POl1101:
Introduction to Political Science

Week 03a

Syllabus at: http://bit.ly/1uejHmf

Announcements

- Fixed date in syllabus
  - Week 03 = Sep. 17 & **Sep. 19**.
  - http://bit.ly/1uejHmf
- Friday's Activity: Social Science Essay Structure
- Will wrap up Conflict and Coordination on Friday

Collective Action

- Why can't we get our act together?
  - Poverty/hunger/disease
  - Conflict (deal with bullies)
  - Environment
- We have the collective knowledge/technology/ wealth to provide public goods (global health, peace, sustainability)
- What we often lack is the individual willingness to participate/contribute in/to the public good.

Formally, how can we think about this?

- Do a cost benefit analysis:
- Private goods (Should I buy the new Apple Watch? Buy tickets see the Redblacks vs the Als?)

Expected **R**eward = **B**enefit - **C**ost

Formally, how can we think about this?

- A little different …
- Collective action function

Expected **R**eward for individual for participating in collective action

=

Expected **B**enefit from accessing the good

* **Probability** of individual being effective for provision of the good.

– the **C**ost of participating

Turn to your neighbour and think this out

How can you use this model to explain the Canadian Government's 2011 decision to withdraw from the Kyoto Protocol on Climate Change?

What types of arguments can you think of to challenge the decision informed by this perspective?

Keeping in mind

- Benefits vary depending on the nature of the good:
  - Pure public goods: individual participation can be very beneficial
  - Common pool goods: benefits are conditional on the contributions of others.
  - Benefits of same good are not equal for everyone
    - Subsidized housing, e.g.. Guinness.
    - Protests

Predictions I

- Participation in collective action should be higher for network or pure public goods; production depends on my individual participating.
- Participation in collective action should be lower for maintaining rival or common goods because success is dependent on other people's participation

Predictions II

- Expect higher participation in low-cost actions (e.g.. signing petitions) than in those actions which cost more (take time/involve charges, fees or dues) or involve risk (might get you jailed or killed).
- Expect higher participation in collective action in democracy than in authoritarian states.

Predictions III

- Expect more participation when members of the group are homogenous and they share common interests in a large number of different collective goods (health care, education, sustainable environment)
- Expect less participation when group members are heterogeneous and share a common interest in few issues

Freeriders

- Tragedy of the Commons
- Doesn't mean that individual don't care, it simply means that they don't expect that others will act the same way that they do en masse
- Captured by the **P** in the equation. P = "belief in the likelihood of achieving the goal of collective action, which may depend on estimates of how many other people can participate."
  - **P** needs to be big in order to incentivize individuals to participate
  - Problems emerge with large numbers

Solutions to the collective action problem I

- Olson:
  - Find some way to exclude free riders
    - Technology
    - Restrict access
    - How do you do it for goods which are non-excludable?
  - Provide select incentives
    - Insurance with unions, members discounts, special access
    - Although, need to wonder (as Laver does) why select incentives would make a difference if the good is going to be provided anyway.
    - Changes the equation to:

$$R = B*P - C + D$$

Solutions to the Collective Action Problem II

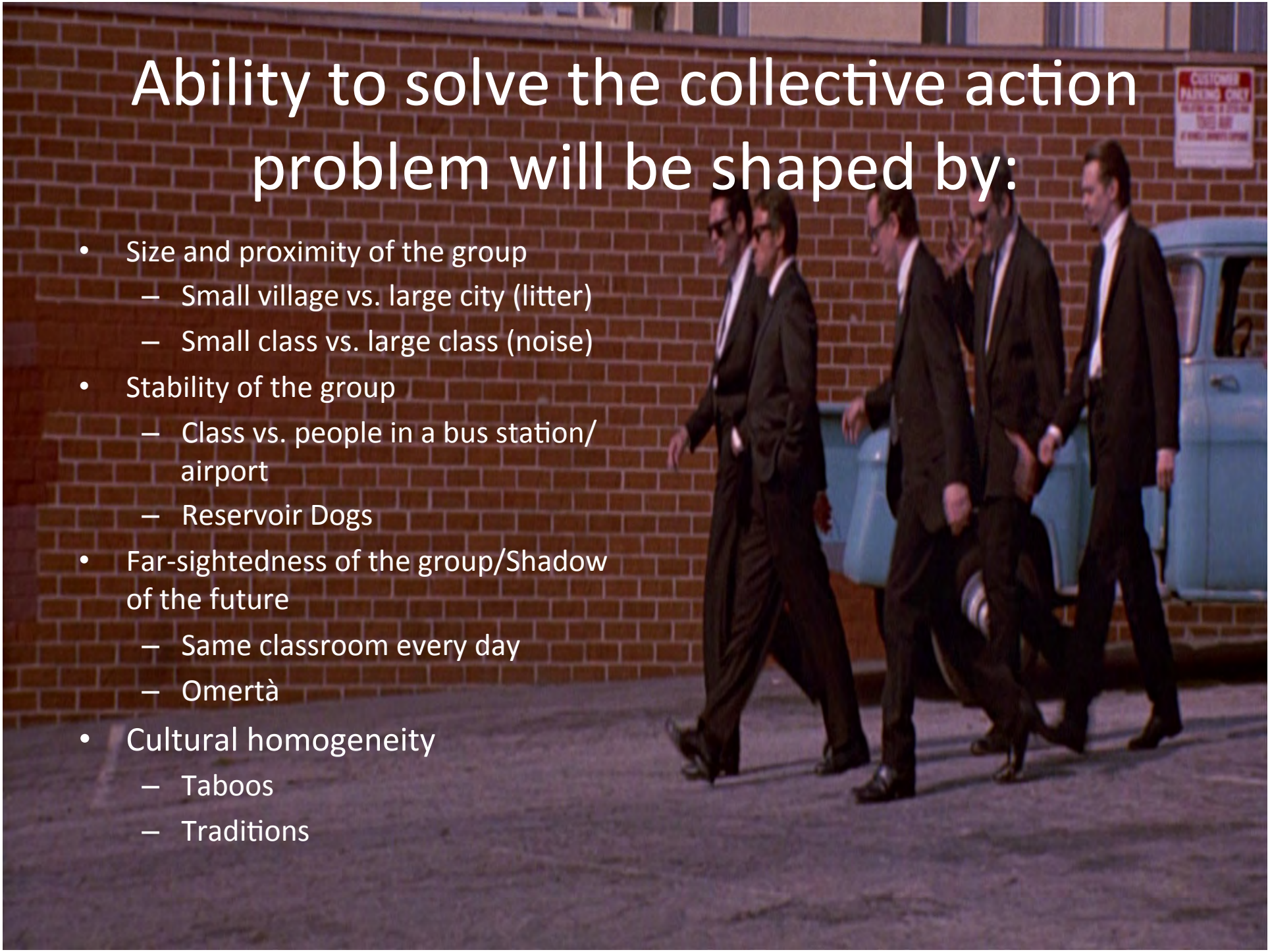
- Laver
  - Monarchy
    - Leviathan
  - Anarchy
    - Let nature sort it out.
    - Game theory
      - Cooperate: participate in common action for common benefit
      - Compete: pursue individual benefit
  - Privatization
    - Assign property rights to goods
    - Not possible for goods which are non-excludable
    - Conditional on political culture/public will

Ability to solve the collective action problem will be shaped by:

- The size of the group
  - The smaller the size, the more important the individual is to the provision of the good.
  - Privileged group
    - Small, one or two members are sufficiently interested in the good to pay it's cost. E.g.. US and NATO
    - Bill and Melinda Gates Foundation
  - Latent group
    - Large, less organized, less visible, less centralized, dispersed, transient.
      - Students!

