



Instructor Guide to Trust Games

Laboratory implementation, theoretical foundations,
experimental evidence, and variants

Behavioral and Experimental Economics Research Lab
Department of Economics



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<https://beer-lab.org/>

How to use this guide

This guide supports the preparation, implementation, and classroom discussion of the family of trust games developed for the Behavioral and Experimental Economics Research Lab (BEER Lab) of the Department of Economics at Tecnológico de Monterrey. It is written for instructors with different levels of familiarity with experimental economics and game theory.

The **quick guide** is sufficient to launch a session. The operational chapters explain each screen.

The conceptual chapters provide theories, predictions, and evidence for the debrief. Common rules are explained once; each variant identifies only what changes from the basic game.

Author

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For the instructor

This guide corresponds to the English interface. A separate Spanish version is available.
Project aggregate results only: never link codes to names, student IDs, seats, or individual decisions.

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Quick implementation guide

1.1 Access through the updated laboratory website

Start at <https://beer-lab.org/en/>. Select **CLASSROOM** in the top navigation menu; it opens <https://teaching.beer-lab.org/en/>. In the **Classroom experiments** catalog, use the search box to locate the activity by name. You can also filter by **Topic** or **JEL code**. Clear any filters left from an earlier search before looking for another game.

Each family's card distinguishes **Español** and **English** access links. The **Show extended version** checkbox selects that edition before following a link. Catalog language and session language are separate choices: verify both. Students use the room specified by the instructor; the instructor prepares and monitors the session through this family's own administrative pages.



Figure 1.1: Current institutional website. Select CLASSROOM in the top navigation menu to open the teaching experiments. Captured on October 7, 2026.

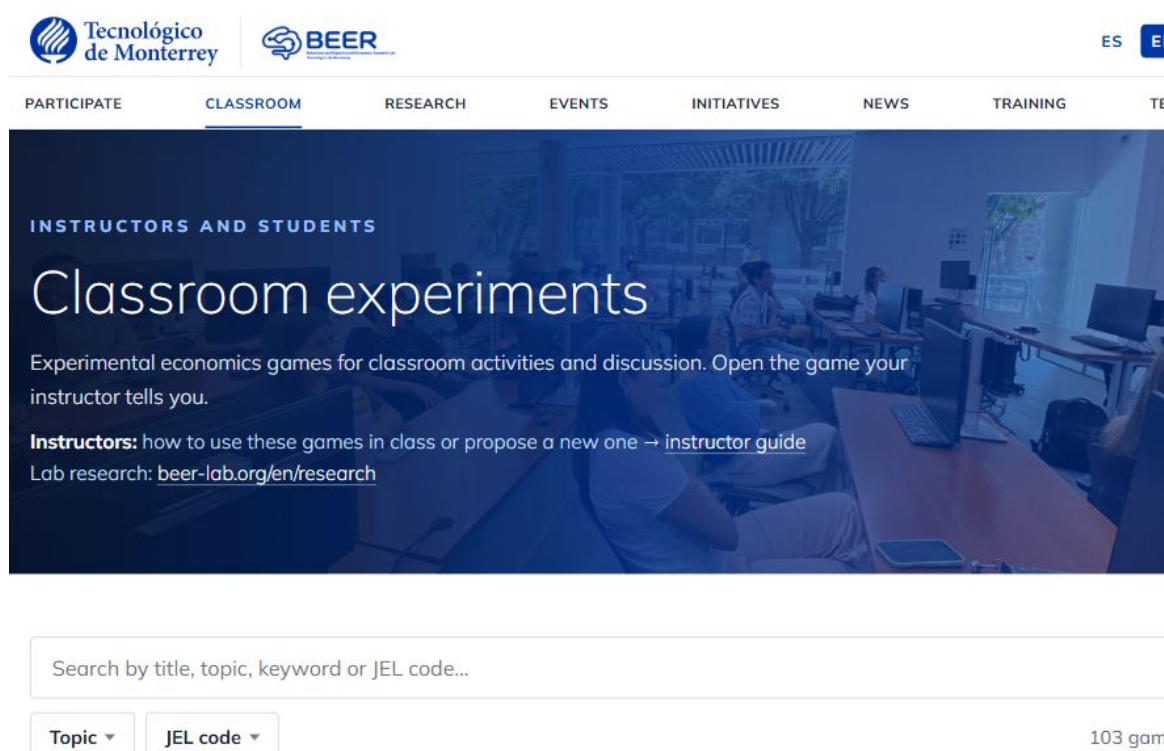


Figure 1.2: Current catalog: search by title, topic, or JEL code. Then locate this family's card and select language and edition. Captured on October 7, 2026.

Checking resources, comprehension, and participant requirements

Before opening the room, check the selected configuration and the number of students present. The session-creation form states the group size and minimum required by that configuration. An individual activity accepts any positive participant count; an interactive activity must satisfy its stated requirement: complete groups when size is fixed, or a minimum participant count when size is flexible. Requirements may change across treatments, for example when adding a third party or changing an institution's size. If you edit a grouping parameter, check the requirement for the edited configuration, rather than relying only on the demo's suggested count.

In the instructions, ensure that students can identify what each role receives, what they can decide, and how the outcome is calculated. An initial account, a distributable budget, and final earnings need not be the same amount. Refer to the resources panel and the example for the selected treatment. Do not carry the basic edition's endowment into a treatment that changes accounts or introduces additional positions.

ECU stands for *Experimental Currency Units*: the activity's unit of account. An outcome of 100 ECU does not automatically equal 100 pesos or 100 dollars. Conversion depends on the session configuration. Before announcing a payment, confirm with the laboratory whether money is paid, the conversion rate, and which decisions count for payment. In hypothetical modules, describe amounts as outcomes in the stated situation.

When a comprehension check is included, an incorrect response receives an explanation beside that question, identifying the submitted answer and the correct answer. Other answers remain in the form. Ask the student to return to the example, locate the relevant rule, and redo the calculation before correcting the response. Avoid revealing answers to the entire class for an individual error, and do not interpret a comprehension mistake as an economic choice in the game.

nfianza extendido — versión básica, una ronda
nfianza extendido — versión básica, 10 rondas, pareja fija
nfianza extendido — versión básica, 10 rondas, parejas aleatorias
nfianza extendido — método de estrategia
nfianza extendido — dotación ganada
nfianza extendido — comunicación estructurada
nfianza extendido — multiplicador variable
nfianza extendido — multiplicador privado
nfianza extendido — información social, 10 rondas
nfianza extendido — reputación individual, 10 rondas
nfianza extendido — castigo costoso, 10 rondas
nfianza extendido — cambio de roles, 10 rondas
nfianza extendido — resultados observables
ust Game — baseline, one round
ust Game — baseline, 10 rounds, fixed partner
ust Game — baseline, 10 rounds, random partners
ust Game — strategy method
ust Game — earned endowment
ust Game — structured communication
ust Game — variable multiplier
ust Game — private multiplier
ust Game — social information, 10 rounds
ust Game — individual reputation, 10 rounds
ust Game — costly punishment, 10 rounds
ust Game — role reversal, 10 rounds
ust Game — observable outcomes
nfianza — una ronda
nfianza — 10 rondas, pareja fija

Juego de confianza / Trust Game — BEER Lab

Selecione una variante de este juego. Select a version of this game.

Figure 1.3: Demo contains only the configurations of this game family, in both languages and editions. Continuation 1/2.

	nfianza extendido — castigo costoso, 10 rondas
BE	nfianza extendido — resultados observables
	ust Game — baseline, one round
	ust Game — baseline, 10 rounds, fixed partner
	ust Game — baseline, 10 rounds, random partners
	ust Game — strategy method
	ust Game — earned endowment
	ust Game — structured communication
	ust Game — variable multiplier
	ust Game — private multiplier
	ust Game — social information, 10 rounds
	ust Game — individual reputation, 10 rounds
	ust Game — costly punishment, 10 rounds
	ust Game — role reversal, 10 rounds
	ust Game — observable outcomes
	nfianza — una ronda
	nfianza — 10 rondas, pareja fija
	nfianza — 10 rondas, parejas aleatorias
	— one round
	— 10 rounds, fixed partner
	— 10 rounds, random partners

Figure 1.4: Demo contains only the configurations of this game family, in both languages and editions. Continuation 2/2.

Rooms

Current rooms:

[ES] Juego de confianza
[EN] Trust Game
[ES] Juego de confianza extendido
[EN] Extended Trust Game

Figure 1.5: Rooms contains the four rooms for this family: basic and extended editions in Spanish and English.

Room: [EN] Trust Game

Create a new session

English room. Only the three English configurations for this game are shown below.

Session Config

[EN] Trust Game — one round

Number of participants

Complete groups of 2 participants. Use a multiple of 2; minimum 2.

Create

[Configure session](#) 

App sequence

trust_game_common (10 rounds)

Juego de confianza bilingüe / Bilingual Trust Game.

Figure 1.6: Session-creation form for the basic English room. Check the selected configuration and participant requirement before creating the session.

Downloading a session with several rounds

For the instructor

Open **Data** within the relevant session and use that session's CSV or CSV-for-Excel download link. The general export has one row per participant and columns for the different rounds. Ten rounds do not necessarily mean ten rows per person. When the family provides its own long-format export, observations may instead be organized by participant and round or another unit defined by the design.

Save the original file together with the configuration name, session code, and active-round count. Check that columns for the last active round are present and that the data belong to the selected session. Empty cells can represent inactive rounds, a pending decision, or a field that does not apply to a role; do not automatically recode them as zeros. To compare learning, preserve round and group identifiers alongside participant identifiers. Share only anonymous aggregates in class, and record session incidents before constructing derived tables.

