



Instructor's Guide to Bargaining, Settlement, and Litigation

Laboratory implementation, theoretical foundations,
experimental evidence, and variants

Behavioral and Experimental Economics Research Lab
Department of Economics



Revised edition | October 2026

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

How to use this guide

This guide supports the preparation, implementation, and classroom discussion of the family of bargaining, settlement, and litigation games prepared for the Behavioral and Experimental Economics Research Lab (BEER Lab) at the Department of Economics of Tecnológico de Monterrey. It is intended for instructors with different levels of familiarity with experimental and behavioral economics.

The document offers three reading paths. The **quick guide** is enough to launch a session. The operational chapters explain each screen used by instructors and students. The conceptual chapters present the theories, predictions, and empirical findings needed to lead the post-game discussion.

Access instructions and common screens are explained once. Each variant then focuses only on what changes relative to the basic game: configuration, group size, decisions, predictions, relevant outcomes, and academic literature.

Author

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For the instructor

This guide follows the English-language interface. Spanish configurations use the same logic. Never project individual codes or connect outcomes to names, student identification numbers, or seats in the room.

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Preparation and access

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.

	Negociación,
reja fija	
rejas reasignadas	
ública	
privada	
información pública	
ratuita	
ostosa	
ncido	
Enadas con demora	
ción automática	
ción humana no vinculante	
ed partner	
assigned partners	
ence	
mation	
mation control	
ure	
asure	
offers with delay	
ecommendation	
human recommendation	

**Negociación,
acuerdos y
litigación /
Bargaining,
Settlement, and
Litigation —
BEER Lab**

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

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

Rooms

Current rooms:

[ES] Acuerdos y litigación: básica
[EN] Settlement and litigation: basic
[ES] Acuerdos y litigación: extendida
[EN] Settlement and litigation: extended

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

Room: [EN] Settlement and litigation: basic

Create a new session

Session Config

[EN] one round

Number of participants

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

Create

[Configure session](#) 

App sequence

settlement_game (10 rounds) Sequential settlement, private information, litigation costs, and nonbinding recommendations.

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 Purpose and catalog summary

This family examines why two parties may enter a costly dispute procedure even when a transfer exists that both would prefer. A random draw represents an uncertain claim. The design separates the transfer, the resources spent resolving the dispute, and the information available before bargaining. Begin with one offer and one response, then choose comparisons addressing litigation costs, private information, verifiable disclosure, fee allocation, delay, or nonbinding recommendations. These six extension mechanisms answer different questions. They appear in separate presets because their instructional contribution determines the scope, rather than a numerical limit on versions.

Purpose	Study bargaining, settlement, and litigation through a transfer and a costly dispute procedure.
Experimental unit	Interactive game: an A/B pair per case; an A/B/C trio for human recommendations.
Suggested duration	35–50 minutes for an introduction; 50–70 for repeated cases. Pending a classroom pilot.
Participants	An even number for pairs; a multiple of three for human recommendations.
Basic edition	One case; ten cases with a fixed partner; ten with reassigned partners.
Extended edition	Reference plus six mechanisms in eleven presets per language, each with ten cases.
Decision	B proposes and A responds; alternating offers or bilateral approval where applicable.
Payoff	Initial balance of 150 ECU per person and case, adjusted by transfers and applicable costs.
Topics	bargaining; settlement; litigation costs; private information; information disclosure; conciliation.
JEL	C78; C92; D82; K41.

Legal terminology belongs in the discussion after decisions. Participant screens assign positions

A, B, and sometimes C, and describe amounts, information, and available actions. They do not announce hypotheses about fairness, optimism, or cooperation. A receives a transfer and represents a claimant. B pays the transfer and represents a defendant. C recommends an amount in the human preset. The draw contains no human judge, interpretation of legal doctrine, or open factual dispute. The activity therefore develops reasoning about incentives rather than teaching current procedural rules in a particular jurisdiction.

The catalog codes were checked against the official American Economic Association classification. C78 covers Bargaining Theory and Matching Theory; C92 covers Laboratory, Group Behavior; D82 covers Asymmetric and Private Information and Mechanism Design; K41 covers Litigation Process. The classification is available at <https://www.aeaweb.org/econlit/jelCodes.php?view=jel>. The codes describe the scholarly content, while the six topics provide a useful entry point for students who do not know the classification. The English and Spanish versions use identical parameters and decision procedures. Changing language does not create a new experimental mechanism.

