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Using Collective Action Experiments to Teach the Economics of Social Issues

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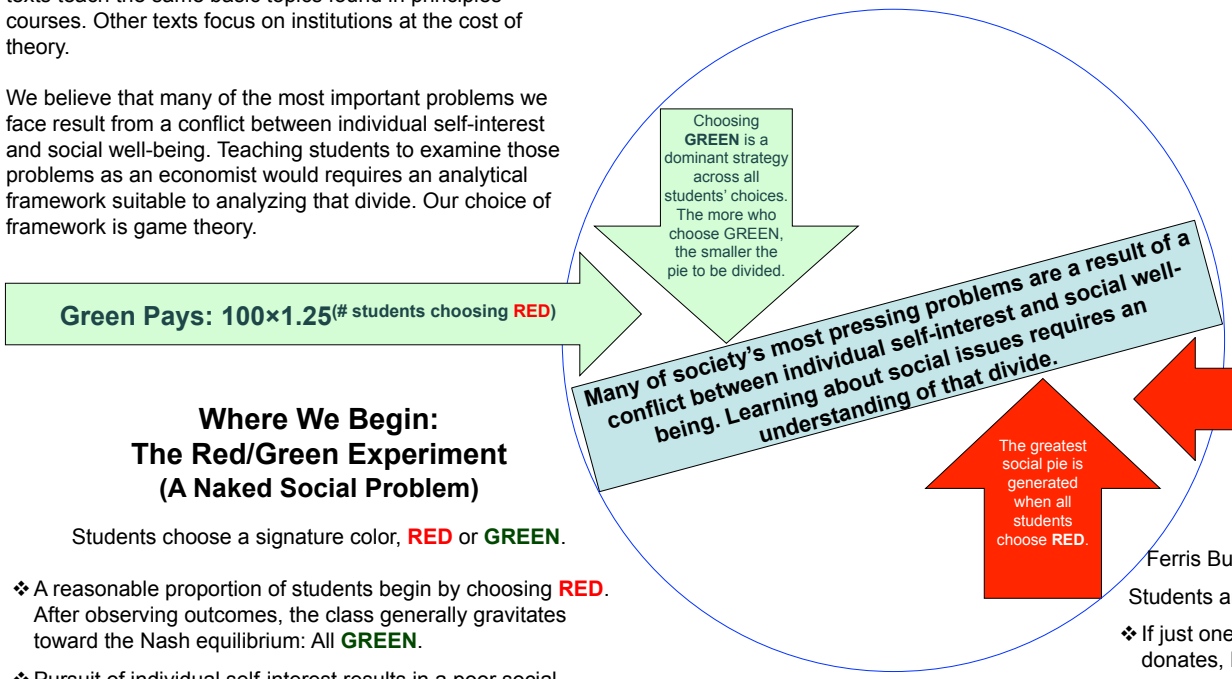
Introduction:

Traditionally, Economics of Social Issues courses have gravitated toward a principles-type treatment of topics that often don't truly constitute social problems. Many Issues texts teach the same basic topics found in principles courses. Other texts focus on institutions at the cost of theory.

We believe that many of the most important problems we face result from a conflict between individual self-interest and social well-being. Teaching students to examine those problems as an economist would requires an analytical framework suitable to analyzing that divide. Our choice of framework is game theory.



Where We Begin: The Red/Green Experiment (A Naked Social Problem)

Students choose a signature color, **RED** or **GREEN**.

- A reasonable proportion of students begin by choosing **RED**. After observing outcomes, the class generally gravitates toward the Nash equilibrium: All **GREEN**.
- Pursuit of individual self-interest results in a poor social outcome.
- This experiment presents a context-free way to demonstrate the divide between self-interest and social interest.

Along the Way: Following the Herd Experiment

Students must choose whether to receive a vaccine:

- Vaccinations are costly, 500 pts.
- Illness is more costly, 1500 pts.

- The probability of getting sick depends on how many others choose to be vaccinated. Specifically:

$$P(\text{illness}) = 100\% \times \frac{\left[N - N_{immunizing} - 1\right]}{\left[N - 1\right]}$$

- Immunizers receive only part of the benefits of the vaccine. Bystanders capture some of the benefits as well.
- Some individuals attempt to free ride on the immunizations of others.
- Once decisions are submitted, a random number is generated. If the random number < *P*(illness), non-immunizers contract the illness.
- Students display remarkable tendency to gravitate toward 66% immunizing (the Nash equilibrium).

Where We End: Save Ferris Experiment

Ferris Bueller is sick, and needs a kidney transplant.

Students are asked to donate a kidney (at some cost).

- If just one student assents, Ferris lives. If nobody donates, Ferris dies.
- If Ferris lives, everyone benefits (including the donor).

This is a case where a single individual provides a public good. Potential volunteers must weigh their desire to see Ferris saved with their desire to see someone else do the saving.

In theory, the larger the group of potential volunteers, the smaller the chance that a donor will be found. (In most iterations, Ferris dies.)