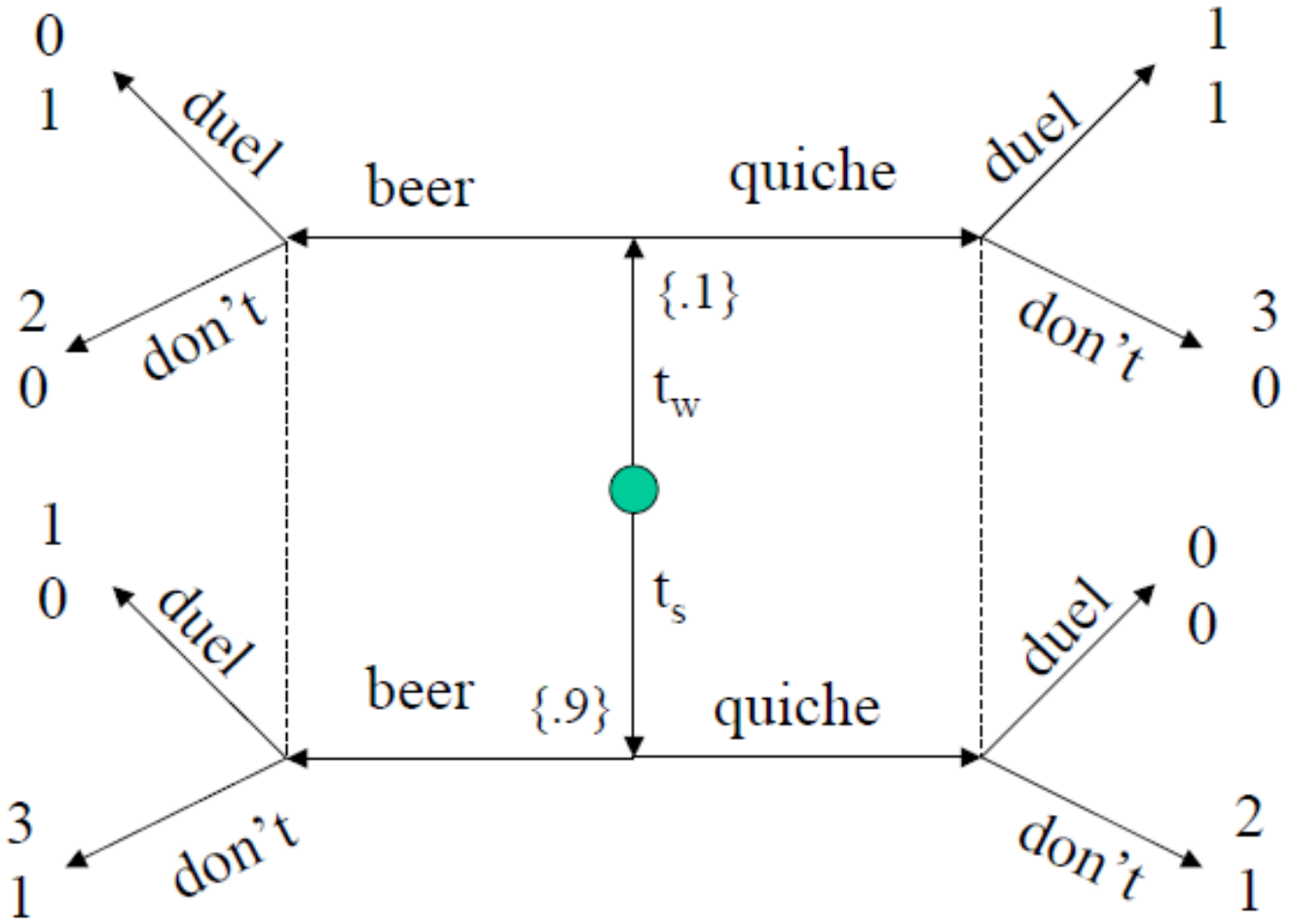
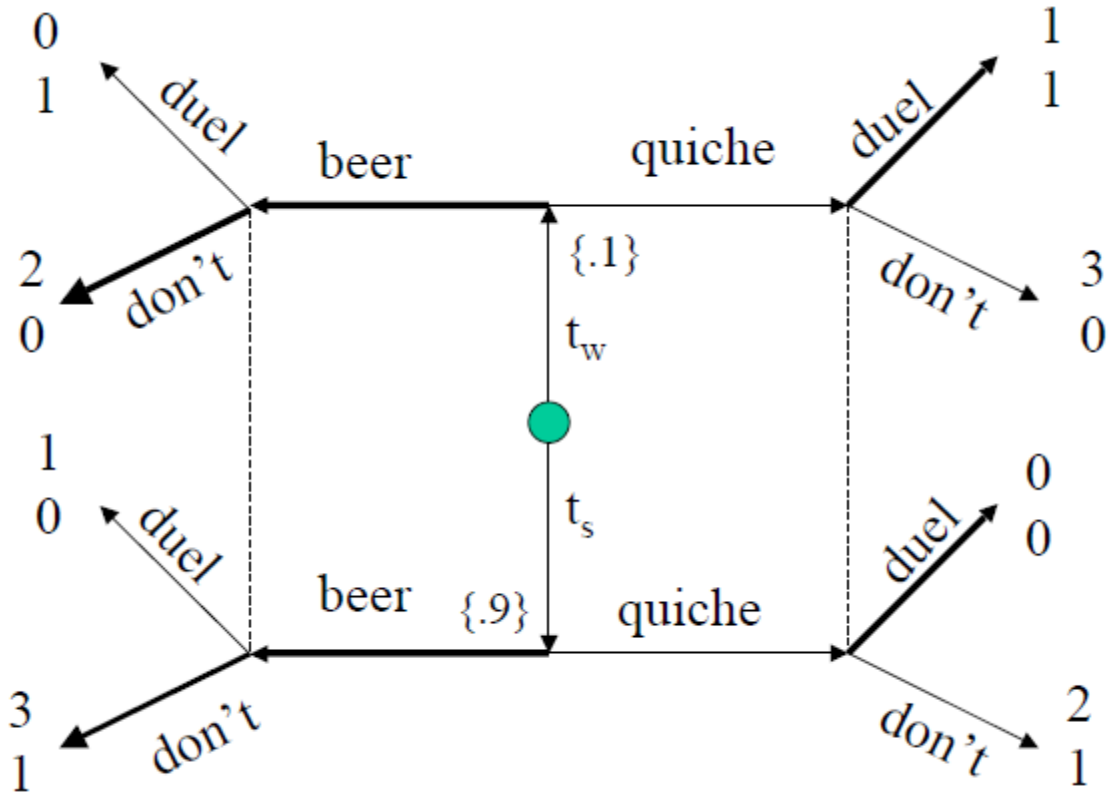
Signalling games