1.3 From the laboratory portal to a session

Begin at <https://beer-lab.org/> and continue to <https://teaching.beer-lab.org/>. The catalog card is Bargaining, Settlement, and Litigation Process. The family key is settlement, and its proposed domain is <https://settlement.beer-lab.org/>. Adding the card and making that domain available require deployment of this package. The screenshots in this guide come from a local instance restricted to this family. They are not evidence that the new domain has been published. The exact verified local address is recorded with the delivery and works on the computer hosting the server.

The planned instructor entry is <https://settlement.beer-lab.org/demo>, with classroom administration at <https://settlement.beer-lab.org/rooms>. Demo supports inspection and rehearsal of the presets; Rooms organizes entry into a classroom session. Students use https://settlement.beer-lab.org/room/settlement_en for the English basic edition or https://settlement.beer-lab.org/room/settlement_extended for the extended edition. Spanish room names are `acuerdos_es` and `acuerdos_extendido`. Choose the language before creating a session. A basic room contains three configurations in its language, while an extended room contains eleven.

An individual participant link preserves that person's position and decisions. It differs from the report address, must not be shared with another participant, and may become invalid if the database is reinitialized. Open the instructor report from the created session. There is no single permanent report URL collecting every class: the panel generates a session-specific route. Keep the report, Monitor, and participant links in separate tabs. The aggregate report can be projected, while access codes and individual records remain private. A room link facilitates entry but does not itself grant permission to inspect results.

Checkpoint

Before admitting students, verify that Demo contains only this game family, Rooms shows its four rooms, and the default basic option is in the room's language. If another family appears, consult the laboratory coordinator before creating a session.

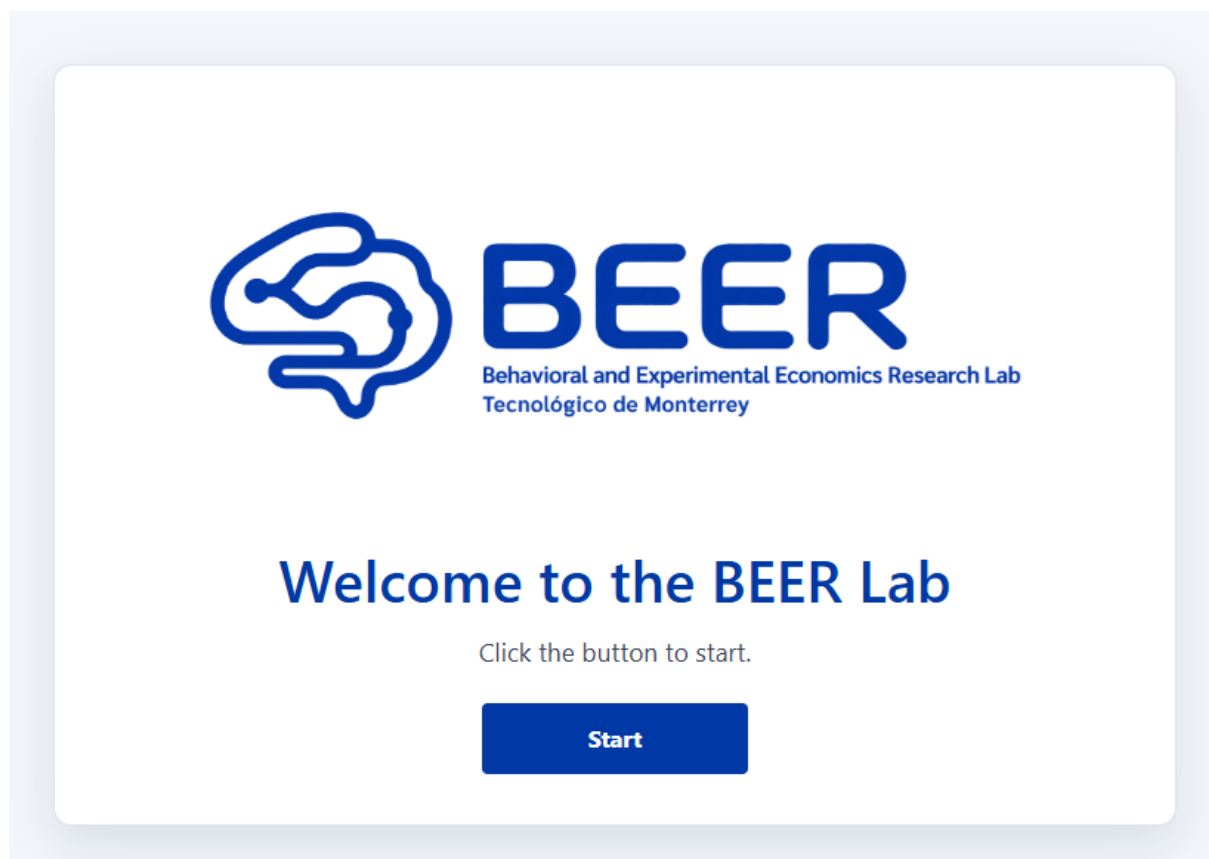


Figure 1.7: Participants enter through the room. The instructor controls which classroom session is available there.