1.2 Basic facts

Purpose	Study trust, vulnerability, reciprocity, and surplus creation in a sequential interaction.
Participants	An even number; groups of two, with a Player 1 and a Player 2.
Endowment and multiplier	Player 1 receives 100 ECU. The transfer is multiplied by 3 before reaching Player 2.
Payoff	If the transfer is s and the return is r , $\pi_1 = 100 - s + r$ and $\pi_2 = 3s - r$.

Duration	25–35 minutes for one round; 45–60 for ten rounds or an extension.
Student access	trust.beer-lab.org/room/trust_game_en .
Extended access	.../room/trust_game_extended .
Instructor access	trust.beer-lab.org/demo .
Report	Player 1 trust in blue; Player 2 reciprocity in orange; histograms, their relationship, and round trends.
Experimental unit	Interactions in groups of 2 participants.
Basic edition	one round; 10 rounds, fixed partner; 10 rounds, random partners.
Extended edition	baseline, one round; strategy method; earned endowment; structured communication; variable multiplier; private multiplier; social information, 10 rounds; individual reputation, 10 rounds; costly punishment, 10 rounds; role reversal, 10 rounds; observable outcomes.
Decision	A chooses the initial transfer; B decides how much to return after it is multiplied.
Topics	trust; reciprocity; social preferences; repeated games; reputation.
JEL	C91; C92; D64; D91; Z13.

1.3 Minimum sequence

1. Confirm an even number of participants and select the treatment, rounds, and matching rule.
2. Go to beer-lab.org, select **View games**, and continue to teaching.beer-lab.org.
3. Select **Trust Game** and the session language.
4. In the instructor area, open **Rooms** and choose the basic or extended room.
5. Select the configuration, create the session, and open **Monitor** and **Report**.
6. Share the room or QR code. Reveal the report only after every pair has completed the round.

1.4 Checklist

- ☐ Computers, internet, browser, and projector are ready.
- ☐ Even participant count, variant, rounds, and matching rule are confirmed.
- ☐ Credentials, link, or QR code were tested from another computer.
- ☐ The pedagogical nature or payment rule was explained before play.
- ☐ Monitor, report, and discussion questions are ready.
- ☐ Definitions of trust, reciprocity, and profitable trust are available for the debrief.

Accessing the platform

2.1 Route from the laboratory website

At beer-lab.org, select **View games** in the section for instructors and students.

The catalog is at teaching.beer-lab.org. Select the Trust Game card and the session language.

2.2 Student and instructor routes

	Students	Instructor
Route	/room/trust_game_en	/demo
Use	Join the session	Create and supervise
Identification	Anonymous code	Administrative credentials
Projection	No	Aggregate report only

What participants will see

Students do not need an oTree, GitHub, or ORSEE account. They open the room, join the session, and receive an anonymous code.

2.3 Creating and supervising a session

Under **Rooms**, open the room and select the configuration and participant count. Use the persistent room for class and **Demo** for testing. At the address for this game, **Demo** lists only the 32 trust game configurations, and **Rooms** shows only its four rooms (basic and extended in Spanish and English). If another game appears, do not start the session; contact the laboratory coordinator.

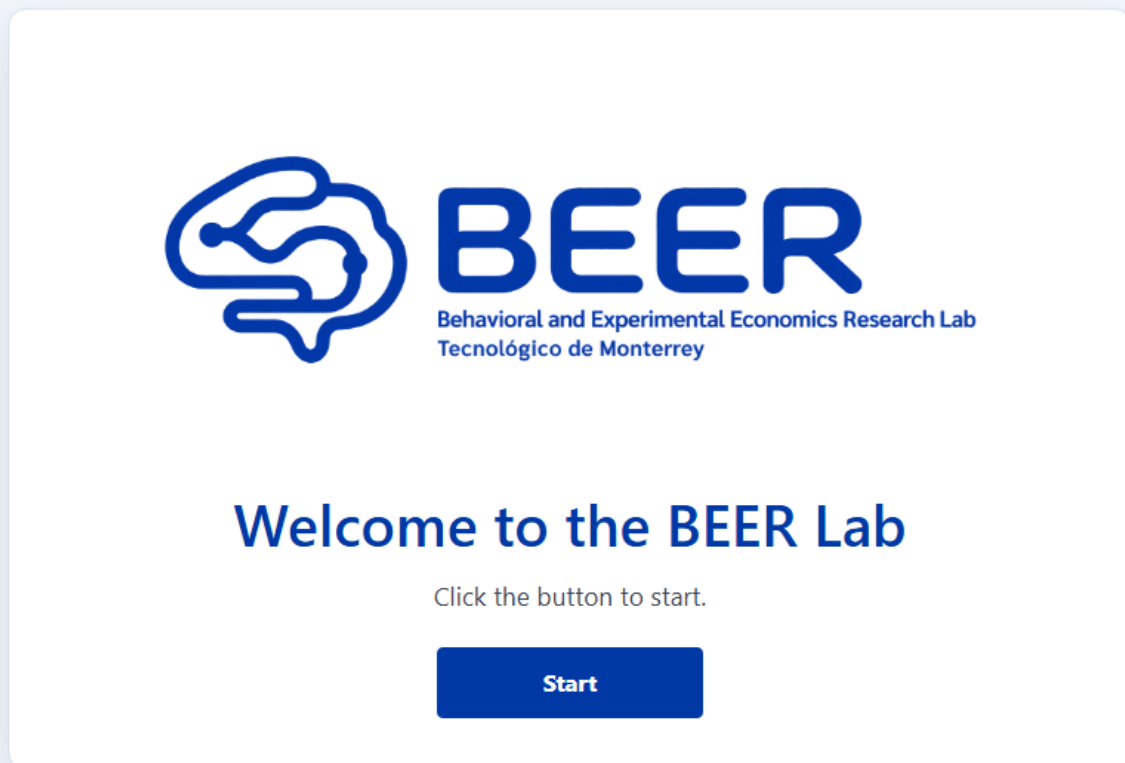


Figure 2.1: Two routes with different functions. Student room.

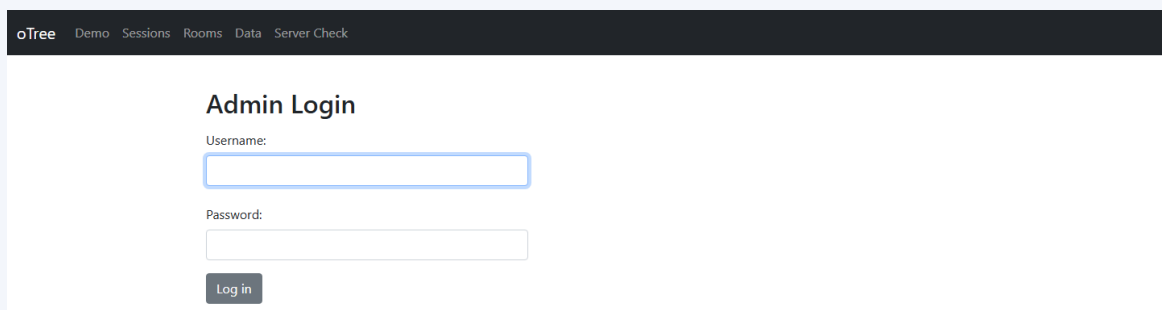
The image shows an administrative login interface. At the top, there is a dark navigation bar with the "oTree" logo and links for "Demo", "Sessions", "Rooms", "Data", and "Server Check". Below this, the heading "Admin Login" is centered. Under the heading, there are two input fields: "Username:" followed by a text box, and "Password:" followed by a password box. At the bottom of the form, there is a grey button labeled "Log in".

Figure 2.2: Administrative login.

oTree

DemoSessionsRoomsDataServer Check

[EN] Trust Game — one round: session '2n77o79s' (demo)

New

Links

Monitor

Data

Payments

Report

Description

Below are temporary links for testing and demonstration. To launch a real study, either create persistent links by setting up a [room](#), or create a session through the [sessions page](#).

Choose one of the following options to play the session:

Combined views

Split-screen view

Launch

Grid view

Launch

Session-wide testing link

Open the below link in up to 4 browser tabs.

<http://127.0.0.1:8001/join/vutajjo>

Single-use links

Open each link in its own browser tab.

P1

<http://127.0.0.1:8001/initializeParticipant/cn7c2u7b>

P2

<http://127.0.0.1:8001/initializeParticipant/17b48djd>

P3

<http://127.0.0.1:8001/initializeParticipant/jivtpyir>

P4

<http://127.0.0.1:8001/initializeParticipant/b2yfhcdt>

Figure 2.3: Creation and monitoring. Temporary testing links.

oTree

DemoSessionsRoomsDataServer Check

[EN] Trust Game — one round: session '2n77o79s' (demo)

New

Links

Monitor

Data

Payments

Report

Description

ID	Code	Label	Progress	App	Round	PageName	Waiting	WaitsFor	Since
0 started, 0 in progress (total: 4)									

Advance slowest participants

Figure 2.4: Participant progress.

The basic game and its screens

3.1 Rules, sequence, and payoffs

Player 1 receives an endowment of 100 ECU and chooses an integer transfer $s \in [0, 100]$. The laboratory multiplies it by 3. Player 2 observes the resulting $3s$ and chooses an integer return $r \in [0, 3s]$. The return is not multiplied.

$$\pi_1 = 100 - s + r, \quad \pi_2 = 3s - r, \quad \pi_1 + \pi_2 = 100 + 2s.$$

Every ECU transferred creates 2 additional ECU of surplus. The return allocates surplus but does not change the total. Player 1 recovers the amount sent when $r \geq s$. With a multiplier of 3, this requires returning at least one third of the amount received.

For the instructor

Avoid calling Player 1 “generous” or Player 2 “fair” before the discussion. Decisions may reflect beliefs, risk, efficiency, altruism, inequality, reciprocity, or learning.