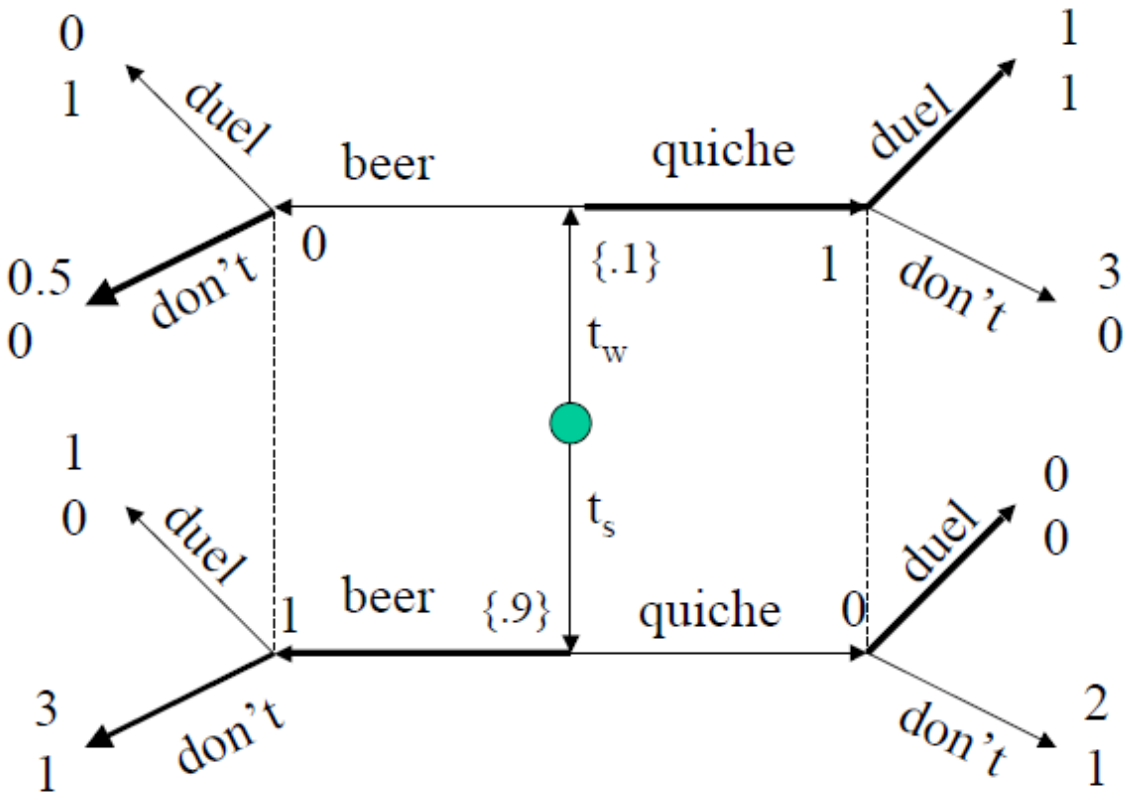

0
1
duel
beer
quiche
duel
1
1
2
0
don't
{.1}
t_w
don't
3
0
1
0
duel
t_s
duel
0
0
beer
{.9}
quiche
3
1
don't
don't
2
1

Pooling equilibrium



- Since both types have beer, beliefs given beer are given by nature
- EU(duel | beer) =0.1*1+0.9*0
- EU(don't | beer) =0.1*0+0.9*1
  - Prefer not to!
- Beliefs given quiche are arbitrary
- Have to be such that P2 prefers to duel, so that P1 doesn't want to deviate from beer
- belief that player is weak given quiche is *q*
- EU(duel | quiche)=q
- EU(don't | quiche)=1-q
- If q>1/2, P2 duels after observing quiche
  - No profitable deviation of P1

Separating equilibrium



- Since every info set is reached in eq, beliefs given by Bayes' law
  - If I see quiche, I know it's a weak type
  - If I see beer, I know it's a strong type
- P2 chooses optimally given these beliefs, so he fights given quiche, doesn't given beer
- Deviations don't pay for P1
  - Weak would get 0.5 instead of 1
  - Strong would get 0 instead of 3