1.4 Choosing a mode and participant count

The basic edition offers three modes. A single interaction produces an initial distribution of proposals and responses before participants have experience with the task. Ten cases with a fixed partner allow learning and possible reciprocity within the same pair. Ten cases with reassigned partners allow adjustment as the counterpart changes. A and B retain their positions in every mode. Do not interpret the fixed-versus-reassigned difference as changing reputation alone. Shared history, opportunities to respond to a specific counterpart, and variation in encounters change together.

Extended presets use ten cases with reassigned groups. Every case starts with a fresh balance: earnings from earlier cases do not finance later decisions. The individual total adds all active case balances. Two-person presets require an even participant count. Human recommendations require a multiple of three; the demonstration uses six participants, while other demos use four. Confirm the actual number attending before creation. An absent participant stops the waits in that person's group. Increasing a session's nominal size does not create a substitute decision maker and should not be used to resolve an attendance problem.

In reassignment, A serves as the reference position. With at least two pairs, A does not immediately meet the previous B. In trios, the procedure also avoids assigning the previous C to that A when alternatives exist. It does not guarantee that B and C never meet each other again, nor that all future encounters differ. With a single group there is no alternative counterpart. Explain this limitation when interpreting small classes. The activity changes matching; it does not manufacture statistical independence, erase knowledge of past experiences, or guarantee anonymity from classmates' informal observations.

The app requests no names, student identifiers, age, gender, or other personal characteristics.

Handle participation credit outside the decision dataset. For a paid activity, announce the approved ECU conversion and payment procedure before participants enter. The delivered configurations report ECU and do not prescribe a monetary conversion for a particular class. When payment is absent, describe the activity as an instructional experience. Do not imply that its incentives are equivalent to those of a paid experiment. The instructional objective is still useful, but the interpretation of revealed willingness to accept risk requires that qualification.

1.5 Equipment and timing

Rehearse with separate browser windows for every role. Complete instructions, one acceptance, one rejection, the final screen, and the report reveal control. Rehearse C's proposal and both independent responses for the human preset. Check the connection, projector, and ability to show the report without exposing other tabs. A rehearsal contains artificial decisions; label it accordingly and exclude it from student observations. A functioning first page alone does not demonstrate that a multi-stage session can finish. The waits and final report deserve the same attention as the input forms.

For an introductory session of 35 to 50 minutes, allocate eight minutes to entry and comprehension, ten to decisions and individual results, fifteen to reconstructing payoffs, and ten to a comparison. For ten cases, allow 50 to 70 minutes, adding decision time and discussion of round evolution. These are preparation estimates awaiting a classroom pilot. Groups progress at different speeds. Observe the Monitor and assist with access privately rather than encouraging a particular proposal to meet a timetable. If the class is short, choosing one interaction in advance is preferable to truncating a repeated activity halfway through.

For the instructor

Announce the working rules only: private individual decisions, silence, private requests for assistance, and keeping the screen open. Reserve equilibrium, fairness, selection, and conciliation for discussion after decisions so the instructions do not suggest the behavior being studied.

Participant workflow

2.1 Welcome, instructions, and comprehension

The welcome introduces BEER Lab and its participation rules. Each person accepts those rules before proceeding. Instructions display the assigned position, endowment, maximum transfer, information, costs, and relevant procedure. A and B read a common example but take different actions later. C receives specific information about recommendations and the fixed balance. The meaning of an amount never changes with the proposer: every proposal states the ECU transferred from B to A. This convention is particularly important when A makes the second offer, because a request by A remains a payment by B.



BEER Lab

Case 1 of 1

Your position: B

Welcome to the BEER Lab

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

Remain silent. Do not talk or communicate with other participants. Decide individually and privately, and follow the on-screen instructions. Do not refresh, close, or leave the page. If you need help, raise your hand and speak privately with the staff.

☐ I have read these rules and will follow them during the activity.

Start

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Figure 2.1: Ask each participant to read the laboratory rules and continue individually.

