

SOCIAL DILEMMAS

Trapped in destructive social
situations

SOCIAL DILEMMAS DEFINED

Individually reasonable behavior leads to a situation in which everybody is worse off than they might have been otherwise.

EXAMPLES OF SOCIAL DILEMMAS

- The (famous) prisoner's dilemma
- Providing public goods
- The tragedy of the commons

THE PRISONER'S DILEMMA

PLAYER ONE	PLAYER TWO Coop	PLAYER TWO Defect
Coop	3, 3	-10, 5
Defect	-10, 5	-4, -4

THE PUBLIC GOODS CASE

- Defining property. A resource from which all can benefit regardless of contributing.
- Public television. Why?
- Pure public good
- non-excludable. No one can be excluded
- non rival. My extraction of benefit does not diminish yours.
- The production function

THE TRAGEDY OF THE COMMONS

- The classic story.
- Reality proof. Commercial fishing
- Again, non-excludability
- However, benefits subtractable (opposite of nonrival)
- The replenishment function

RESEARCH ON PD

- Defection is common
- Players over trials often end up in negative numbers
- Why? Fear and greed.
- Creating a future leads to cooperation

AXELROD'S TOURNAMENT; EMERGENCE OF COOPERATION

- Possibility of future exchanges
- Persons must be able to identify each other
- Memory, information about past behavior of other

THE WINNER: TIT FOR TAT

- Researchers designed strategies
- The tit for tat strategy
 - First cooperate
 - Match opponent's move on trial n on $n+1$
- The winner in tournament one. Tit for tat
- The winner in tournament two. Tit for tat

PSYCHOLOGICAL CHARACTERISTICS OF TIT FOR TAT

- Don't be envious
- Don't be the first to defect
- Reciprocate both cooperation and defection
 - Don't hold grudges
 - Don't be a pushover
- Don't be too clever

LIMITATIONS OF TIT FOR TAT

- It assumes perfect information/closed universe of possibilities
- Demonstration. The Hatfields and the McCoys
- The Hatfields, McCoys, and the drunken hunter

SOCIAL DILEMMAS IN THE REAL WORLD

- Modifying values
- Inducing group identity
- The introduction of an authority
 - Who can enter group
 - Rate of withdrawal of joint resource
- Privatization of the commons.
- Local regulation of access and use of commons

SUMMARY ON DILEMMAS

- Real and socially destructive
- Strategies are highly context dependent
- In real, continuing social dilemmas, the group has usually organized to at least moderate their effects.