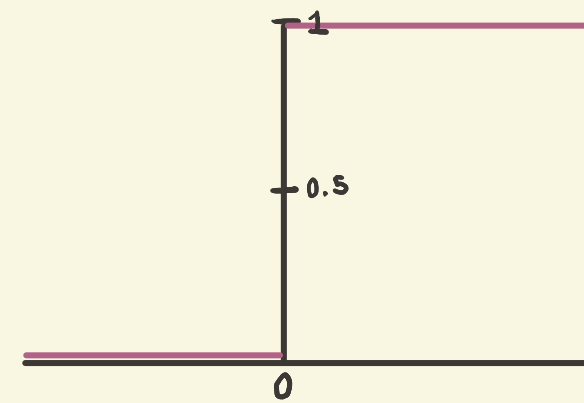
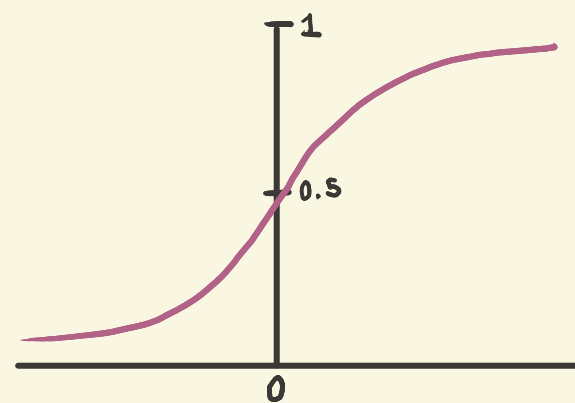
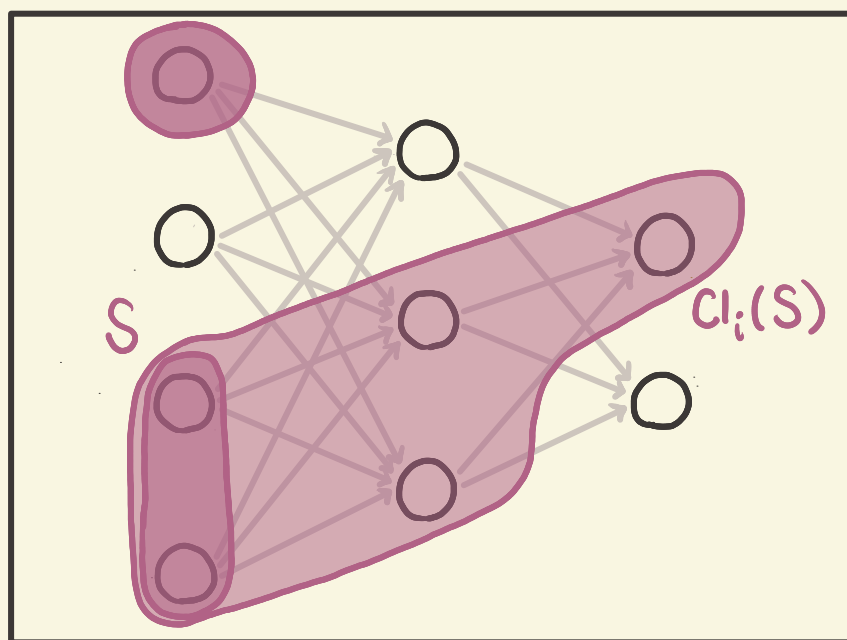


