

## Goals of today's lecture

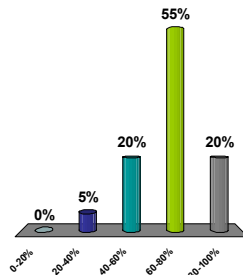
- Understand the “tragedy of the commons” and its application to environmental issues (and other issues).
- Look at different approaches to addressing the tragedy of the commons.
- Introduce Selfishness Week!

## Welcome to Selfishness Week!

- Synonyms: Self-interested, self-centered, self-absorbed, shortsighted (*myopic*), looking out for #1. *Not* hating people (being *misanthropic*) or caring only about money. (Traffic analogy.)
- For this set of lectures we will assume that people are and will always be selfish.
- Theoretical reason: A world full of angels is always going to turn out heavenly—that’s boring.
- Practical reason: People *are* mostly selfish.

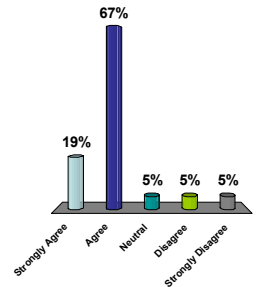
How much time do *most people* spend thinking pretty much just about themselves?

1. 0-20%
2. 20-40%
3. 40-60%
4. 60-80%
5. 80-100%



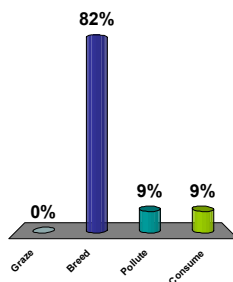
“Individualism and shortsightedness are the greatest problems of the current social system... and the deepest cause of unsustainability.”

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree



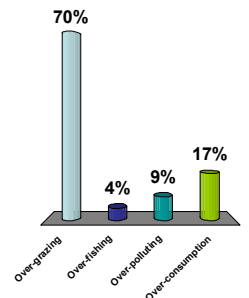
“Freedom to \_\_\_\_ is intolerable”

1. Graze
2. Breed
3. Pollute
4. Consume



The *main metaphor* in “Tragedy of the Commons” is about...

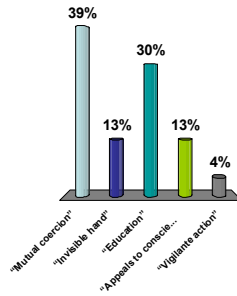
1. Over-grazing
2. Over-fishing
3. Over-polluting
4. Over-consumption





## Hardin's solution to the "Tragedy of the Commons" is...

1. "Mutual coercion"
2. "Invisible hand"
3. "Education"
4. "Appeals to conscience"
5. "Vigilante action"



## Tragedy of the Commons

- Individual incentives can sometimes lead individuals to make choices that are bad for the group as a whole.
- Example: The commute game. Imagine a simple world where everybody just goes back and forth between work and home.
- Only two options: drive or take the bus.
- Only one goal: shortest possible commute.

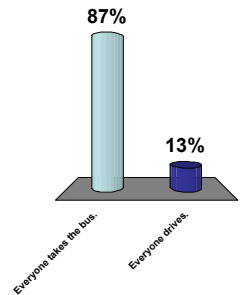
## The commute game

- If *everybody* takes the bus, the commute takes 20 minutes (including 10 minutes to walk to the bus stop and wait for the bus).
- If *everybody* drives, the commute takes 40 minutes because of traffic jams.
- The bus gets stuck in traffic just like every other vehicle, so you can *always* get to work 10 minutes faster by driving.