The comprehension check asks for the transfer when the draw activates it, the combined costs



BEER Lab Case 1 of 1

Your position: B

Instructions

Resources and unit of account
Each participant's initial endowment: 150 ECU.
ECU stands for Experimental Currency Units. It is the unit of account for this activity.
This session does not convert ECU into real money.

You will take part in one independent case.

A can receive a transfer from B. If a proposal is accepted, B transfers that amount to A. If no agreement is reached, a single random draw takes place.

Starting balance per case: 150 ECU. Each case starts with a fresh balance. A case balance does not fund the next case. Balances from all active cases are added at the end.

If the draw activates the transfer, B pays A: 100 ECU.

Probability that the draw activates the transfer: 60%.

If a draw takes place, A and B each pay 15 ECU. These costs are deducted in addition to any transfer.
B proposes a whole number between 0 and 100 ECU. A may accept or decline. The amount always means how much B transfers to A.

All balances and costs are expressed in ECU. Any conversion into a reward will be announced by the instructor.

Continue

Con tecnología de [oTree](#)

Figure 2.2: Current instructions for the basic edition: initial resources, decision rules, and experimental units.

charged to the parties when that procedure occurs, and the number of people in the group. Reference answers are 100, 30, and 2. Low costs require 100, 10, and 2; high costs require 100, 50, and 2. The human-recommendation preset has three people. An error returns the participant to the same page with a correction message and does not affect earnings. Ask privately which rule is unclear. Providing a bargaining amount as the answer would move from procedural assistance to influencing a decision.



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

BEER Lab Case 1 of 1

Your position: A

Check your understanding

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.

How many ECU does B transfer to A if the draw activates the transfer?

Your answer: 101. The correct answer is 100. Check the transfer amount, the combined costs, and your group size.

What is the combined cost paid by A and B if the draw occurs, excluding earlier costs?

How many people are in your group?

[Continue](#)

Con tecnología de [oTree](#)

Figure 2.3: Current comprehension check with an incorrect answer, its specific explanation, and retained responses.

2.2 Preparing each case

Every case displays the position and the information that person may use. In the reference, both know the probability of 60 percent. With private information, A knows whether the case probability is 30 or 90 percent, while B knows the distribution only. In the public-information control, the exact value becomes available to both after preparation and before the offer. This timing allows

B's first estimate to be collected from the same initial information across the four information presets. The public control therefore changes disclosure of the case value rather than changing the distribution of underlying cases.

B gives an integer probability estimate between zero and one hundred before preparation and again after it. Neither estimate changes payoffs or receives an accuracy reward. In disclosure presets, A chooses whether to communicate the exact value. Communication is verifiable: A cannot announce a false probability. Costly disclosure charges A five ECU even if settlement follows. A group wait makes the chosen information available before B's second estimate and offer. When communication is declined, B cannot recover the hidden value from a participant screen. Treat estimates as unremunerated reports, rather than automatically identifying them with carefully incentivized beliefs.



BEER Lab
Case 1 of 10

Your position: A

Information for this case

Positions remain unchanged. Groups are reassigned between cases, avoiding consecutive meetings with the other A/B participant when alternatives exist. With few groups, later meetings can repeat.

Starting balance per case: 150 ECU.

If the draw activates the transfer, B pays A: 100 ECU.

The probability in this case can be 30% or 90%. The value 90% occurs with probability 50%. A fresh value is selected for each group and case.

A knows the selected value from the beginning of the case. B knows the distribution but initially does not know the selected value.

Probability that the draw activates the transfer: 90%.

If a draw takes place, A and B each pay 15 ECU. These costs are deducted in addition to any transfer.

B proposes a whole number between 0 and 100 ECU. A may accept or decline. The amount always means how much B transfers to A.

Continue

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Figure 2.4: A sees the selected case value. Do not project this screen while other participants are deciding.



BEER LabCase 1 of 10

Your position: B

Information for this case

Positions remain unchanged. Groups are reassigned between cases, avoiding consecutive meetings with the other A/B participant when alternatives exist. With few groups, later meetings can repeat.

Starting balance per case: 150 ECU.

If the draw activates the transfer, B pays A: 100 ECU.

The probability in this case can be 30% or 90%. The value 90% occurs with probability 50%. A fresh value is selected for each group and case.

A knows the selected value from the beginning of the case. B knows the distribution but initially does not know the selected value.

The selected value is not communicated on this screen.

If a draw takes place, A and B each pay 15 ECU. These costs are deducted in addition to any transfer.