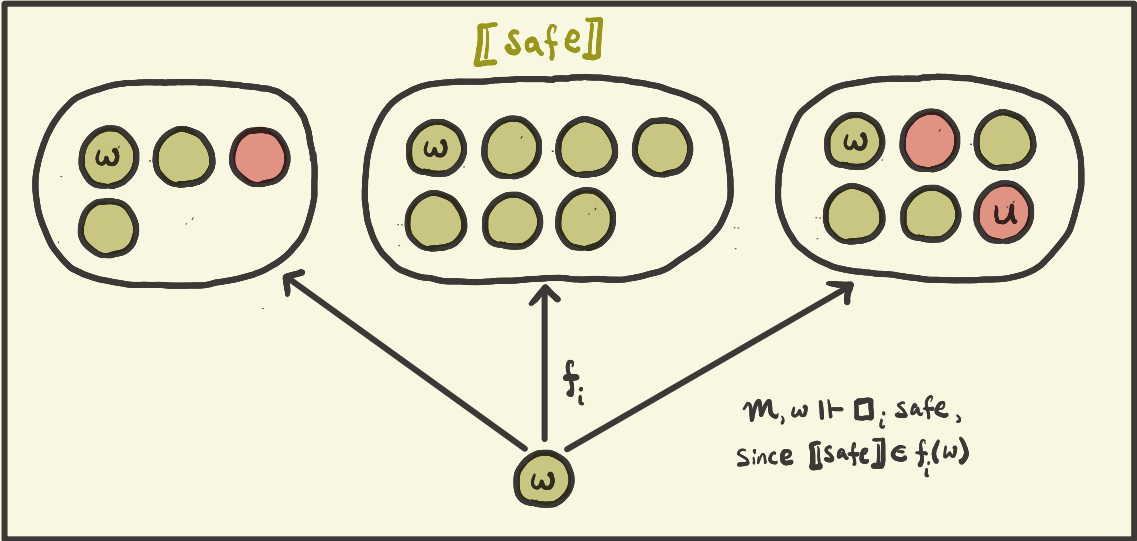
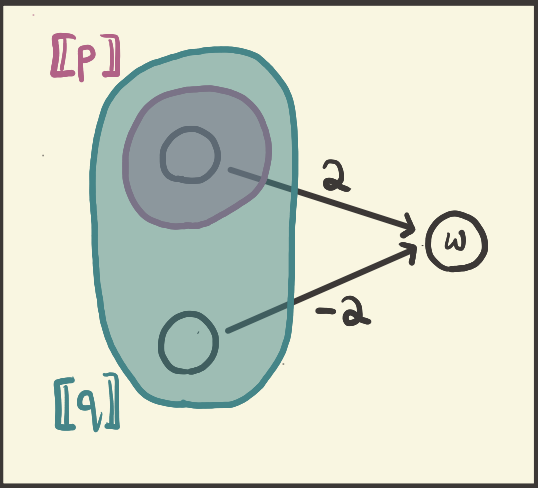