Ability to solve the collective action problem will be shaped by:

- Size and proximity of the group
  - Small village vs. large city (litter)
  - Small class vs. large class (noise)
- Stability of the group
  - Class vs. people in a bus station/ airport
  - Reservoir Dogs
- Far-sightedness of the group/Shadow of the future
  - Same classroom every day
  - Omertà
- Cultural homogeneity
  - Taboos
  - Traditions



POL1101
Introduction to Political Science

Week 03b

Syllabus at: http://bit.ly/1uejHmf

Announcements

- Midterm Next Friday
  - Full class
  - Format:
    - 10 Multiple Choice (worth 10 percent (1 percent each))
      - E.g.. Which of these is a public good?
        - A) cat
        - B) dog
        - C) goat
        - D) the biosphere
    - 9 "Medium" Answer Questions (worth 90 percent (worth 10 percent each))
      - Define "public good" and identify its characteristics. Provide an original example of a public good which was not provided in the slides or the required text.
  - Please read the university calendar to familiarize yourself with the rules regarding missing exams. i.e. you'll need a doctors' note.
  - Good way to prepare: review quick quizzes and questions for review in text.

Exit, Voice and Loyalty

- The decision to participate in collective action can also depend on the alternatives available:
  - Exit: Accept what you don't like and change behaviour to optimize to a new situation:
    - Don't like increase tuition fees in Ontario? Move to Newfoundland
  - Voice
    - Don't like increased tuition fees in Ontario? Complain, protest, lobby or take other direct action to change the environment back to its original state.
  - Loyalty
    - Don't like increased tuition fees in Ontario? Accept the status quo, pay your fees and come to the University of Ottawa.
  - For more: Hirschman, Albert O. 1970. *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge: Harvard University Press.

Helps to explain…

- Why smaller groups/organizations/interests appear to be more powerful and effective at getting what they want than large collectivities:
  - Rich vs. Poor
  - Monsanto vs. Farmers
  - Dairy farmers vs. other agricultural interests
  - Big pharma vs. global health promotion.

Let's turn back to one of Laver's solutions

- Anarchy
  - What to do when no leviathan or private property regime, can't exclude free riders, no select incentives?
    - E.g.. international system (anarchic) & global commons
  - You can choose to *cooperate (participate in common action for common benefit)* or you can choose to *compete (pursue your own benefit)* and see what others do next.

Game Theory

- A branch of mathematics concerned with decision making in social interactions.
- It applies to situations (called **games**) where two or more people (called **players**) each attempt to choose between two or more ways of acting (called **strategies**).
- The possible outcomes of a game depend on the choices made by all players, and can be ranked in order of preference by player.

Different types of games

1. Coordination games: an interaction in which there are efficient results for all players.
   - Strongly shared interests among players produce common benefits
2. Zero sum games: an interaction in which the gains for some players imply loses for others.
   - Implies strong competition
3. Non-zero sum games: An interaction in which mutual cooperation can produce gains for all players.
   - Falls between 1 and 2.
   - Outcome is undetermined, although mutual cooperation can produce gains for all participants.

Examples of archetypal games

1. Prisoners' dilemma
2. Chicken game
3. Stag hunt

Prisoner's Dilemma

- Real-life examples
  - Arms races
  - Climate change
  - Steroid use/blood doping in Tour de France

Prisoners' Dilemma I

- Matthew and Rachel, two known felons are both picked up near a crime scene by the police and brought to the station for interrogation.
- Even though there is no evidence to link them to the crime, M & R, in fact, committed the crime.
- The police, despite the lack of evidence, are pretty sure that M & R are the perps.

Prisoners' Dilemma II

- M & R are interrogated separately and simultaneously.
- They have two options:
  1. Squeal on the other (defect)
  2. Clam up and say nothing (cooperate)
- However
  - If M squeals on R (defects) and R squeals on M (defects) then both M & R get **5 years in jail** for committing the crime.
  - If M squeals on R (defects) and R clams up (cooperates) then **M goes free** and **R gets 10 years in jail** for committing the crime.
  - If M clams up (cooperates) and R squeals then **R goes free** and **M gets 10 years in jail** for committing the crime.
  - If M clams up (cooperates) and R clams up (cooperates) then **M and R both get 1 year in jail** for a parole violation offence (out past curfew)