3.2 Welcome, instructions, and comprehension

The comprehension check uses $s = 20$ and $r = 30$: Player 2 receives 60 ECU, Player 1 ends with 110, and Player 2 with 30. It also checks observation, rounds, and matching.

3.3 Role assignment

The colors remain consistent: **blue for Player 1** and **orange for Player 2**. In the basic game, roles remain fixed throughout the session.

3.4 Transfer, waiting, and return

Player 1 moves first while Player 2 waits. After the transfer, Player 1 waits and Player 2 observes the transfer, multiplier, and amount received before returning any amount.

What participants will see

“Please wait” means the page is synchronizing with the partner. It is not an error. The participant should not close or refresh the page.



Welcome to the BEER Lab

The Behavioral and Experimental Economics Research Lab of the Department of Economics at Tecnológico de Monterrey is a space for learning about economic decision-making through controlled activities.

Read each screen carefully and decide according to your own judgment. Results will be presented in aggregate for class discussion.

Laboratory rules

- Remain silent and do not communicate with other participants unless the instructions allow it.
- Do not look at other screens.
- Put away your phone and do not open other applications.
- Do not close, refresh, or leave the page.
- Raise your hand if you need assistance.

☐

I have read and understood the laboratory rules.

Continue to instructions

Powered by [oTree](#)

Figure 3.1: Entry and instructions. BEER Lab rules.



Instructions

Baseline

One round
One random pair

Resources and unit of account

Initial endowments per round: the first player receives 100 ECU and the second starts with 0 ECU. The first player's transfer and its multiplication determine what the second can return.

ECU stands for Experimental Currency Units. It is the unit of account for this activity.

This session does not convert ECU into real money.

Player 1 receives 100 ECUs and decides how much to send to Player 2. The transfer is multiplied. Player 2 then decides how much to return.



Powered by [oTree](#)

Figure 3.2: Current basic-edition instructions, with initial resources and experimental units.



Review the marked questions. Each shows your answer and an explanation; your other answers are retained.

Check the rules

Answer correctly before continuing.

Baseline
One round

Resources and unit of account

ECU stands for Experimental Currency Units. It is the unit of account for this activity.

This session does not convert ECU into real money.

If 20 ECUs are sent and the multiplier is 3, how many ECUs does Player 2 receive?

Your answer: 61. The correct answer is 60. The first player sends 20 ECU; the example multiplier is 3: $20 \times 3 = 60$ ECU.

If 20 ECUs are sent and 30 ECUs are returned, what is Player 1's payoff?

Figure 3.3: Current comprehension check with an incorrect answer, its specific explanation, and retained responses. Continuation 1/2.

Does Player 2 observe the transfer before the effective return is determined?

- ☒ Yes
☐ No

Does Player 1 know the exact multiplier before sending?

- ☒ Yes
☐ No

How many rounds are in this session?

- ☒ 1 round
☐ 10 rounds

How are pairs formed?

- ☒ The interaction occurs once.
☐ The same pair continues.
☐ The partner changes each round.

61

Your answer: 61. The correct answer is 60. The first player sends 20 ECU; the example multiplier is 3: $20 \times 3 = 60$ ECU.

If 20 ECUs are sent and 30 ECUs are returned, what is Player 1's payoff?

110

With multiplier 3, what is Player 2's payoff in that example?

30

Does Player 2 observe the transfer before the effective return is determined?

☒ Yes
☐ No

Does Player 1 know the exact multiplier before sending?

☒ Yes
☐ No

How many rounds are in this session?

☒ 1 round
☐ 10 rounds

How are pairs formed?

☒ The interaction occurs once.
☐ The same pair continues.
☐ The partner changes each round.

Check answers

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Figure 3.4: Current comprehension check with an incorrect answer, its specific explanation, and retained responses. Continuation 2/2.

Before starting

Your role is

Baseline
One random pair

Role

Player 1 · investor

Your role will remain fixed throughout the session.

Begin

Powered by [oTree](#)

Figure 3.5: Private role assignment. Player 1 chooses the transfer.

Before starting

Your role is

Baseline
One random pair

Role

Player 2 · trustee

Your role will remain fixed throughout the session.

Begin

Powered by [oTree](#)

Figure 3.6: Player 2 chooses the return.

Your transfer decision

How many ECUs do you want to send?

Multiplier ×3
Round 1

Player 1 · investor

100 ECU

ECU

Confirm transfer

Powered by [oTree](#)

Figure 3.7: First decision. Player 1 transfer decision.

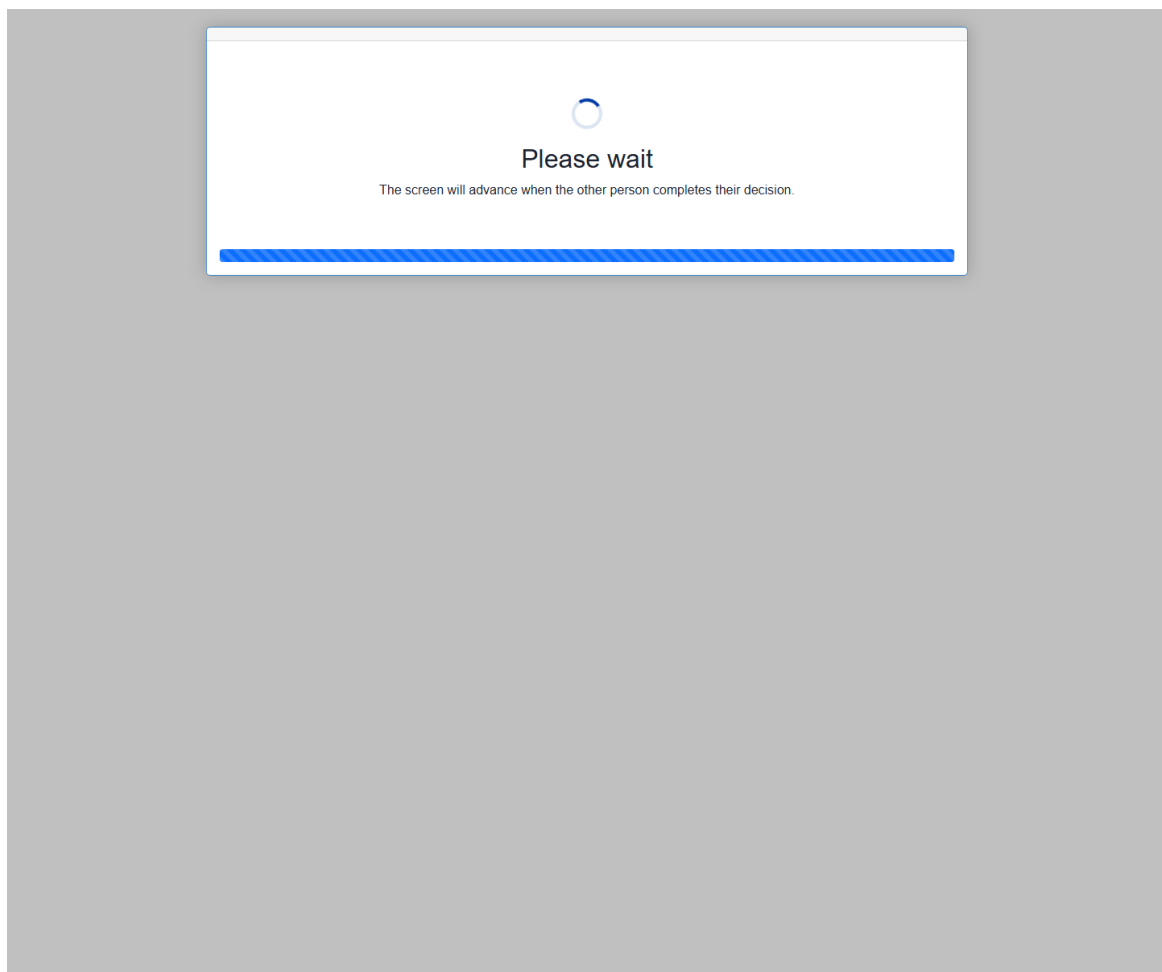


Figure 3.8: Player 2 waiting screen.

Your return decision

How many ECUs do you want to return?

Multiplier ×3
Round 1

Amount sent

50 ECU

Amount received after multiplication

150 ECU

ECU

Confirm return

Powered by [oTree](#)

Figure 3.9: Second decision. Player 2 return decision.