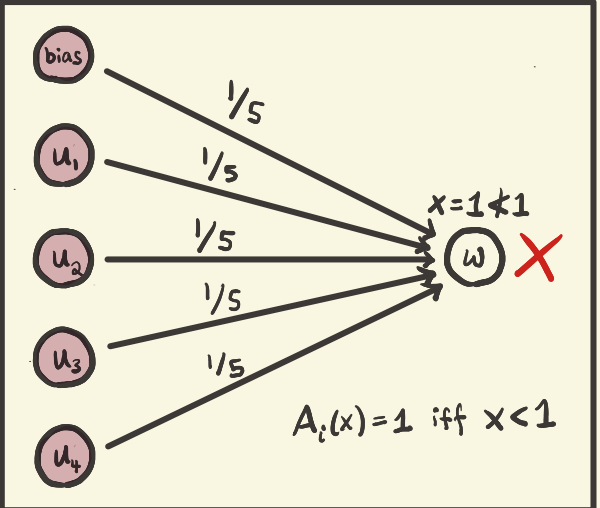
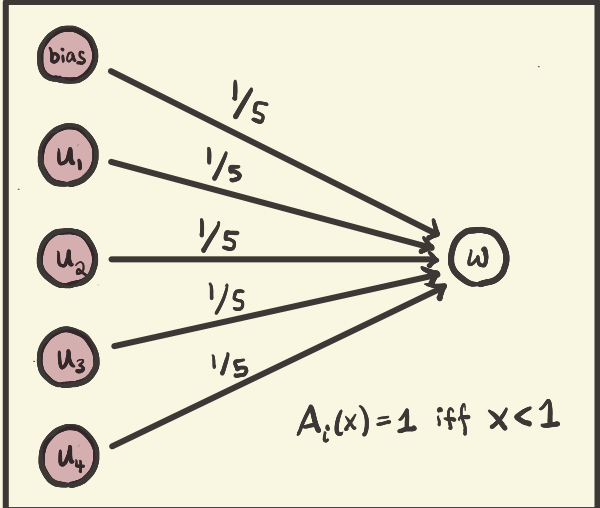
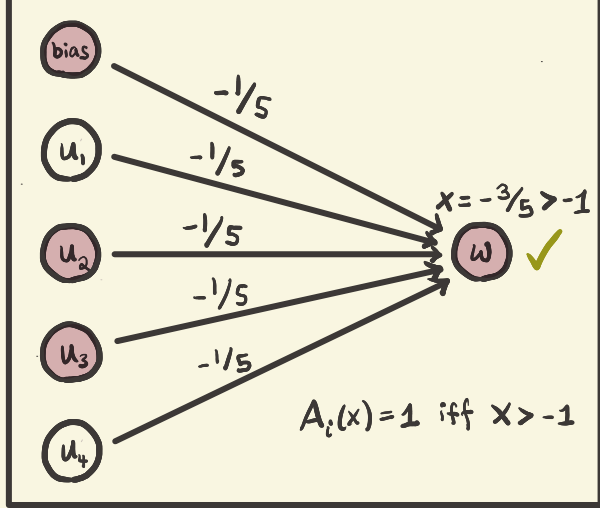
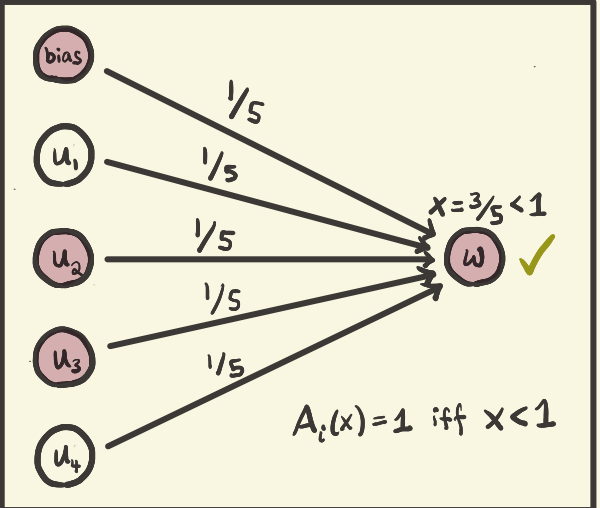
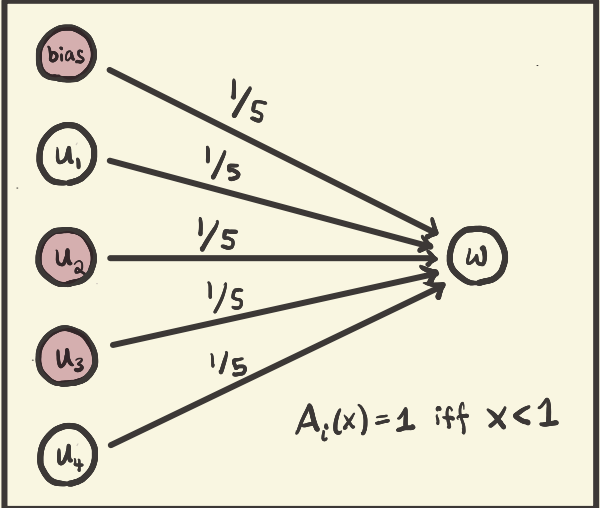
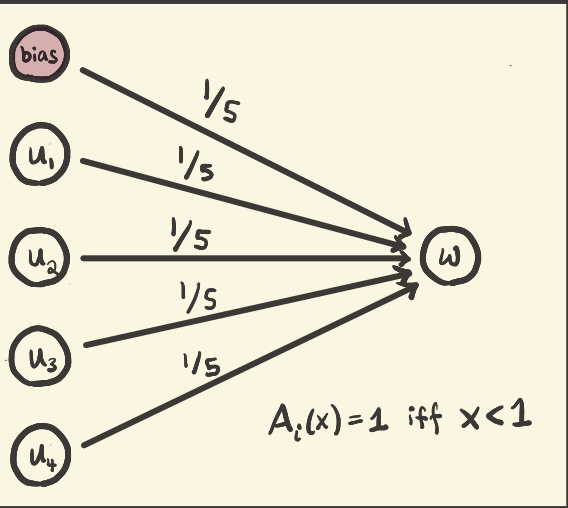
→ SAFE

