Classroom Experiment 7: Public Goods Contribution

經濟學實驗七: 公共財自願捐獻

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A Water Purification Project

▸ Overview

▸ Each round, each group member receives same amount of money

▸ Each simultaneously chooses how much to contribute to water purification project

▸ Each individual's benefit from project:
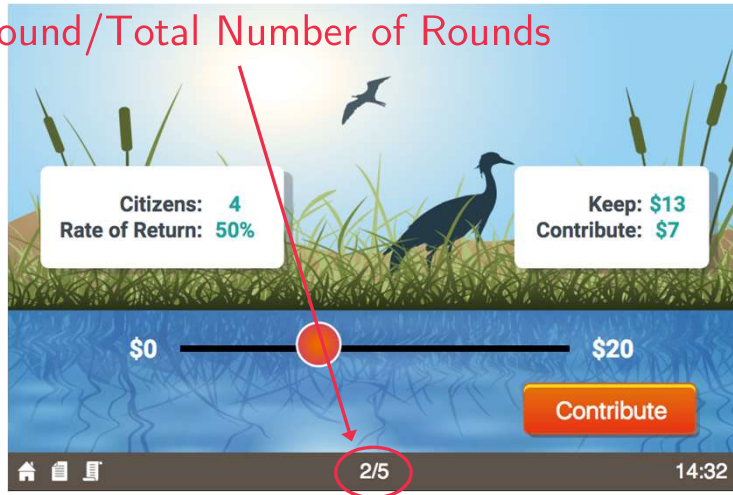 ▸ Total Group Contributions x Rate of Return

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Your Game Screen

Current Round/Total Number of Rounds
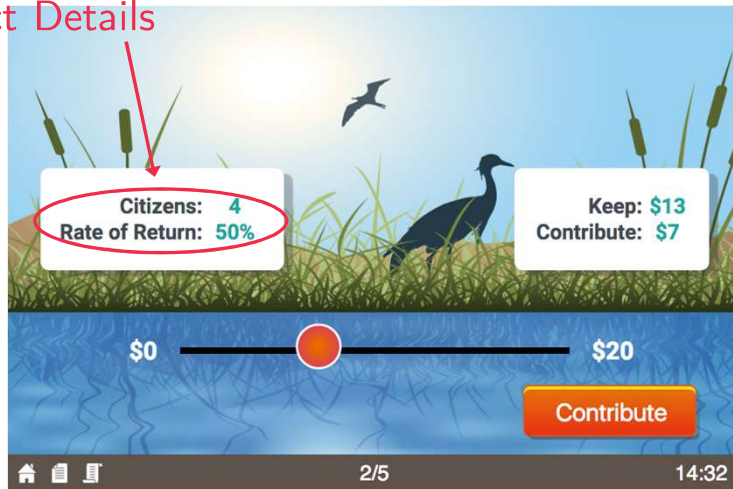

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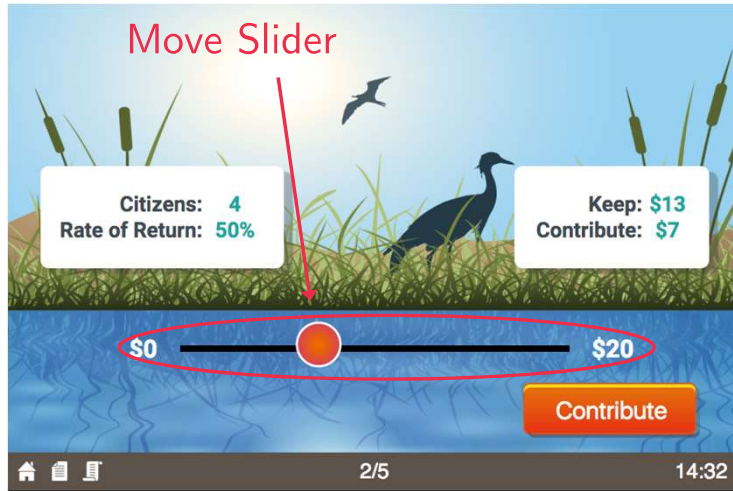
Your Game Screen

Project Details

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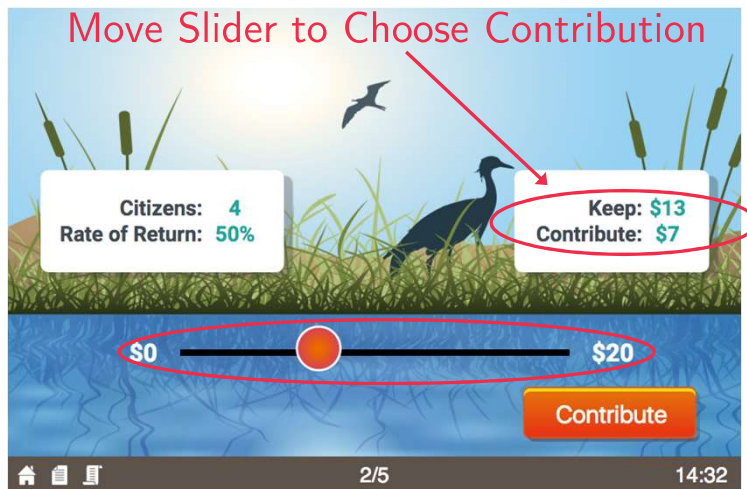2021/10/29 — Public Goods Contribution — Joseph Tao-yi Wang