Prisoners' Dilemma III

- Can represent this in a **pay-off matrix**

		Rachel	
		Cooperate	Defect
Matthew	Cooperate	1,1	10,0
	Defect	0, 10	5, 5

- Assuming that both M & R are interested in maximizing their time out of jail, i.e. 0 > 1 > 5 > 10 then "defect" is the way to go. This is called a **dominant strategy**.
- Worst scenario for me is "I cooperate; you defect". Called the "**sucker's payoff**". E.g.. Canada and Kyoto.
- If M & R pursue their dominant strategies then they get 5 years in prison each – and a lot of dirty looks.

Prisoners' Dilemma VI

- Mutual distrust and pursuit of what's best for the individual lands both M & R in the slammer for 5 years.

		Rachel	
		Cooperate	Defect
Matthew	Cooperate	1,1	10,0
	Defect	0, 10	5, 5

- There is an **equilibrium**: not in M or R's interest to change their mind. Makes them worse off.
- That sucks. If they had cooperated, they could have only spent 1 year in jail.
- How does Omertà change the payoffs? How would that work?

Prisoner's Dilemma V

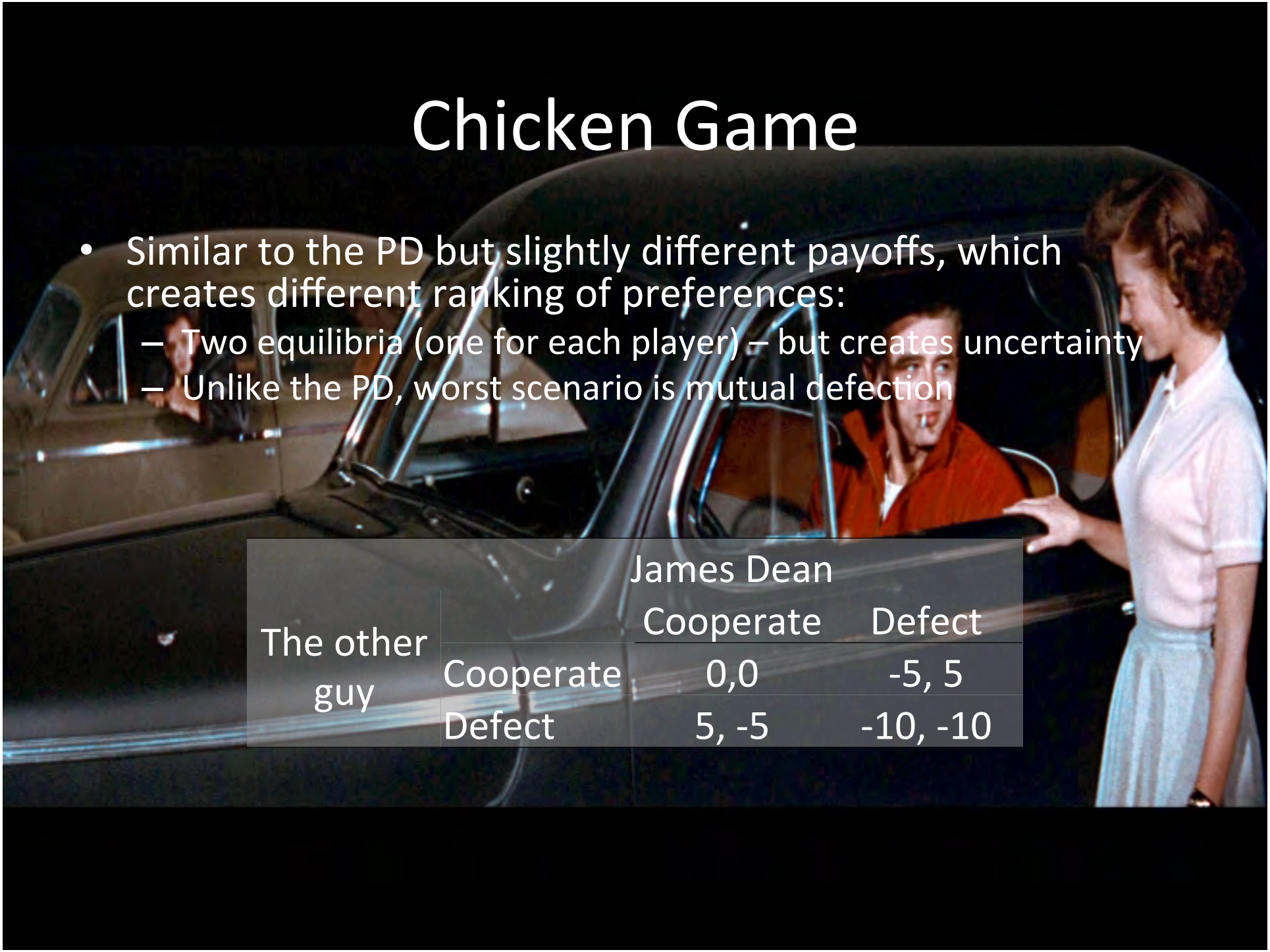
- Assumptions in story:
  - M & D can't communicate with each other
  - Choices are not retractable (it's a one-off game)
  - The circumstances which contribute to the pathology of the PD help us to identify how to resolve PD situations.
- Real world doesn't always work like that.
  - Tit for Tat:
    - Always defect; Always cooperate
    - Golden rule
  - Keep the game going.
- Robert Axelrod's tournament?