## Which is a better social outcome, i.e., outcome for the whole group?

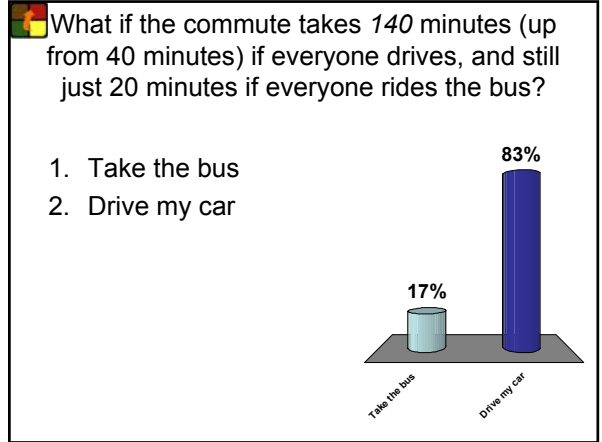
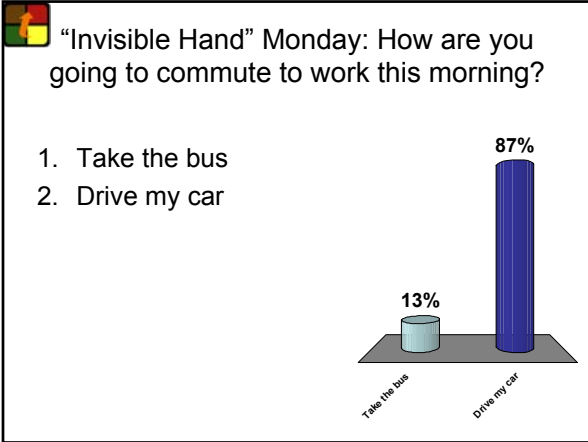
1. Everyone takes the bus.
2. Everyone drives.



## The commute game

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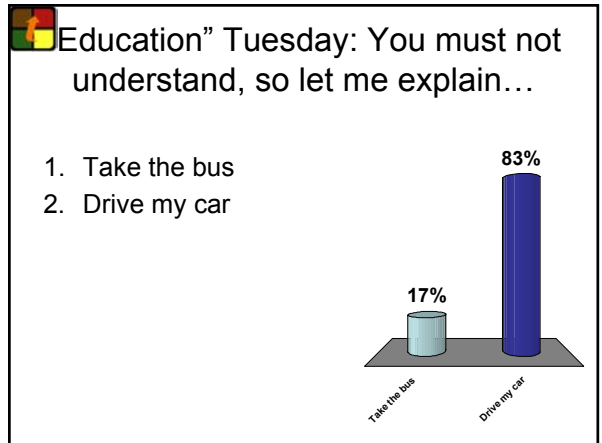
- "Invisible hand"
- "Education"
- "Appeals to conscience"
- "Vigilante action"
- "Mutual coercion"



- “Invisible hand”
- “Education”
- “Appeals to conscience”
- “Vigilante action”
- “Mutual coercion”

Objection to using the “invisible hand”?

*Sometimes individual incentives can lead people to make personal choices that are bad for the group as a whole.*

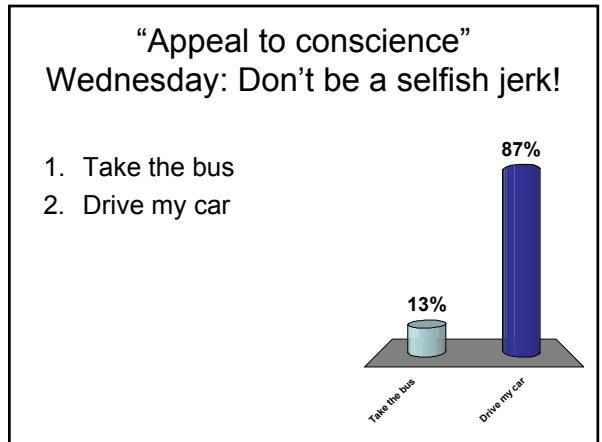


- “Invisible hand”
- **“Education”**
- “Appeals to conscience”
- “Vigilante action”
- “Mutual coercion”

Objection to using “education”?

*Sometimes problems can't be solved by education alone.*

(Gasp!)

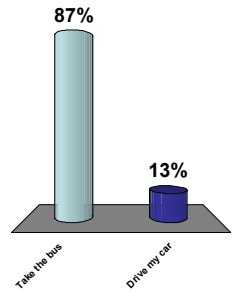


- “Invisible hand”
- “Education”
- **“Appeals to conscience”**
- “Vigilante action”
- “Mutual coercion”

Objection to using “appeals to conscience”?  
*People often act like selfish jerks.*  
 (Gasp!)

“Vigilante” Thursday: Ride the bus or Big Tony will break your kneecaps.

1. Take the bus
2. Drive my car

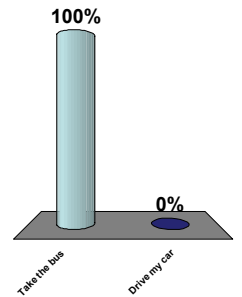


- “Invisible hand”
- “Education”
- “Appeals to conscience”
- **“Vigilante action”**
- “Mutual coercion”

Objection to using “vigilante action”?  
*Do you really want Big Tony in charge?*  
*And what ever happened to democracy and freedom, and stuff like that?*

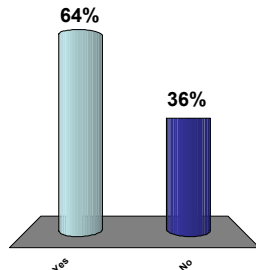
Mutual coercion Friday: Ride the bus or *Officer* Tony will fine you \$500.