B proposes a whole number between 0 and 100 ECU. A may accept or decline. The amount always means how much B transfers to A.

Continue

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Figure 2.5: B sees the probability distribution, rather than the private value. The public control uses the same case distribution.



BEER LabCase 1 of 10

Your position: A

Communicate the value

The probability in this case can be 30% or 90%. The value 90% occurs with probability 50%. A fresh value is selected for each group and case.

A knows the selected value from the beginning of the case. B knows the distribution but initially does not know the selected value.

Probability that the draw activates the transfer: 30%.

Before the proposal, A decides whether to communicate the selected value to B. If communicated, the screen displays the true value. A pays 5 ECU to communicate it, whether agreement or a draw follows.

Do you want B to know the selected value before making a proposal?

☐ Communicate the true value

☐ Do not communicate the value

Continue

Powered by [oTree](#)

Figure 2.6: A can communicate verifiable information. The stated cost remains payable regardless of the later settlement outcome.

2.3 Proposals, responses, and recommendations

In the basic sequence, B enters an integer from zero to one hundred and A accepts or declines. Acceptance executes the transfer without a draw or trial costs. Rejection activates one draw and the applicable costs. Wait pages prevent a response before an offer exists and prevent results before the required decisions are complete. Missing decisions do not automatically become rejections. The group waits while the instructor addresses participation or access. This preserves the distinction between a participant choosing trial and a connection failure leaving an action unobserved.



BEER Lab
Case 1 of 1

Your position: B

Propose an amount

Stage 1

Probability that the draw activates the transfer: 60%.

If a draw takes place, A and B each pay 15 ECU. These costs are deducted in addition to any transfer.

How many ECU do you propose that B transfer to A?

Enter a whole number between 0 and 100. The other person decides whether to accept.

Continue

Powered by [oTree](#)

Figure 2.7: B proposes a B-to-A transfer. Only integer amounts within the announced range are valid.

Alternating offers add a second stage proposed by A and a third proposed by B. Entering each additional stage costs both parties two ECU. A's proposal still means a transfer from B to A, rather than a payment in the reverse direction. Rejection at the third stage activates the draw. Earlier acceptance skips all later stages, so their costs are never charged. The stage number and costs already incurred remain visible. Distinguish spending to enter the current stage from the additional spending that a rejection would create; only the latter changes the continuation comparison.

The automatic recommendation is 60 ECU. In the human preset, C chooses an integer in the same range. A and B answer separately without observing the other person's current vote. Two approvals implement the recommendation. Any veto immediately activates the draw, with no later ordinary offer by B. C cannot impose the recommendation and retains 150 ECU under every outcome. Both recommendation sources use the same consent protocol. The human variant nevertheless adds a participant and allows the amount to vary, so their comparison does not isolate human presence while holding every other feature constant.



BEER Lab

Case 1 of 1

Your position: A

Respond to the proposal

Stage 1

Proposal from B to A: 0 ECU.

Probability that the draw activates the transfer: 60%.

If a draw takes place, A and B each pay 15 ECU. These costs are deducted in addition to any transfer.

