CS344M Autonomous Multiagent Systems

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Good Afternoon, Colleagues

Are there any questions?

Logistics

• Progress reports due in 1 week

Logistics

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- Topic change for next week: multiagent learning

Logistics

- Progress reports due in 1 week
- Topic change for next week: multiagent learning
- Talks in the department:
 - FAI Talk Sergey Levine, Frdiay 11am GDC 6.302

Mixed strategy equilibrium

			Player	2	_
		Action	1	Action	2
Player 1	Action 1	3,7		2,2	
	Action 2	6,5		1,7	

Mixed strategy equilibrium

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- What if player 2 picks action 1 3/4 of the time?
- What if player 2 picks action 1 1/4 of the time?
- Player 1 must be indifferent between actions 1 and 2
- Player 2 must be indifferent between actions 1 and 2

Correlated Equilibria



Correlated Equilibria

Sometimes mixing isn't enough: Bach/Stravinsky

Want only S,S or B,B - 50% each

- We will both be in Paris for some time in June.
- We both know that we will both be there on the 15th.

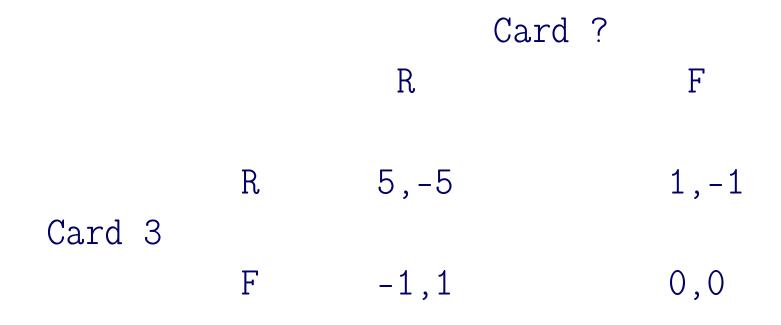
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- When and where?
- What are the Nash equilibria?

- We each get one of 3 cards: 1,2,3
- If we both fold, we both lose nothing
- If one raises and one folds, the raiser gets 1
- If both raise, the one with the higher card gets 5
- Zero sum

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Card ?

R

F

Card 3

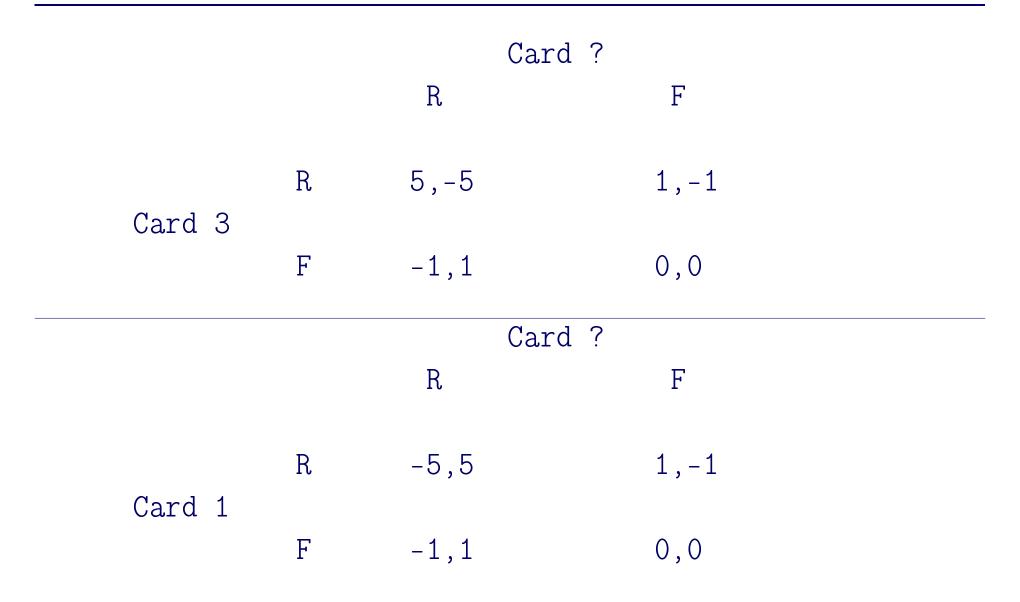
R

5,-5

1,-1

F - 1, 1

0,0



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 - Fold: (.5)(-1) + (.5)(0) = -.5

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With more numbers and/or different payoffs, bluffing can be a part of the Nash Equilibrium

Discussion

How useful is the concept of Nash equilibrium?

Discussion

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- What if one player isn't rational?

Discussion

- How useful is the concept of Nash equilibrium?
- What if one player isn't rational?
- What can't game theory simulate?

Book slides

- Book slides
- Tournaments on resources page

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- Threats slides

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- Threats slides
- Doran's ICML slides