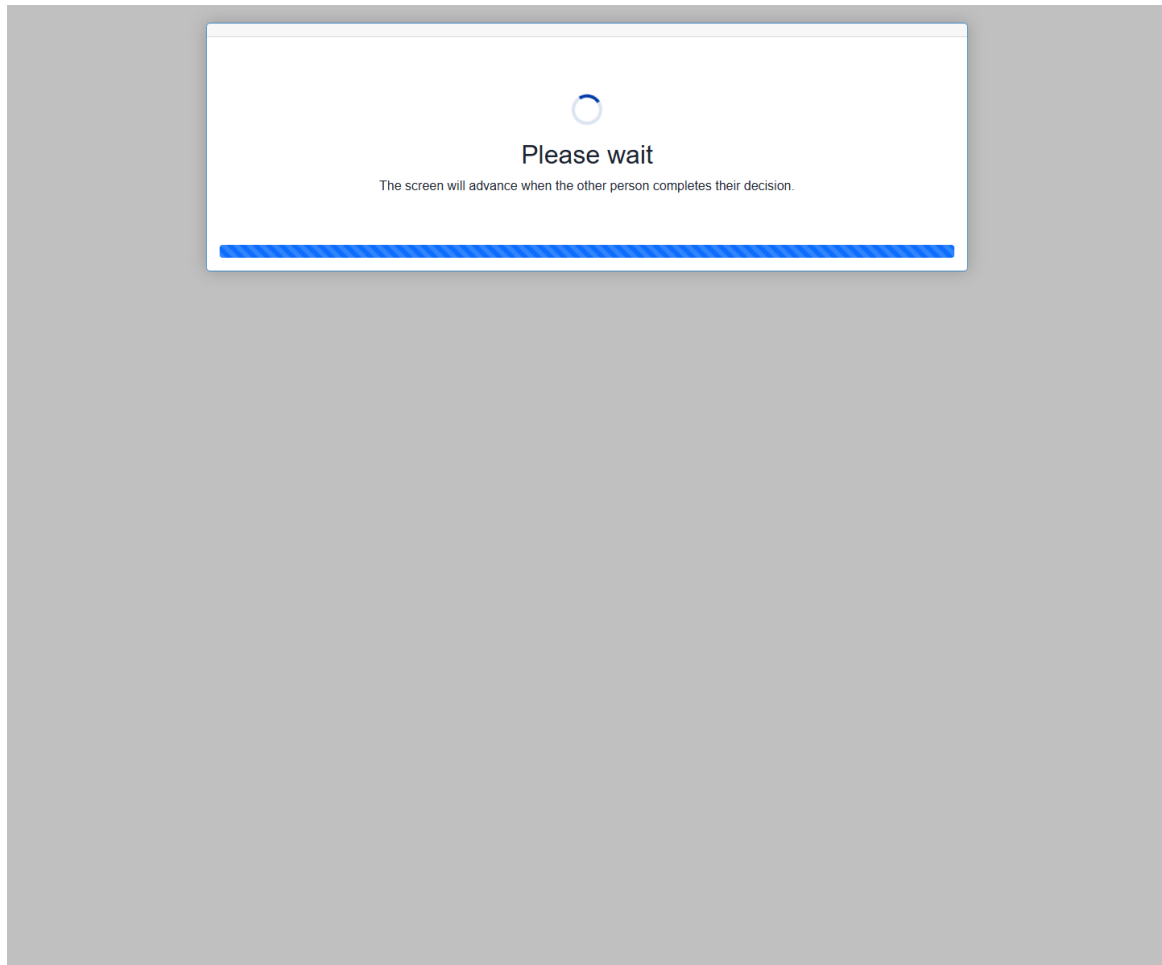


Figure 3.10: Player 1 waiting screen.

3.5 Round result and individual summary

Both roles see the transfer, multiplied amount, return, and payoffs. The final summary shows



Powered by [oTree](#)

Figure 3.11: Results by role. Private result for Player 1.

3.6 Instructor report

The report stays protected until every pair finishes. The instructor then clicks **Reveal round results**.

3.6.1 What each panel measures

- **Trust**: $100s/100$, the transfer as a percentage of the endowment.
- **Reciprocity**: $100r/(3s)$, the return as a percentage of the amount received. It is undefined when $s = 0$.
- **Profitable trust**: share of positive transfers for which $r \geq s$.
- **Histograms**: separate distributions of trust and reciprocity.
- **Scatter plot**: each pair appears by transfer and return rate. The 33.3% line marks the threshold at which Player 1 recovers the transfer.
- **Trends**: mean trust and reciprocity in each round.

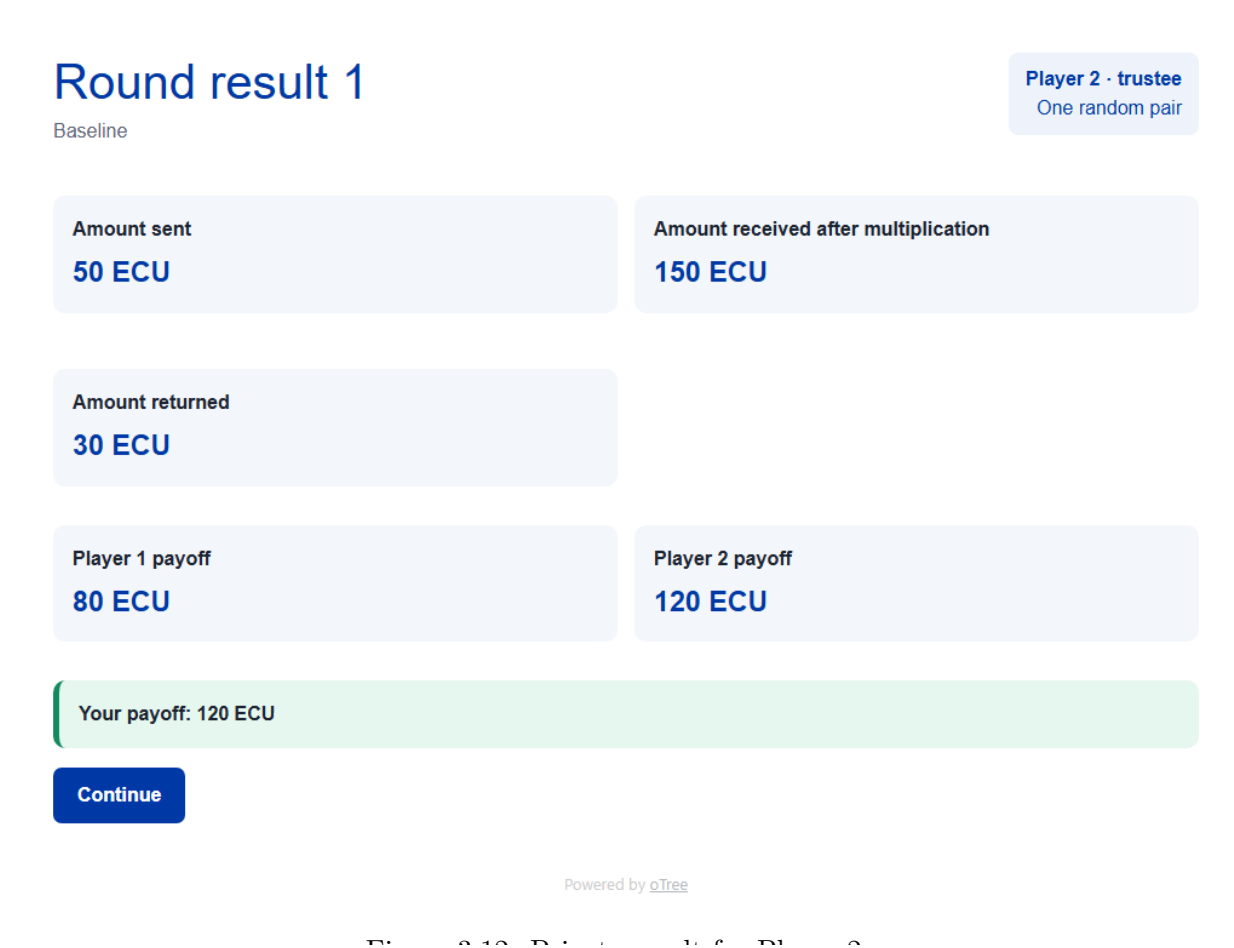


Figure 3.13: Completion screen and cumulative result.

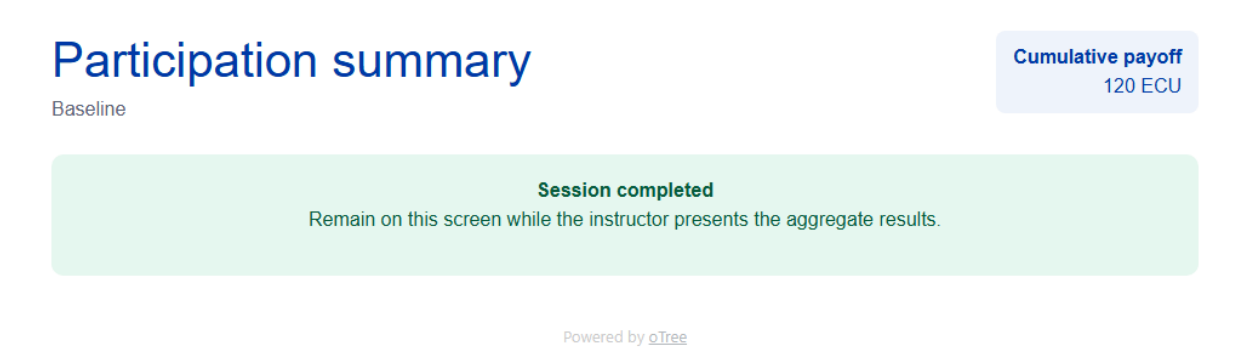


Figure 3.13: Completion screen and cumulative result.

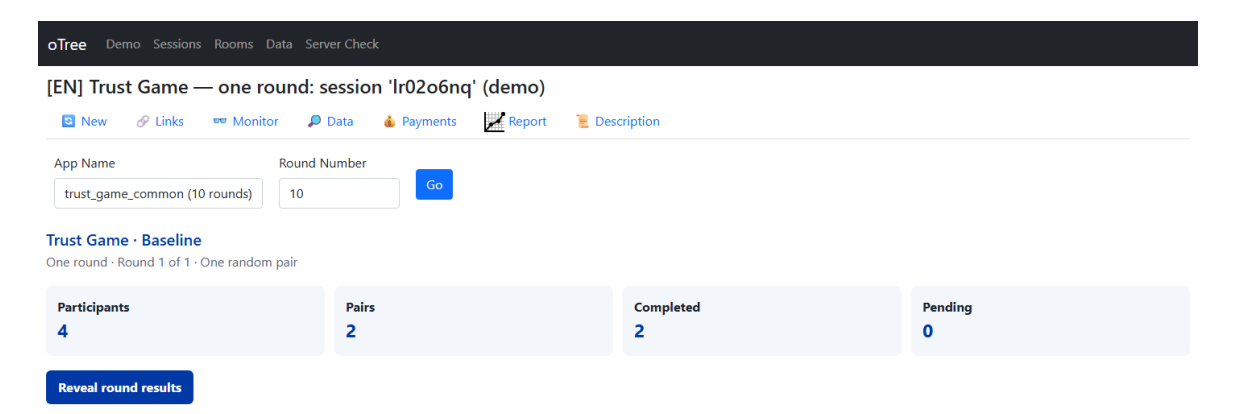


Figure 3.14: Results remain protected until every pair completes the round.