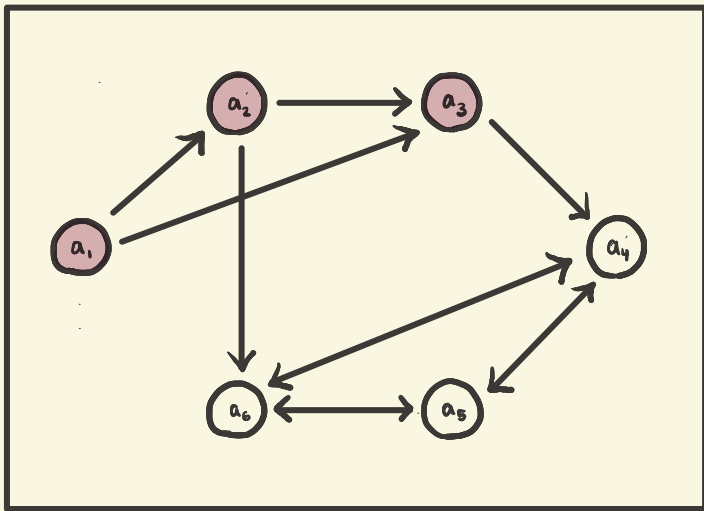
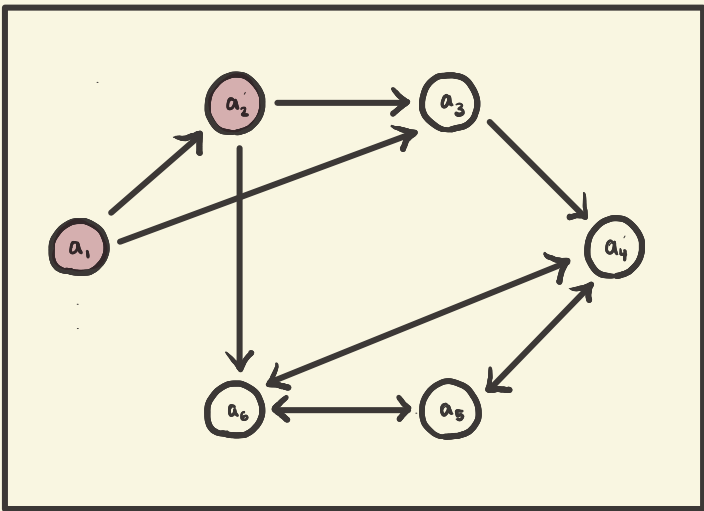
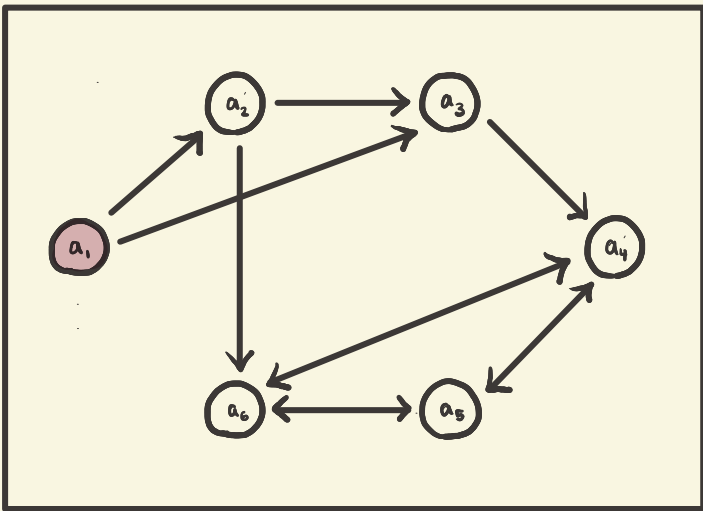






(belief for neighborhood models is more complicated!)





$\theta \geq 1/2$  in this example.

~~the mushroom is safe~~  
Agent adopts the belief the mushroom is safe.

Graph reachability  
Construction