Robert Axelrod's Tournament

- Start nice
  - Begin by cooperating
- Retaliate
  - Reply in kind:
- Forgive
  - Try cooperating after getting thumped
- Keep it simple
  - Golden rule should lead to established norms of cooperation in the long run
- Try it out in your daily life.
  - Nasty vs. Nice
  - Smile at the people you make eye contact with.

Chicken Game

- Similar to the PD but slightly different payoffs, which creates different ranking of preferences:
  - Two equilibria (one for each player) – but creates uncertainty
  - Unlike the PD, worst scenario is mutual defection



		James Dean	
		Cooperate	Defect
The other guy	Cooperate	0,0	-5, 5
	Defect	5, -5	-10, -10

Chicken Game

- Solutions:
  - Precommitment
    - Proclaim in public that not going to swerve (posturing)
    - Lock the steering wheel/door
    - Forces the other to cooperate first.
  - Real life examples:
    - Cuban missile crisis

Cuban Missile Crisis

		USSR	
		Withdrawal	Maintenance
United States	Blockade	(Compromise) 3, 3	(Soviet victory/ US defeat) 2, 4
	Air strike	(US Victory/ Soviet defeat) 4, 2	(Nuclear War) 1, 1

4 = best; 3 = next best; 2 = next worst; 1 = worst
Borrowed from Steven J. Brams
"http://plus.maths.org/content/game-theory-and-cuban-missile-crisis"