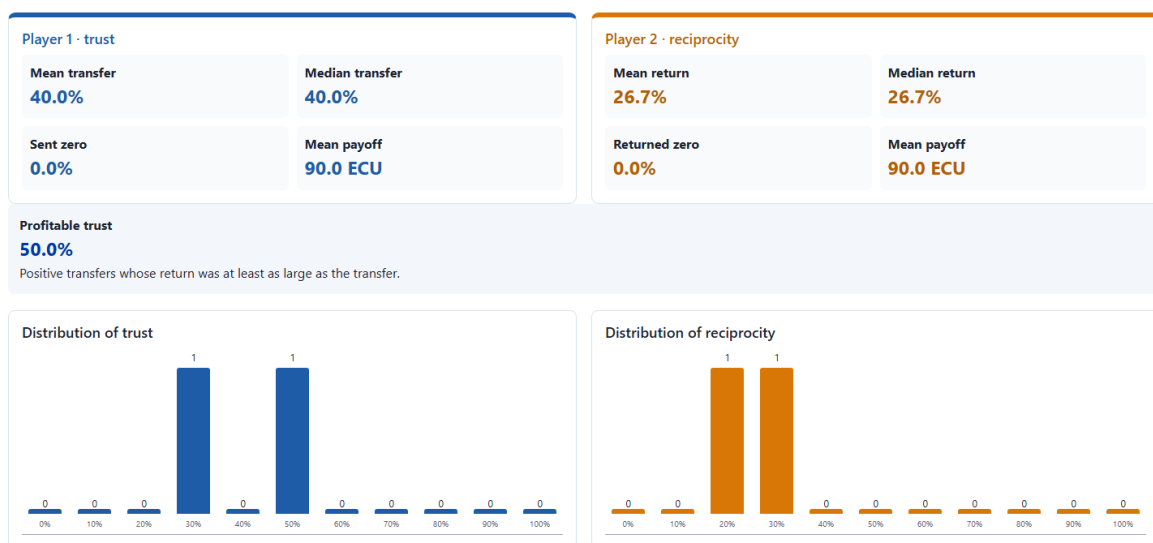


Figure 3.15: Revealed results: role-specific indicators and separate trust and reciprocity histograms.

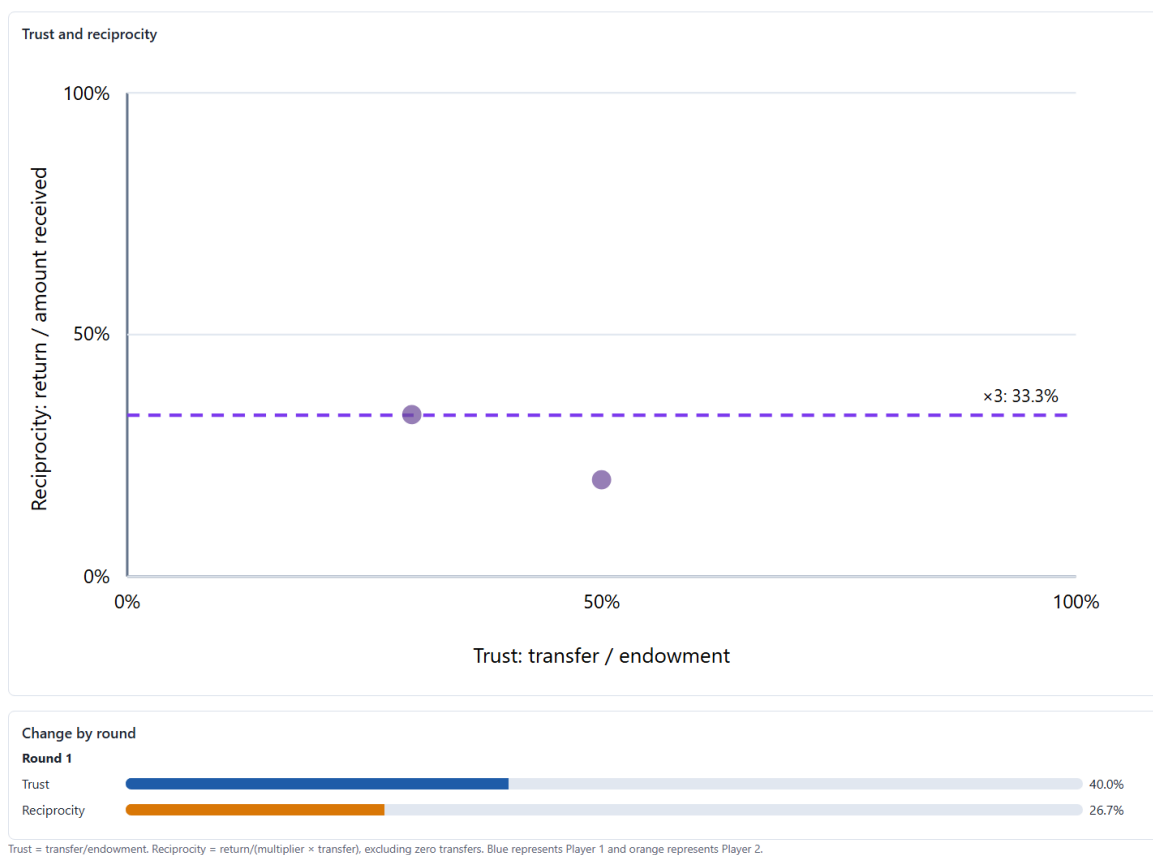


Figure 3.16: Trust-reciprocity relationship, break-even threshold, and round trends.

Attention

Reciprocity excludes zero transfers. Always report the number of pairs and denominator. With two pairs, one observation represents 50% of the distribution. A classroom mean is descriptive, not a precise population estimate.

Theoretical foundations and evidence

4.1 Prediction under monetary self-interest

At the last stage, a Player 2 who values only personal ECU chooses $r = 0$ after every s . Anticipating this response, Player 1 chooses $s = 0$. Backward induction therefore predicts $(s, r) = (0, 0)$ and payoffs $(100, 0)$. This outcome protects Player 1's private payoff, but every $s > 0$ increases total surplus.

The prediction does not say that transferring is a mistake. It is conditional on purely monetary preferences, correct expectations, and common knowledge of those assumptions. The game is pedagogically useful precisely because observed behavior commonly departs from this benchmark (Berg et al., 1995; Camerer, 2003).

4.2 What a transfer can mean

A transfer makes Player 1 vulnerable, but it does not identify a unique motive. It may combine expected repayment, risk tolerance, betrayal aversion, altruism, or a preference for efficiency. Comparisons with equivalent lotteries show that the social risk of betrayal can be valued differently from impersonal chance (Bohnet and Zeckhauser, 2004; Fehr, 2009).

Cox develops a three-game design to separate trust from altruism and reciprocity from distributional preferences (Cox, 2004). Ashraf, Bohnet, and Piankov find that expectations explain much of trusting behavior while unconditional kindness also matters; unconditional kindness can account for more of second-mover behavior than reciprocity alone (Ashraf et al., 2006).

Theoretical foundation

In this session, “trust” and “reciprocity” are operational labels for two rates. They are not pure measures of a preference or personal trait.

4.3 Social preferences and reciprocity

Inequality aversion can induce returns that reduce payoff differences (Fehr and Schmidt, 1999; Bolton and Ockenfels, 2000). Models of reciprocity incorporate intentions and responses to perceived kindness (Dufwenberg and Kirchsteiger, 2004). These theories can all predict $r > 0$, but for different reasons: the final allocation, the intention behind the transfer, or the expectation it created.

Returning one third of the amount received under a multiplier of 3 restores Player 1's endowment,

but it does not generally equalize payoffs. Equal payoffs require

$$100 - s + r = 3s - r \implies r = 2s - 50,$$

when this value is feasible. The break-even return, repayment of the transfer, and equal division are therefore distinct benchmarks.

4.4 Empirical regularities

The foundational experiment by Berg, Dickhaut, and McCabe documented positive transfers and returns under anonymity and included a social-history treatment ([Berg et al., 1995](#)). Johnson and Mislin’s meta-analysis covers 162 replications and more than 23,000 participants. It documents substantial heterogeneity and protocol, multiplier, population, and both-role effects ([Johnson and Mislin, 2011](#)). There is no universal “correct” rate.

For the instructor

Compare the class with the qualitative prediction of zero transfer and zero return. Do not present a published mean as a moral norm or universal reference value. Protocol differences matter.

4.5 Repetition and matching

With fixed partners, present behavior can affect future responses. In ten rounds with a known endpoint, monetary backward induction still predicts zero transfer in every round. In practice, bilateral reputation, learning, heterogeneous types, and social preferences may support positive transfers and returns for part of the sequence. Repeated trust-game evidence shows that expected relationship length changes strategies and the evolution of trust ([Engle-Warnick and Slonim, 2004](#)).

Random rematching weakens direct reciprocity between the same two people. Learning, norms, and beliefs about the population remain. The algorithm preserves roles and attempts to avoid repeat partners; repetition becomes unavoidable when there are too few possible pairs.

