

**Claim.** Set  $D$  contains a bivalent config.

**Proof.** By contradiction. That is,  
suppose  $D$  has only 0- and 1- valent states (and no bivalent ones)

- There are states  $D_0$  and  $D_1$  in  $D$ , and  $C_0$  and  $C_1$  in  $C$  such that

- $D_0$  is 0-valent,  $D_1$  is 1-valent
- $D_0 = C_0$  foll. by  $e = (p, m)$
- $D_1 = C_1$  foll. by  $e = (p, m)$
- And  $C_1 = C_0$  followed by some event  $e' = (p', m')$

(why?)