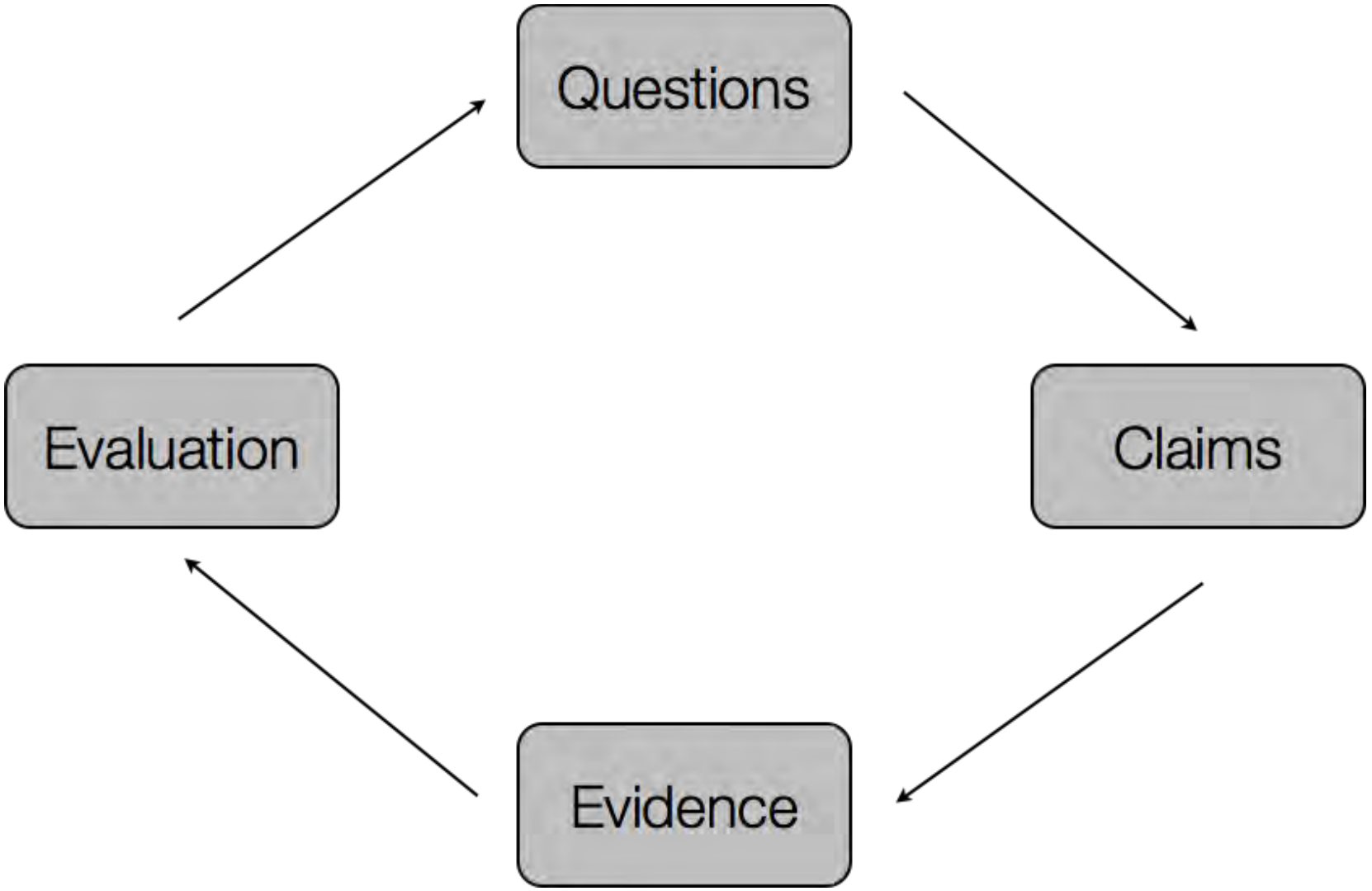
Stag Hunt

- Concept introduced by J.J. Rousseau
- Hunters can hold out and work together and catch a deer
- If one hunter is hungry and doesn't want to wait then she can catch and eat a rabbit which passes by, but the noise will scare off the deer and the other hunter will go hungry.
- Both hunters can go for a rabbit and eat the rabbit, but a rabbit is not really that tasty.
- Or both hunters can cooperate, wait for the deer and prepare and eat some delicious venison .

		Rachel	
		Cooperate	Defect
Matthew	Cooperate	3, 3	0, 2
	Defect	2, 0	2, 2

Activity

- What is distinctive about a social science essay?
  - Evidence
  - Theory
  - Argument