Implementing the basic game

5.1 Available configurations

Configuration	Rounds	Matching
trust_game_en_1_round	1	One random pair
trust_game_en_10_fixed_partner	10	Same partner
trust_game_en_10_random_partners	10	New partner each round

5.2 Designing a classroom comparison

When one class completes several treatments in sequence, order, experience, and discussion contaminate the comparison. This may be acceptable for a demonstration. For a stronger causal interpretation, randomly assign students or sessions, hold instructions and group size constant, do not reveal results between treatments, and record sample sizes.

Checkpoint

Before starting, announce the number of rounds, matching rule, and meaning of ECU. Do not announce the standard prediction as the correct answer. Verify the numerical example and confirm that Player 2 observes the transfer before returning.

5.3 Basic-game debriefing script

Feedback script

1. Before revealing results, ask for separate predictions of Player 1 transfers and Player 2 returns.
2. Show the number of participants, completed pairs, and distributions; begin with histograms rather than the mean.
3. Compare behavior with the self-interest benchmark: $r = 0$ and, in anticipation, $s = 0$.
4. Use the scatter plot to ask whether larger transfers received larger return rates. Point out the 33.3% line.

5. Compare trust, reciprocity, and profitable trust. Explain why they measure different objects.
6. In ten rounds, examine trajectories and the endpoint. Compare fixed and random partners without claiming causality if assignment was uncontrolled.
7. Close by distinguishing observed action, expectation, and motivation.

Extended variants

6.1 Configuration map

Configuration	Change	Concept
<code>trust_game_extended_1_round</code>	Baseline	One-shot interaction
<code>trust_game_extended_10_fixed_partner</code>	Repetition	Bilateral relationship
<code>trust_game_extended_10_random_partners</code>	Rematching	Learning without fixed pair
<code>trust_game_extended_strategy_method</code>	Contingent plan	Conditional reciprocity
<code>trust_game_extended_earned_endowment</code>	Prior task	Entitlement and deservingness
<code>trust_game_extended_communication</code>	Structured message	Promises and expectations
<code>trust_game_extended_variable_multiplier</code>	Public $\times 2$ or $\times 5$	Social return
<code>trust_game_extended_private_multiplier</code>	Asymmetric information	Informational uncertainty
<code>trust_game_extended_social_information</code>	Prior averages	Descriptive norms
<code>trust_game_extended_reputation</code>	Individual history	Reputation
<code>trust_game_extended_costly_punishment</code>	1:3 sanction	Enforcement and efficiency
<code>trust_game_extended_role_reversal</code>	Alternating roles	Perspective and learning
<code>trust_game_extended_observable_outcomes</code>	Anonymous table	Social observability

6.2 Strategy method

Player 2 chooses a return for each possible transfer of 0, 25, 50, 75, and 100 ECU before learning the actual transfer. Player 1 selects from those same five values, and the system applies the relevant response. The design therefore observes a response function for every Player 2.

The literature finds that the strategy method often preserves qualitative treatment effects, although it can change intensity and some behaviors, particularly punishment (Brandts and Charness, 2011). Compare the return as a percentage received at every transfer level.

Feedback script

Ask whether the return rate rises with the transfer. Distinguish responses to Player 1's intention from preferences over final allocations. The elicitation method itself may also change deliberation.

6.3 Earned endowment

Before play, Player 1 solves three arithmetic tasks: $7 + 5$, 3×7 , and $40 - 8$. After correct answers, the 100 ECU are framed as earned. The subsequent game is unchanged.

This extension supports discussion of perceived property rights and deservingness. Classic earned-endowment evidence comes mainly from the dictator game, where earning resources reduces transfers (Cherry et al., 2002); it is evidence about a related mechanism rather than a direct estimate for this trust treatment.

Feedback script

Compare the language of “received” and “earned.” Does it change willingness to expose resources? Without random assignment to a simultaneous baseline, a difference may reflect composition or experience.

6.4 Structured communication

Before the transfer, Player 2 selects one of four messages: a promise to return at least the amount sent; a promise to return about one third of the amount received; a statement emphasizing own payoff; or no promise. Player 1 reads the message. There is no free chat and the message is nonbinding.

Promises can influence expectations and activate guilt aversion. Charness and Dufwenberg find that communication and promises increase trustworthy behavior in a related partnership game (Charness and Dufwenberg, 2006). The report displays trust and reciprocity by message, but message choice is not random.

Feedback script

Compare promise, transfer, and return. Which messages appeared credible? An association by message combines selection and response; do not interpret it as the causal effect of the text.

6.5 Known variable multiplier

The multiplier is 2 or 5, and both roles know it before deciding. A larger multiplier raises the surplus created by a transfer and changes Player 1’s break-even return rate: 50% of the amount received under $\times 2$ and 20% under $\times 5$. The monetary benchmark remains $r = 0$ and $s = 0$.

The meta-analysis identifies the multiplier as one protocol feature related to heterogeneous outcomes, especially return behavior (Johnson and Mislin, 2011). The report compares transfers and returns by multiplier and displays the relevant threshold.

Feedback script

Separate amounts transferred, transfer rates, amounts returned, and return rates. A larger returned amount under $\times 5$ does not necessarily imply a higher reciprocity rate.

6.6 Private multiplier

Player 1 knows that the multiplier is either 2 or 5, but not its realized value. Player 2 knows the exact value. This information asymmetry separates the true social return from the information available when trusting. Player 1 must form beliefs about both the multiplier and the return.

Feedback script

Ask what probability participants assigned to each multiplier. Compare known and private conditions while recognizing that a difference can reflect uncertainty about efficiency, uncertainty about the other person, or ambiguity aversion.

6.7 Social information

Across ten rounds with a fixed partner, Player 1 sees the previous round's mean trust, mean reciprocity, and profitable-trust rate from round 2 onward. The information can update beliefs about the class or activate a descriptive norm. The treatment combines social information with bilateral reciprocity.

Social history appeared in the foundational design ([Berg et al., 1995](#)). Related evidence on prosocial behavior shows conditional responses to information about others ([Frey and Meier, 2004](#)); that study does not use this exact game or mechanism.

Feedback script

Examine whether transfers move toward the displayed average. A time-series association may also arise from the partner's return or learning, so it does not identify conformity by itself.

6.8 Reputation

Across ten randomly rematched rounds, from round 2 Player 1 sees the current Player 2's past mean return rate and the number of relevant observations. The screen states when no record exists.

Reputation turns earlier decisions into information for future partners. Bolton, Katok, and Ockenfels show that limited information about previous behavior can increase cooperation among strangers, especially when cooperation is costly ([Bolton et al., 2005](#)).

Feedback script

Compare transfers to partners with high, low, or missing records. Emphasize selection: the return rate is observed only after positive transfers and is imprecise with few observations.

6.9 Costly punishment

After the transfer and return, Player 1 may spend 0–10 ECU, capped by the pre-punishment payoff. Each ECU spent reduces Player 2's payoff by 3 ECU. Final payoffs cannot be negative. The pair remains fixed for ten rounds.

Sanctions may discipline behavior, but they can also destroy surplus or crowd out voluntary reciprocity. Fehr and Rockenbach show that sanctions perceived as unfair can reduce altruism in a trust game (Fehr and Rockenbach, 2003). Their design uses a sanction threat rather than the ex post punishment used here.

Feedback script

Compare returns, punishment, and final payoffs. The report separates returns below and at or above 33.3%. Ask whether punishment was retributive, strategic, or normative, and whether it raised cooperation at the cost of welfare.

6.10 Role reversal

The pair remains fixed for ten rounds and roles alternate every round. Each participant experiences both positions. This can generate perspective learning, across-round reciprocity, or sharper comparisons of norms.

Burks, Carpenter, and Verhoogen find that playing both roles reduces trust and reciprocity in their treatments (Burks et al., 2003). The finding warns that “understanding the other side” need not increase cooperation.

Feedback script

Compare a person’s choices across roles without exposing the code. Ask whether receiving a return affected the next transfer and whether role changes created intertemporal reciprocity.

6.11 Observable outcomes

At the end of a round, the class sees an anonymous pair-level table with the transfer, multiplier, return, and payoffs. It contains no names or participant codes. Anticipated observation can activate social comparison, approval, or image concerns.

Evidence on observability and identification in public-goods experiments shows that social effects depend on what is disclosed and whether decision makers are identified (Andreoni and Petrie, 2004). This is evidence about a related mechanism rather than a direct estimate for this anonymous trust treatment.

Feedback script

Ask whether anticipating the table changed behavior. Keep the discussion aggregate and do not reconstruct pairs. Anonymous observability and individual reputation are different institutions.

Class plan and interpreting results

7.1 Suggested 50-minute session

0–5 min	Access, laboratory rules, and computer assignment.
5–12 min	Instructions and comprehension check.
12–22 min	Decisions. In ten rounds, proceed without discussing aggregate results.
22–27 min	Class predictions before revealing outcomes.
27–40 min	Histograms, scatter plot, break-even threshold, and round trends.
40–47 min	Theory, alternative mechanisms, and published evidence.
47–50 min	Conclusion and transfer to markets, contracts, or organizations.

7.2 Questions for discussion

1. What did Player 1 expect Player 2 to return? How was that belief formed?
2. Did Player 2 respond to the amount sent, the perceived intention, or the final distribution?
3. How do returning one third, returning the transfer, and equalizing payoffs differ?
4. When did total surplus rise, and who captured it?
5. Was trust profitable? Must it be profitable to be rational under social preferences?
6. How would a known partner, a contract, or reputation information change the decision?

7.3 Common interpretation errors

Quick interpretation	Correction
The transfer measures pure trust.	It may also reflect altruism, efficiency, risk, or betrayal aversion.