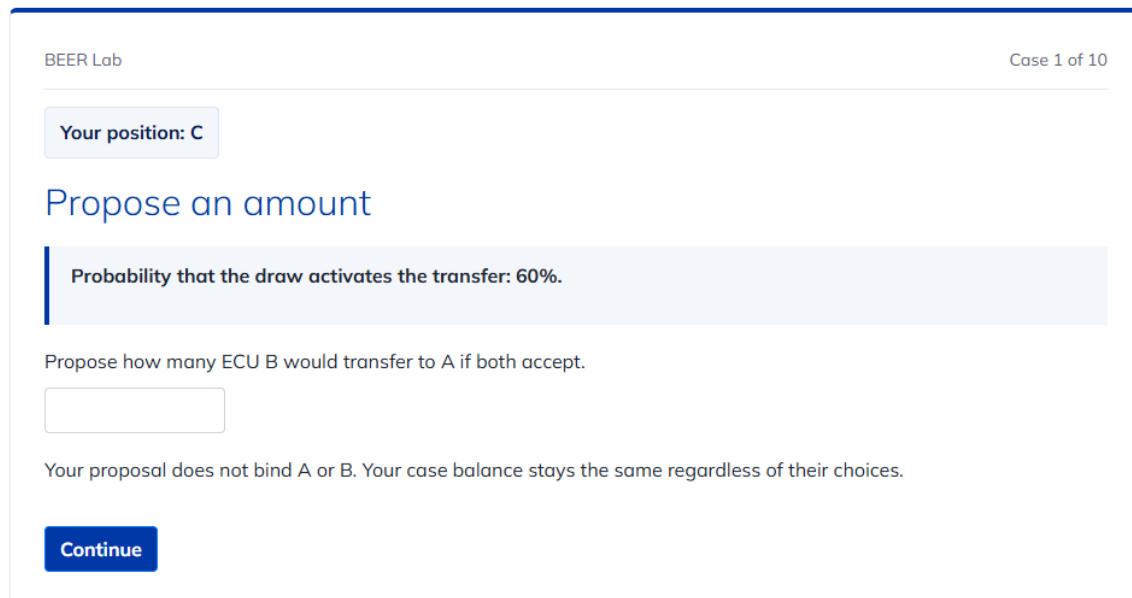
☐ Accept the proposed transfer

☐ Decline and activate the draw

Continue

Powered by [oTree](#)

Figure 2.8: A observes the proposal and chooses. A rejection is an admissible decision, not a failed comprehension answer.



BEER Lab Case 1 of 10

Your position: C

Propose an amount

Probability that the draw activates the transfer: 60%.

Propose how many ECU B would transfer to A if both accept.

Your proposal does not bind A or B. Your case balance stays the same regardless of their choices.

Continue

Powered by [gTree](#)

Figure 2.9: C recommends without imposing an outcome. C's own balance is fixed regardless of A's and B's responses.

2.4 Results and the final screen

The settlement ledger shows the participant's balance and separates the transfer, trial fees, stage costs, and communication cost. The actual case probability becomes visible to both parties at this point. If settlement occurred, the screen states that no draw took place. No hypothetical result is stored to tell parties who would have won. Showing such a counterfactual would alter the experience and might introduce regret into later cases. If trial occurred, the screen states whether the hundred-ECU transfer was activated and includes the appropriate fees. A favorable draw is an outcome; its ex ante probability remains a different quantity.

The single-interaction activity ends after the first active case even though the app can technically support ten rounds. Repeated modes sum ten case balances. The final screen has no next button and asks participants to keep the window open. Those finishing early should remain silent while others continue. Only completed active cases enter the report: unplayed technical rounds and incomplete group decisions do not enlarge the sample. This is essential when discussing a class in which one group has finished and another is waiting. Apparent differences in progress are not zero earnings or trial decisions.



BEER Lab
Case 1 of 1

Your position: B

Case result

No agreement was reached and the draw took place.

Your balance in this case: 135 ECU.

Probability that the draw activates the transfer: 60%.

The draw activated the transfer: No.

Transfer from B to A	0 ECU
A's draw cost	15 ECU
B's draw cost	15 ECU
Cost paid by A to communicate	0 ECU
Accumulated cost per person from changing stages	0 ECU
A's balance	135 ECU
B's balance	135 ECU

Continue

Powered by [oTree](#)

Figure 2.10: Reconstruct the ledger from the starting balance, transfer, and applicable costs. Distinguish the draw outcome from its probability.