1. Take the bus
2. Drive my car



Vote on Proposition 1: Anyone who drives will get a \$500 fine.

1. Yes
2. No



- “Invisible hand”
- “Education”
- “Appeals to conscience”
- “Vigilante action”
- **“Mutual coercion”**

Objection to using “mutual coercion mutually agreed upon”?

*“But what about my freedom?”*

Garrett Hardin’s response: *“Freedom is the recognition of necessity.”*

## The Tragedy of the Commons has two parts

1. It's better for the *group as a whole* if everyone makes Choice A rather than Choice B.
  2. Each person *individually* prefers to make Choice B.
- Under the hood is a *negative externality*: when I choose B, it hurts you, and when you choose B, it hurts me.

## Example: Traffic congestion

1. It's better for the *group as a whole* if everyone takes the bus.
  2. Each person *individually* prefers to drive.
- Negative externality: My driving creates an external cost by creating congestion that slows down everyone behind me.

## Example: Common areas in dorms or group houses

1. It's better for the *group as a whole* if everyone cleans up after themselves.
  2. Each person *individually* prefers to leave their dishes in the sink.
- Negative externality: I create external costs by leaving dirty dishes for my housemates.

## Example: Splitting the bill at a restaurant

1. It's better for the *group as a whole* if everyone orders a moderately priced dish instead of the expensive steak.
  2. Each person *individually* prefers to order the filet mignon.
- Negative externality: I create external costs by ordering the steak because I only pay 1/n of the cost of my meal.

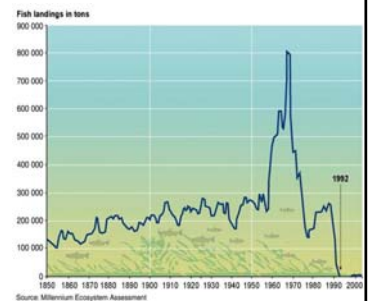
## Example: Overfishing

1. It's better for the *group as a whole* if everyone limits how much they fish so that there will be enough fish next year.
  2. Each person *individually* prefers to maximize their *individual* profits by fishing like crazy.
- Negative externality: When I catch fish, I create external costs by reducing *your* ability to catch fish next year.

## Overfishing: Cod



[www.fishermensvoice.com/archives/...html](http://www.fishermensvoice.com/archives/...html)



## Example: Dirty coal

1. It's better for the *group as a whole* if everyone avoids coal-based energy (the dirtiest, most carbon-intensive fuel) in favor of natural gas, wind, solar, etc.
  2. Each person *individually* prefers to buy coal-based energy because it's the lowest cost *to the individual*.
- Negative externality: My pollution creates external costs (smog, climate change).

## Example: Voting

1. It's better for the *group as a whole* if everyone pays some attention to politics and votes responsibly.
2. Each person *individually* prefers to watch *Ugly Betty*.



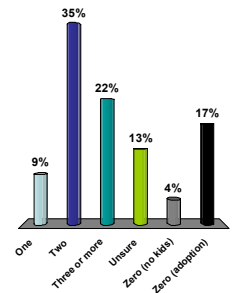
- Negative externality?

## Is human population growth a tragedy of the common???

1. It's better for the *group as a whole* if everyone has just two children so that populations don't continually rise: 6 billion, 12 billion, 24 billion, 48 billion...
  2. Each person *individually* prefers to have 3 or more children.
- Is statement #2 true?

## How many children do you want?

1. One
2. Two
3. Three or more
4. Unsure
5. Zero (no kids)
6. Zero (adoption)



## Is human population growth a tragedy of the common???

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  2. Each person *individually* prefers to have 3 or more children.
- Is statement #2 true?
  - Is statement #1 true?

## Not every situation is a Tragedy of the Commons!

- In many situations, individual incentives lead people to make personal choices that are *good* for the group as a whole.
- Sometimes we just get lucky.
- And sometimes this happens because of the "hidden order" that comes out of free-market economics, Adam Smith's "invisible hand" metaphor.