Quick interpretation	Correction
The return measures pure reciprocity.	It may reflect unconditional kindness, inequality, or distributional norms.
Returning 33.3% splits payoffs equally.	It only restores Player 1's transfer under a multiplier of 3.
The mean summarizes the class.	Examine the distribution, zeros, scatter plot, and sample size.
An association is a causal effect.	Messages, reputations, and actions may be selected.
More trust always benefits Player 1.	Only if the return offsets the transfer; total surplus does rise whenever $s > 0$.

Operations, privacy, and troubleshooting

8.1 Privacy and laboratory conduct

- Do not request names, student IDs, or demographic information during this activity.
- Project the aggregate report. Keep codes, decisions, and individual screens private.
- Do not use the session to label personal traits such as generosity, honesty, or trustworthiness.
- Treat the session as a teaching activity unless a separate research protocol and consent process apply.
- Prevent communication among participants while decisions are active.

8.2 Common problems

Situation	Action
“Please wait”	Check Monitor . The partner has not finished or an odd participant remains unmatched. Do not refresh first.
“No more pages left”	The session has ended. The current version should display the summary; verify that the latest configuration was used.
“This user does not exist”	The link belongs to a reset database or an old session. Create a new session and share the current link.
Hidden report	Wait for every pair, refresh Report , and click reveal.
Missing reciprocity point	The transfer was zero; $r/(3s)$ is undefined and omitted.
Unmatched participant	Use an even number. Reassign or close the session before decisions begin.
Repeated partners	With few pairs and ten rounds, avoiding every repeat may be impossible.

8.3 Data for later analysis

Depending on the variant, the export records role, round, pair, transfer, multiplier, amount received, return, payoffs, rates, message, contingent plan, reputation, social information, and punishment.

Before analysis:

1. remove unnecessary operational identifiers and retain pseudonymous codes;
2. document treatment, rounds, matching, and information rules;
3. use the pair as the unit for joint outcomes and the role as the unit for decisions;
4. treat repeated observations from the same person or pair as dependent;
5. do not calculate reciprocity when the transfer is zero.

Expanded teaching manual for nonspecialist instructors

This part brings together what an instructor needs to turn Trust game into a learning experience. It complements the operational material above. It can be read before the first session and reused as a script during the discussion of results. The central question is how much a person risks in trusting and how much the recipient returns from the opportunity created by that trust. The guide always separates four levels: rules, benchmark prediction, observed behavior, and interpretation. Moving directly from a bar in a chart to a psychological explanation confuses those levels.

9.1 Conceptual map before opening the session

9.1.1 Unit of analysis

The relevant unit is the pair in each round, distinguishing sender and receiver. One data row is not always one independent person: the same person may decide repeatedly, and interacting participants share information, payoffs, or history. The instructor should therefore state what enters the numerator, what enters the denominator, and whether observations are people, decisions, pairs, groups, or rounds. This prevents thirty repeated decisions from being presented as thirty independent participants.

The task is to the sender transfers part of an endowment, the amount is multiplied, and the receiver decides how much to return. Before presenting theory, ask students to restate the rule and identify what information is available when they decide. A correct calculation does not guarantee understanding of the strategic or behavioral structure. Check available actions, information, payoffs, order, and feedback timing separately.

9.1.2 Benchmark prediction

The starting point is: a purely material receiver returns zero; by backward induction, a sender who anticipates this sends zero. The benchmark is a disciplined comparison, not a moral statement about what a person ought to do. First write the assumptions that support it, then derive the action or pattern, and only then compare it with the class. If information, repetition, incentives, matching, or the reference point changes, derive the prediction again instead of carrying it over automatically.

Keep equilibrium, efficiency, and fairness separate. An action can be a best response and generate a poor joint outcome; another action can raise surplus and remain vulnerable to unilateral deviation. Likewise, an equal outcome need not be efficient, and an efficient distribution does not reveal

the process that produced it. Asking the class to label each statement as positive, normative, or strategic reduces confusion.

9.1.3 Alternative mechanisms

The literature and treatments permit discussion of trust, reciprocity, altruism, inequality aversion, expectations, reputation, and signals of intention. These mechanisms are not interchangeable labels. Two can predict the same baseline action and separate only when a treatment changes. The informative comparison therefore asks not only how much behavior occurred but also what experimental change should increase, reduce, or leave the pattern unchanged if one mechanism matters.

Organize discussion in three columns. Write the observed fact in the first, such as a share, median, or trajectory. List compatible mechanisms in the second. Record the additional evidence needed to distinguish them in the third. The third column is essential because a classroom session rarely identifies a stable preference or causal relationship by itself.

9.2 Worked example and explanation

With an endowment of 10, the sender transfers 6 and the laboratory triples it to 18. If the receiver returns 8, final payoffs are 12 for the sender and 10 for the receiver. Trust is measured as $6/10$; return can be expressed as $8/18$. Using $8/6$ answers a different question and can exceed one, so the denominator must be stated.

Solve the example in six steps. First list actions and possible states. Second calculate payoffs or consequences without interpreting motives. Third derive the theoretical benchmark under its assumptions. Fourth identify the minimum observation needed to evaluate that benchmark. Fifth compare treatments while stating what is held constant and what changes. Sixth formulate a limited conclusion: “the pattern is consistent with” is more accurate than “the experiment proves” when rival explanations remain.

Then change one parameter and ask for a new prediction before calculating. This pause turns the example into a reasoning tool. It also reveals whether students memorized an answer or understood the mechanism. If answers diverge, ask each group to identify the assumption producing the difference.

9.3 Reading the instructor report

The central measures are fraction of the endowment sent; fraction returned from the amount received; payoffs by role; relationship between amount sent and amount returned. Write the denominator next to every indicator. A rate can divide by eligible participants, completed decisions, formed pairs, groups, or rounds; these alternatives are not equivalent. If records are incomplete, show how many were excluded and why.

Use this reading order:

1. Verify participants, groups, and completed decisions. Do not interpret percentages before checking coverage.
2. Inspect the full distribution. A mean can hide two groups with opposing responses or a concentration at focal values.

3. Compare the median, range, and theoretically relevant categories. Explain whether the graph counts people or decisions.
4. Inspect time paths only when rounds are comparable. Changes in matching or treatment must be marked.
5. Compare treatments with absolute differences and denominators, not merely with bars of different heights.
6. Select one anonymous case or sequence connecting rules and the aggregate. Never use it to identify or ridicule a student.

A visible difference in a small class is descriptive evidence from that session. Do not call it a causal effect without appropriate assignment, adequate size, and a comparison defined before seeing the data. Across classes, composition, time, and prior experience may change together. The pedagogical value lies in stating a prediction, confronting it with evidence, and asking what design would teach us more.

9.4 Step-by-step debrief script

Begin without revealing results. Ask for the benchmark prediction and which assumption students find most demanding. Record two quantitative class predictions. Next reveal the observation count and distribution, initially withholding the mean if it would distract from heterogeneity. Ask students to describe the chart without explaining causes.

In a second stage, show aggregate measures and ask: which observation contradicts the simplest prediction, which remains compatible with it, and what heterogeneity disappears in the average? Accept multiple explanations, but require each to yield a testable prediction. Introduce the variants: fixed or reassigned partner; strategy method; earned endowment; private multiplier; social information; reputation; punishment and role reversal. For each variant, identify the single changed element, predicted direction, and report measure to inspect.

Close by connecting the laboratory to credit, delegation, platforms, supply chains, and employment relationships. Point out which elements of the real setting are absent: institutions, selection, repetition, long-run consequences, or rich information. The analogy is useful when it isolates a mechanism; it becomes misleading if the class assumes that the laboratory reproduces the full context.

A verbal sequence that works well is: “first describe,” “now derive,” “then interpret,” and “finally ask what evidence is missing.” This discipline allows a nonspecialist instructor to lead a rigorous discussion without treating every departure as a bias or every match as definitive confirmation.

9.5 Frequently asked questions and model answers

Should theory be explained before play? In a first session, collect predictions without revealing the full solution. Explain rules, payoffs, and information. Then derive a purely material receiver returns zero; by backward induction, a sender who anticipates this sends zero. In a second session, reverse the order and assess whether theory improves prediction or only changes vocabulary.

Is there a correct answer? Separate a normative or equilibrium solution from a behavioral prediction. Theory supplies a conditional benchmark. The laboratory reveals what occurs and why a reasonable person may choose differently.

Does a departure prove irrationality? No. It may reflect omitted preferences, beliefs, error, weak comprehension, or a different institution. Check controls and incentives. Then treat trust, reciprocity, altruism, inequality aversion, expectations, reputation, and signals of intention as hypotheses requiring further comparisons.

Why show the distribution? The same mean can arise from moderate consensus or two opposing groups. A distribution reveals focal values, boundaries, and heterogeneity. In Trust game, connect those shapes to fraction of the endowment sent; fraction returned from the amount received; payoffs by role; relationship between amount sent and amount returned.

How many observations are enough? There is no universal threshold for debriefing. A small class is useful when described cautiously. Treatment comparisons require several independent units, clear assignment, and common protocols. Repeated decisions do not create new participants.

Can sessions be pooled? Yes, if parameters and definitions remain fixed. Retain session identifiers and inspect each cohort first. If instructions, composition, or incentives change, document the heterogeneity.

What if results contradict the literature? Check rules, treatment, comprehension, exclusions, and calculation. If no error exists, preserve the result. A class need not reproduce a published estimate. Ask what design would distinguish chance, composition, and mechanism.

How can embarrassment be avoided? Project aggregates and anonymous sequences. Avoid personal labels. Describe actions and consequences. The laboratory studies decisions under specific rules; it does not diagnose traits.

Should the decision be graded? Do not grade agreement with a prediction. Assess understanding: derive the benchmark, calculate a measure, explain a limitation, and design a comparison. Experimental incentives and academic assessment serve different purposes.