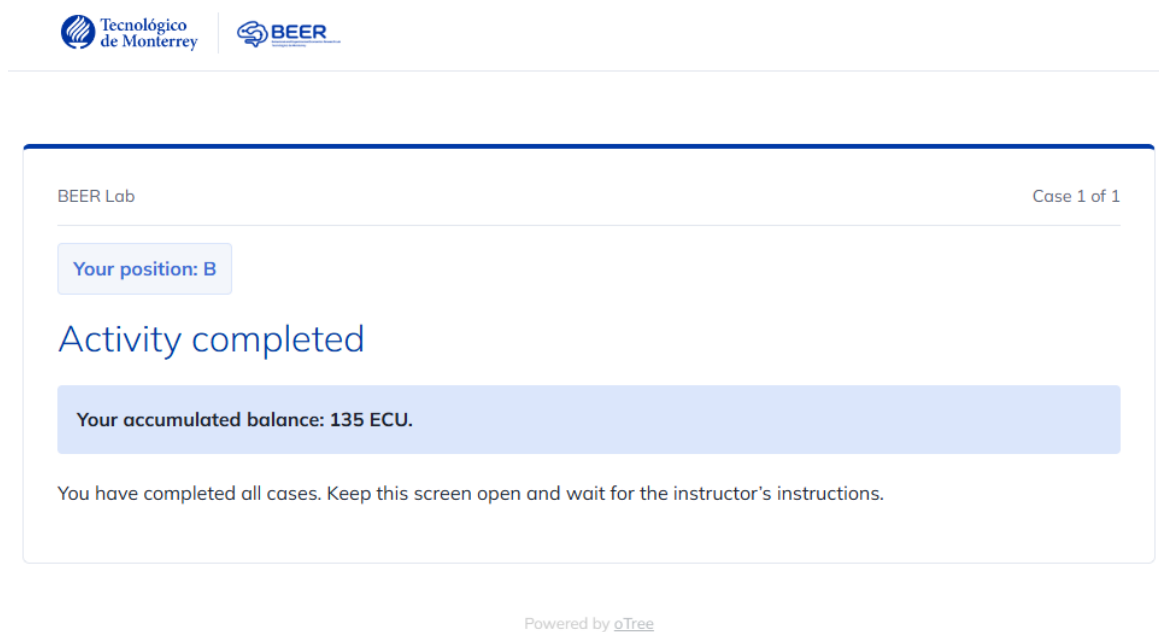


Figure 2.11: The final screen shows total earnings and asks the participant to wait. It has no continuation to a generic oTree ending.

Model and extensions

3.1 Transfers and resource losses

Let e denote each person's endowment, v the claim value, p the probability that A receives v , and c the trial cost for each party. Reference values are e equal to 150, v equal to 100, p equal to 0.6, and c equal to 15. An offer s denotes the B-to-A transfer. Following acceptance, A receives e plus s and B retains e minus s . The sum remains 300 because the transfer decreases one balance exactly as it increases the other. A larger receipt by A does not mean that the pair has produced additional resources.

At trial, A receives one hundred with probability 0.6 and zero with probability 0.4, while both parties pay fifteen. When the transfer occurs, balances are 235 for A and 35 for B. Otherwise, both receive 135. The sum is 270 under either realization. The endowment of 150 prevents negative individual balances, but it does not remove the thirty-ECU resource loss. A settlement of sixty produces 210 and 90. Its joint advantage over trial is thirty, not sixty: the sixty reallocates money within the pair. This identity is a useful first question when students read the results ledger.

$$\pi_A^S = e + s, \quad \pi_B^S = e - s, \quad \pi_A^J = e + Iv - c, \quad \pi_B^J = e - Iv - c.$$

Here S denotes settlement, J denotes trial, and I equals one when the transfer is activated and zero otherwise. The expected value of I is p . A's expected trial balance is 195 and B's is 75 in the reference. These are averages across possible outcomes, rather than balances that every participant will receive. To calculate A's expectation, multiply 235 by 0.6 and 135 by 0.4. For B, multiply 35 by 0.6 and 135 by 0.4. The app settles the actual outcome and does not replace it with an expected balance.

3.2 The settlement interval and proposal power

A risk-neutral person evaluates a lottery using its expected monetary balance. Under that assumption, A prefers settlement if 150 plus s reaches at least 195, requiring s of at least 45. B prefers settlement if 150 minus s reaches at least 75, allowing a transfer of at most 75. The weak mutually acceptable interval therefore runs from 45 to 75. Weak means that the endpoints include indifference for one party. Interior amounts strictly improve both expected balances. Existence of this interval identifies a settlement opportunity but does not, by itself, determine a unique offer.

$$pv - c \leq s \leq pv + c.$$

The lower reservation transfer is A's expected claim receipt minus the cost A avoids. The upper transfer adds B's avoided cost to the expected payment. The interval width is twice c . The

endowment cancels because it is received under both alternatives. Students may think A should accept any positive amount because the claim was not part of A's initial balance. The correct comparison uses the available alternative, rather than zero. Others may think B necessarily loses from a transfer. B also faces an expected payment and a fee if settlement fails, so an agreed payment can improve B's position.

B controls the only offer in the reference. If B maximizes own money, knows A's reservation transfer, and expects acceptance at indifference, B proposes 45. A receives 195 and B receives 105. The pair preserves 300, with B capturing the thirty-ECU saving relative to B's expected trial balance. If A requires strict improvement and accepts only integer amounts, the smallest accepted transfer is 46. A difference of one ECU consequently need not reveal a strong distributive preference. It may reflect how equality between alternatives is treated. State the tie assumption whenever presenting a numerical benchmark.

Theoretical foundation

The minimum-offer prediction requires common information, risk neutrality, concern for own money alone, and an explicit response at indifference. The settlement interval compares alternatives. An equilibrium offer additionally depends on proposal rights and the counterpart's response.

