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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- DigCS

Mixed strategy equilibrium

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

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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

Do actual numbers matter?

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.

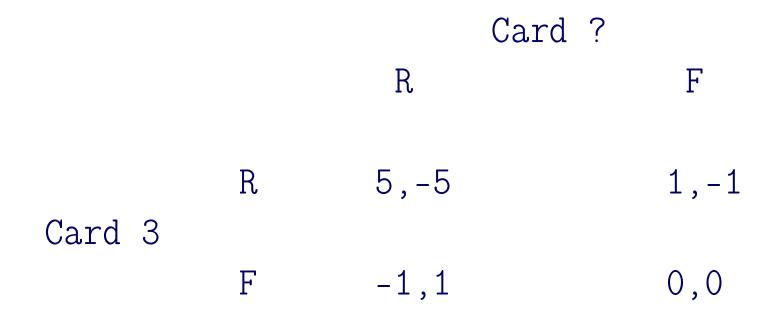
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- When and where?
- What are the Nash equilibria?

- 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

Card? F R 5,-5 1, -1R Card 3 F -1,10,0 Card ? F R 1, -1R -5,5Card 1 F -1,10,0

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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?

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- 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