How should a variant be chosen? Begin with the mechanism to separate. Select from fixed or reassigned partner; strategy method; earned endowment; private multiplier; social information; reputation; punishment and role reversal, state a direction and measure, and hold other elements constant. Do not run more conditions than can be analyzed.

What conclusion is appropriate? Use three sentences: what was observed, which mechanism it is consistent with, and what evidence is missing. The connection to credit, delegation, platforms, supply chains, and employment relationships should preserve those limits.

What should students remember? They should reconstruct the central tension, explain the benchmark, read the main denominator, and propose an institution that could change the outcome.

9.6 Diagnostic cases for interpretation practice

9.6.1 Agreement with the benchmark

The distribution is concentrated near the prediction derived from a purely material receiver returns zero; by backward induction, a sender who anticipates this sends zero. Do not conclude that everyone shared the same motive. Some calculated, others followed a signal, and others chose intuitively. The evidence supports the aggregate prediction under session conditions but does not identify individual reasoning. Ask what belief, process, or response-time measure would distinguish those routes.

Then introduce a variant from fixed or reassigned partner; strategy method; earned endowment; private multiplier; social information; reputation; punishment and role reversal. If the pattern remains when the seemingly obvious mechanism weakens, the original explanation needs revision.

A correct prediction does not automatically validate all its assumptions.

9.6.2 Two groups with opposite behavior

Half the class is at one extreme and half at the other; the mean lies where almost nobody chose. Showing only the average would create a fictional description. Calculate the median, modes, range, and share in theoretical categories. Ask whether heterogeneity is related to role, round, treatment, or comprehension.

Consider trust, reciprocity, altruism, inequality aversion, expectations, reputation, and signals of intention. Write one additional observation for each. If it predicts role differences and none appear, it receives less relative support. If it predicts learning, inspect the trajectory. Do not fill missing measurement with a compelling story.

9.6.3 A large difference with few units

One treatment apparently doubles the main measure but contains two groups and the comparison contains three. Display each group before pooling. One extreme unit can create the difference. Twenty decisions nested in two groups are not twenty independent units.

Ask students to plan the next session: groups, assignment, primary measure, and exclusions. The answer should mention fraction of the endowment sent; fraction returned from the amount received; payoffs by role; relationship between amount sent and amount returned and incomplete data. The experience thereby introduces design and transparency.

9.6.4 A null difference

Two conditions have the same mean. Before declaring that the manipulation does not matter, inspect compliance, comprehension, tails, and dispersion. Opposing subgroup effects can cancel. Define what range of differences would be pedagogically or economically meaningful and what size could distinguish it.

The cases teach four disciplines: do not infer motives from agreement, hide heterogeneity, confuse rows with units, or treat absence of evidence as evidence of absence.

9.7 Explanatory sequence for a complete class

9.7.1 Step 1: pose the problem without labels

Present the decision as a concrete situation and ask what information is missing. Do not announce the name of the bias, equilibrium, or preference at the start. The question is how much a person risks in trusting and how much the recipient returns from the opportunity created by that trust. Collect private responses so the first speaker does not become a focal point.

9.7.2 Step 2: reconstruct rules and incentives

Ask one student to describe actions and another to describe consequences. A third explains available information. Draw the sequence. In Trust game, the decision is to the sender transfers part of an endowment, the amount is multiplied, and the receiver decides how much to return. Do not move to interpretation until the class can calculate a simple case.

9.7.3 Step 3: derive the benchmark

Write a purely material receiver returns zero; by backward induction, a sender who anticipates this sends zero. Underline each assumption. Ask what happens if one fails. Distinguish a logical derivation from an empirical expectation: an equilibrium strategy need not be played immediately by everyone.

9.7.4 Step 4: record predictions

Request one prediction about the mean, another about the distribution, and a third about a variant. Predictions should use fraction of the endowment sent; fraction returned from the amount received; payoffs by role; relationship between amount sent and amount returned. Preserve the record; later comparison reveals learning and reduces hindsight.

9.7.5 Step 5: reveal in layers

Show coverage first, then distribution, measures, and comparisons. At every layer request description before explanation. If someone proposes trust, reciprocity, altruism, inequality aversion, expectations, reputation, and signals of intention, ask what observation would distinguish it from another mechanism.

9.7.6 Step 6: work through one sequence

Use the worked example in this guide. Recalculate slowly and change one parameter. Ask each team to find one excessive conclusion and rewrite it with limited language. Editing claims is as important as calculation.

9.7.7 Step 7: compare institutions

Choose one condition from fixed or reassigned partner; strategy method; earned endowment; private multiplier; social information; reputation; punishment and role reversal. Write a table with constant, change, prediction, and measure. If the variant changes several elements, acknowledge it. Ask whether a third treatment would separate explanations.

9.7.8 Step 8: transfer and close

Connect the mechanism to credit, delegation, platforms, supply chains, and employment relationships. Identify two differences between the laboratory and the real context. End with an exit response: prediction, evidence, compatible mechanism, and limitation. This structure assesses understanding without rewarding a particular decision.

9.7.9 A short script to read aloud

“Describe what happened before explaining why. Identify the prediction and its assumptions. Compare the distribution with the mean. Propose two compatible mechanisms. Finally, state which treatment or additional evidence could distinguish them.” The script keeps discussion in a common sequence across families.

9.8 Assessment bank with solutions

Exercise 1. List actions, information, and payoffs. **Solution:** reconstruct the sender transfers part of an endowment, the amount is multiplied, and the receiver decides how much to return without adding information unavailable to the participant.

Exercise 2. Derive the material benchmark. **Solution:** begin from a purely material receiver returns zero; by backward induction, a sender who anticipates this sends zero and name at least two assumptions. For an interactive game, state best responses; for an individual task, state the decision rule.

Exercise 3. The report shows 40 percent. **Solution:** it cannot be interpreted without numerator, denominator, exclusions, and unit. Eligible people and completed decisions are alternative denominators.

Exercise 4. The mean matches the prediction. **Solution:** inspect the distribution. A correct mean can combine extremes, offsetting errors, or different strategies. Agreement does not identify reasoning.

Exercise 5. Select two mechanisms from trust, reciprocity, altruism, inequality aversion, expectations, reputation, and signals of intention. **Solution:** design a condition changing one prediction but not the other, with an outcome from fraction of the endowment sent; fraction returned from the amount received; payoffs by role; relationship between amount sent and amount returned.

Exercise 6. Compare treatments of different sizes. **Solution:** report counts and shares, preserve the independent unit, and do not compensate for a small group by multiplying rounds.

Exercise 7. Mean differences are absent. **Solution:** inspect dispersion, tails, compliance, and comprehension; define a relevant difference. A broad null does not establish equivalence.

Exercise 8. Propose a figure. **Solution:** use histograms or dots for distributions, lines for rounds, separate bars for roles, and bivariate plots when a response depends on a prior action.

Exercise 9. Explain a variant from fixed or reassigned partner; strategy method; earned endowment; private multiplier; social information; reputation; punishment and role reversal. **Solution:** identify what changes, what remains constant, predicted direction, and an interpretive threat.

Exercise 10. Transfer to credit, delegation, platforms, supply chains, and employment relationships. **Solution:** describe the common mechanism and two institutional differences. Do not claim that one session determines policy.

Exercise 11. Write a three-sentence conclusion. **Solution:** observation with denominator; compatible mechanisms; evidence needed to distinguish them.

Exercise 12. Design a replication. **Solution:** preserve parameters, record assignment, announce the primary measure, set exclusions, and archive the export.

A twelve-point rubric awards one point for each correct component. For a short assignment use Exercises 2, 3, 5, and 11. For a project use all twelve and request a reproducible figure.

9.9 Advanced seminar: from evidence to mechanism

Divide the class into four teams: benchmark model, alternative preferences or beliefs, institutions, and identification critique. Each interprets the same report from its assigned role. The first derives a purely material receiver returns zero; by backward induction, a sender who anticipates this sends zero; the second uses trust, reciprocity, altruism, inequality aversion, expectations, reputation, and

signals of intention; the third selects a variant from fixed or reassigned partner; strategy method; earned endowment; private multiplier; social information; reputation; punishment and role reversal; the fourth identifies missing evidence.

In a replication round, every team writes a quantitative prediction and a condition that could refute it. It exchanges the proposal with another team, which audits unit, denominator, and manipulation. A useful explanation does not merely accommodate past outcomes; it risks a prediction about new evidence.

End with a one-page memo containing question, benchmark, descriptive finding, two mechanisms, discriminating design, application to credit, delegation, platforms, supply chains, and employment relationships, and limitation. Grade causal clarity, technical correctness, use of evidence, and inferential restraint.

For a quantitative extension, export data and reproduce three figures: individual distribution, aggregate by independent unit, and treatment comparison. All three require titles, denominators, and exclusion notes. Compare how the narrative changes when the correct unit is used.

An ethics extension asks which decisions should remain private, when an incentive is proportionate, and how to communicate results without turning group patterns into personal judgments. The answer should separate participant protection, instructional integrity, and analytical transparency.

Annotated bibliography

- [Berg et al. \(1995\)](#): foundational investment experiment, reciprocity, and social history.
- [Johnson and Mislin \(2011\)](#): synthesis of 162 replications and a guide to protocol heterogeneity.
- [Cox \(2004\)](#) and [Ashraf et al. \(2006\)](#): designs separating trust, reciprocity, and distributional preferences.
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- [Engle-Warnick and Slonim \(2004\)](#), [Bolton et al. \(2005\)](#), and [Burks et al. \(2003\)](#): repetition, reputation, and both-role experience.
- [Charness and Dufwenberg \(2006\)](#), [Brandts and Charness \(2011\)](#), and [Fehr and Rockenbach \(2003\)](#): communication, strategy method, and sanctions.

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