

444 Lecture 15

O'Connor Chapter 1

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Day Plan

- Gender Division
- Types
- Complementary and Correlative Games
- Norms and Conventions
- Hawk-Dove
- Notes

Genders in Society

- The ubiquity of gender divisions in societies is really remarkable.
- What other things are this ubiquitous?
- Definitely language use, which is itself remarkable.
- And some age-related divisions, though with more variable manifestations.
- Language is the closest thing to gender; we see it in all societies, but the way we see it varies.

Other Divisions

- Obviously there are other divisions we see in societies.
- Race
 - Religion
 - Class
- But note two things about these.
1. Not nearly as ubiquitous.
 2. They complement gender, not replace.

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Games with Types

- Games with types are sort of 'between' two familiar kinds of games in complexity.
- One is games where each player has a full awareness of the identity of who they are playing with, and can plan strategies that discriminate among these other players.
- At the other end is where a player just has to pick a strategy in complete ignorance of who the other player is.
- With types we get in between; you don't know who the other player is, but you know they are of type t .

- The formal effect of this is to open up a new range of **symmetric** equilibria.
- Without types, the only equilibrium in a complementary coordination game is really bad.

	A	B
A	0, 0	1, 1
B	1, 1	0, 0

- The only symmetric equilibrium is that we both play the mixed strategy half-A/half-B, with a return of 0.5.

7/24

	A	B
A	0, 0	1, 1
B	1, 1	0, 0

- Now imagine that we will first be assigned type-A or type-B, with probability 0.5 for each, and that types will be visible.
- This opens up a new symmetric equilibrium: Play your type if the other is different, randomise if the other is same.
- And this has an expected return of 0.75.
- This will be called a **population equilibrium** in chapter 2, and we'll return to it.

8/24

Gender Division

Types

Complementary and Correlative Games

Norms and Conventions

Hawk-Dove

Notes

9/24

	Bach	Stravinsky
Bach	2, 1	0, 0
Stravinsky	0, 0	1, 2

10/24

	Favorite	Other
Favorite	0, 0	2, 1
Other	1, 2	0, 0

11/24

- Aren't these the same game?
- Not necessarily; depending on how we set the game up.

12/24

Gender Division	Types	Complementary and Correlative Games	Norms and Conventions	Hawk-Dove	Notes
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What makes something a move

- The player must be physically capable of performing the move.
- But they must also be capable of performing it under that description.
- Question: Can I call up Barack Obama?
- Positive answer: it's just a matter of dialing the right number, and I have the dexterity to hit the numbers.
- Negative answer: I don't know his phone number!
- We're working with a system where the negative answer is the right one; which seems very natural.

Gender Division	Types	Complementary and Correlative Games	Norms and Conventions	Hawk-Dove	Notes
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Correlative and Complementary

- Lewis: Correlative vs Complementary is just a matter of relabelling, it doesn't reflect a deep difference.
- O'Connor: That relabelling might convert things that the player can do under that very description into things they cannot do under that description.

Gender Division	Types	Complementary and Correlative Games	Norms and Conventions	Hawk-Dove	Notes
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Day Plan

Gender Division

Types

Complementary and Correlative Games

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Hawk-Dove

Notes

Gender Division	Types	Complementary and Correlative Games	Norms and Conventions	Hawk-Dove	Notes
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Norms and Conventions

- The distinction here is tricky.
- Conventions are things where everyone goes along because they'd expect to do worse as long as everyone else is following the convention.
- Norms are things where everyone goes along because they'd expect to do worse as long as everyone else is endorsing the norm.
- These seem really similar.

Gender Division	Types	Complementary and Correlative Games	Norms and Conventions	Hawk-Dove	Notes
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Norms and Conventions

- The difference is why they expect to do worse if they violate.
- Roughly, social norms are where one expects to do worse because of punishment behavior by others.
- Conventions are where you do worse because of a failure to coordinate. The restaurant won't punish me for knocking on the door at 3 in the morning to see if they are open, they just won't open up. (Because they aren't there!)

Gender Division	Types	Complementary and Correlative Games	Norms and Conventions	Hawk-Dove	Notes
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Examples of Norms and Conventions

- I'm actually not convinced that driving on the socially approved side is a norm in this sense; the downsides are much more due to others behaving normally than due to punishment.
- There is an intermediate case - where we internalise the convention, and violating it generates *guilt*.
- This should probably go with the punishment - not all punishments are by others.

Gender Division

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Types

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Complementary and Correlative Games

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Norms and Conventions

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Hawk-Dove

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Notes

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Day Plan

Gender Division

Types

Complementary and Correlative Games

Norms and Conventions

Hawk-Dove

Notes

19/24

Gender Division

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Types

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Complementary and Correlative Games

000000

Norms and Conventions

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Hawk-Dove

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Notes

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Hawk-Dove

- I haven't talked about this already, but I possibly should have.
- When I talked last week about whether some games were Prisoners' Dilemma or Stag Hunt, there was a third option, Hawk-Dove.
- And maybe that's the right model for some cases we discussed.

20/24

Gender Division

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Types

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Complementary and Correlative Games

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Norms and Conventions

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Hawk-Dove

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Notes

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What is Hawk-Dove

- Everyone wants the other person to be Dove; that's the cooperative move.
- If everyone is a Hawk, it's a disaster. It's even worse than in PD.
- But if everyone is a Dove, it's better to defect and play Hawk. That's like PD and unlike SH.

Everyone wants to be the only defector.

21/24

Gender Division

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Types

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Complementary and Correlative Games

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Norms and Conventions

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Hawk-Dove

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Notes

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Simple Models

- We will come back to Hawk-Dove in chapter 2, so we'll talk about it more then.
- But for now it's good to have simple models in mind.
- Don't think *This coordination problem isn't PD, so must be SH.*
- It could be Hawk-Dove instead.

22/24

Gender Division

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Types

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Complementary and Correlative Games

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Norms and Conventions

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Hawk-Dove

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Notes

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Day Plan

Gender Division

Types

Complementary and Correlative Games

Norms and Conventions

Hawk-Dove

Notes

23/24

Gender Division

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Types

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Complementary and Correlative Games

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Norms and Conventions

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Hawk-Dove

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Notes

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Military

- Just one small note this week.
- Is it really true that militaries need strict hierarchies to be successful?
- I think this turns on what you call a 'military'.
- The slave rebellion in what's now Haiti was pretty successful, without a particularly clear hierarchy.
- The guerilla war the Spanish people waged against Napoleon was much more successful than anyone their own army did.
- I don't think this makes a big difference to the story, but I was surprised to see this stated so categorically.

24/24