Your Game Screen

Your Game Screen

Your Game Screen

and Submit

Your Game Screen

to View Previous Rounds

Payoff

▸ Overview

<p align="right">Happy Playing!</p>
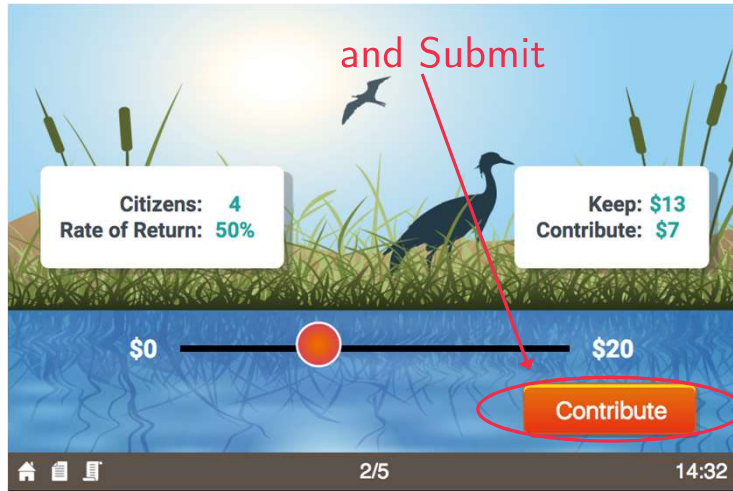
▸ Depend on your contributions and contributions of other group members

▸ Another Example

▸ Start with $20; rate of return is 40% = 2/5

▸ Contributed $12 of $30 group contribution

payoff = start −	your contribution	+	rate of return	×	total group contributions
$20 = $20 −	$12	+	40%	×	$30

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Experiment 7-2: Irrigation Game

▸ Do people cooperate after group discussion?

▸ What if we now play the irrigation game?

　▸ Same rule as before, except

▸ Members claim from the pool in order:

　▸ Member 1 can take whatever s/he wants

　▸ Then, Member 2 can take from what is left

　▸ Etc.

▸ Order is known before contribution

Public Goods Contribution (公共財自願捐獻)

1. A Set of Rules
   - Everybody can contribute, but equally divided
2. Individuals Optimize
   - The Selfish Gene? (拔一毛以利天下而不為？)
3. You React to Others Optimizing
   - You React to Others Optimizing
4. What Should Aggregate Data Look Like?
   - Nash equilibrium = nobody contributes = Tragedy of Commons!

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5. Does Empirical Data Match the Theory?
   - How many contributed zero? Give to Pool = ?
6. Can Individual Differences be Explained?
   - Why did some contribute, but others not?
7. How Can the Institution (Rules) Improve?
   - How can you induce more contribution?
8. Where Did this Institution Come From?
   - Social norms solved Tragedy of Commons
   - What about Global Warming?

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Applications of Public Goods Contribution

▶ Team Work Requires Preventing Free Riders

  ▶ Better if all contribute, but you never know if...

  ▶ Examples:

▶ Project Management

  ▶ Design Reward Schemes To Induce Effort

▶ Disclosure (Good Way to Encourage Donation!)

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Would Pre-play Communication Help?

▶ Watch this Video:

  ▶ https://www.youtube.com/watch?v=7FbkwrhW_0I&t=225s

▶ Two Players Each Choose to Split or Steal

1. Split the Money If Both Choose to Split

2. If One Chooses to Split, the Other Chooses to Steal, the Steal Guy Gets All the Money

3. If Both Choose to Steal, Both Get Nothing

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Would Pre-play Communication Help? 事先溝通有用嗎?

- ‣ How Would You Convince the Other Guy to Split (as One of the Players)?
  - ‣ British TV Program: Golden Balls
  - ‣ How Many People Really Choose to Split? Why?
  - ‣ How to Prevent Being Stolen/Both Get Nothing?
- ‣ How Can You Make Both of You Better Off?
  - ‣ An Unexpected Twist…
    - ‣ http://www.youtube.com/watch?v=S0qjK3TWZE8
    - ‣ 中文字幕版: https://youtu.be/W5qz8SNO7Wc

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Would Pre-play Communication Help? 事先溝通有用嗎?

- ‣ Cooperation is Good, But He May Betray You
  - ‣ Though Consumers Look Competition
- ‣ Examples of Pre-play Communication:
- ‣ WSJ: Airlines Ticket Sales On Monday Night
  - ‣ Opponents Forced to Match Tuesday Morning
  - ‣ Best Online Airfares Occur @ Tuesday 3pm EST
- ‣ Will Airlines Honor Agreements Not to Sale?
  - ‣ If Books.com.tw offers 21% off, so will TAAZE!

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