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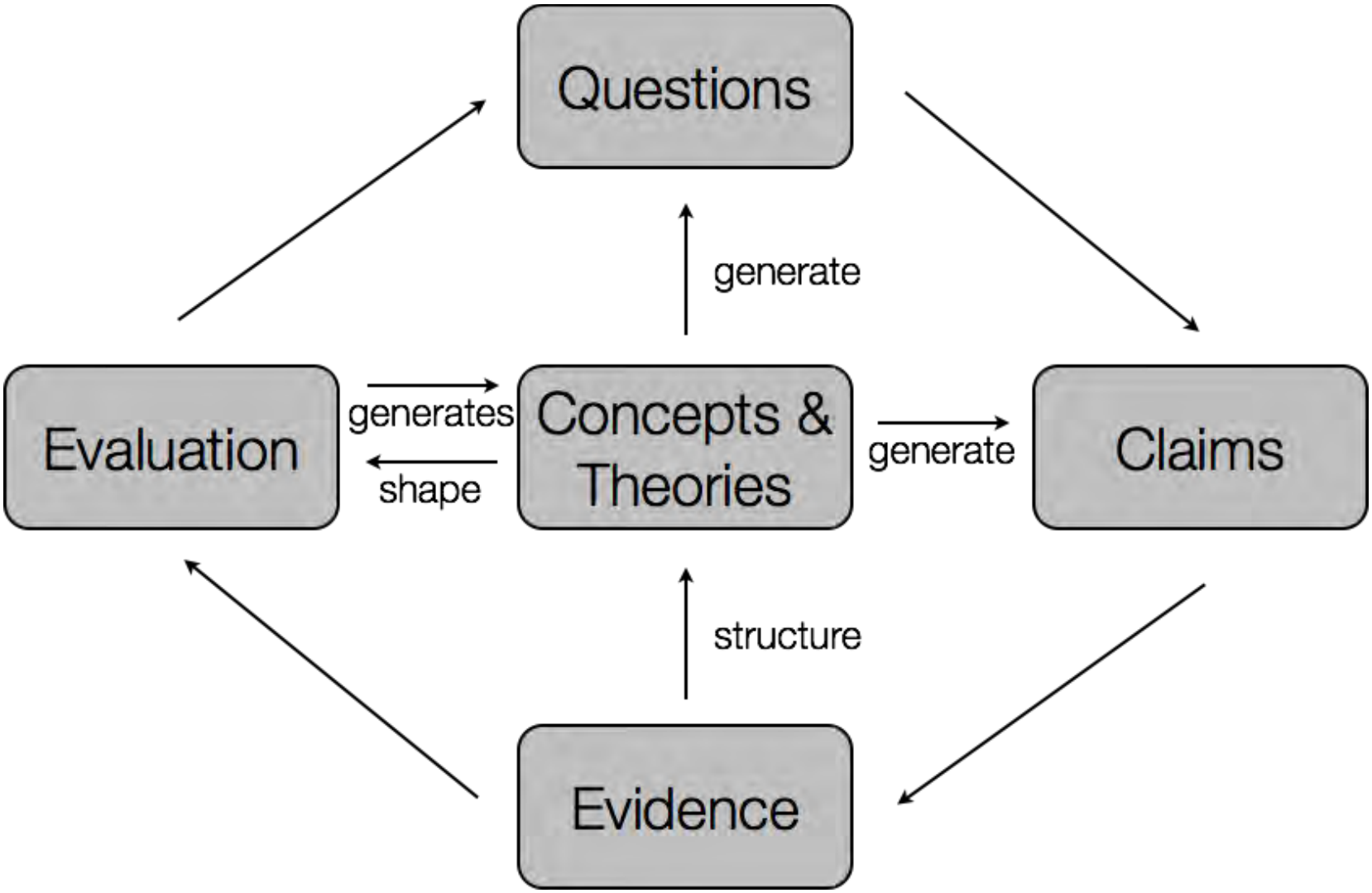

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Three rules for writing social science essays

1. Write your answers in your own words.
2. Answer the question that is being asked.
3. Think about:
    1. Content
    2. Structure
    3. Social scientific skills

Three things that I look for in an essay

- Essays must contain
  - An argument
    - A thesis statement
  - Theory
    - E.g.. Marxism, liberalism, critical theory, rational choice
  - Replicable evidence
    - Peer reviewed sources: journal articles, books.