3.3 Risk, beliefs, and distributional preferences

Risk neutrality does not mean indifference to disputes. It means expected money summarizes the valuation of uncertain outcomes. A risk-averse person may prefer a secure transfer yielding less than the expected trial balance. A person seeking risk may require more to give up the chance of receiving one hundred. Someone concerned about distribution may also value the counterpart's balance or a standard of fair treatment. Such preferences can shift acceptance thresholds without implying ignorance of the rules. The monetary solution is a comparison to investigate after decisions, rather than a correct answer to teach before participants choose.

Consider a transfer of sixty. A's expected improvement over trial is fifteen, and B's improvement is also fifteen. This is the midpoint of the settlement interval but does not equalize final balances: A receives 210 and B receives 90. A zero transfer does equalize initial balances, yet A forgoes an expected claim receipt of sixty while avoiding only fifteen of cost. Ask what students mean by equality: final balances, division of the saving, division of the claim, or respect for an outside option. These standards generate different amounts and can coexist within the same classroom.

Beliefs matter if parties use different probabilities. Suppose A subjectively assigns a probability of 0.8 and B assigns 0.4. A requires at least 65 and B would pay at most 55. Their subjective intervals fail to overlap, even though the objective reference interval does overlap. This illustrates disagreement in expectations; it does not establish optimism in classroom data. Public presets announce the probability, and information presets collect B's unremunerated estimates. Rejection, impatience, distributive concerns, and comprehension difficulty are alternative explanations that need additional evidence. Avoid attaching a psychological label to an observed rejection without considering those possibilities.

3.4 One case and repeated cases

The minimum-offer calculation concerns an isolated case. Repeated history can alter expectations even when case-level payoffs remain unchanged. With a fixed partner, A may reject to influence

later proposals, or B may offer more to sustain settlements. That argument depends on the horizon, expectations, and preferences. Ten cases alone do not imply cooperation. The final case has no subsequent interaction within the session, but participants may continue to follow distributional norms or care about their counterpart. Backward reasoning under purely monetary preferences is a useful benchmark, not a substitute for examining actual patterns.

Reassignment reduces the immediate opportunity to target the same counterpart while preserving learning about the task. It does not erase accumulated experience. Compare first-round offers, later changes, and acceptance at similar amounts. A difference appearing only later might be associated with adjustment; a difference present immediately might reflect group composition or expectations about matching. One class generally lacks enough independent sessions to distinguish these explanations convincingly. The report supports formulating hypotheses without turning them into causal findings. Describe fixed roles as part of the procedure, since changing counterparts is different from allowing people to experience both sides of the dispute.

3.5 Public control and private cases

The four information presets use the same distribution: each case chooses a probability of 0.3 or 0.9 with equal chances. The average probability of activating the transfer is 0.6, as in the reference, but cases now differ. Equal means do not make these environments equivalent. In the reference, every A faces 0.6. In the public control, both parties know the selected value. Under private information, only A knows it before bargaining. A's monetary reservation transfers are 15 in a low case and 75 in a high case. B's upper bounds are 45 and 105 respectively, subject to the implemented offer cap of one hundred.

In the public control, B can propose fifteen for a low case and seventy-five for a high case, assuming acceptance at indifference. Average balances are 195 for A and 105 for B, with no trial. They match the reference means, although proposals differ by case type. Looking only at an overall average can hide this response to information. Inspect the amount distribution, distinguish case values in the private export, and compare trial rates within each type. Case types are random draws, not a forced allocation of five low and five high cases to every pair. Finite classroom samples therefore need not contain exactly equal shares.

3.6 Screening with one offer

Under private information, B cannot directly condition the offer on the hidden probability. An offer of fifteen induces the low A to accept and the high A to reject under the monetary benchmark. B receives 135 in a low settlement. B's expected balance at trial in a high case is 45: the endowment of 150 minus expected transfer of ninety and cost of fifteen. The average is ninety. An offer of seventy-five induces both types to accept but leaves B with seventy-five. B therefore prefers an offer that sends half the cases to trial, even though a mutually acceptable settlement exists separately for each case.

Offering below fifteen makes both types reject, leaving B an expected balance of seventy-five using the average probability. An amount between fifteen and seventy-four keeps the high type rejecting and reduces B's return from the low type. An amount of at least seventy-five reaches both types, but any increase pays more without improving settlement rates. This argument examines the entire integer range without requiring an abstract solution concept. The benchmark is an offer of fifteen, B's expected balance of ninety, and a trial rate of fifty percent. If A rejects at indifference, revise the integer threshold before comparing observations with the benchmark.

Trial composition changes. All cases reaching trial in this calculation have a probability of 0.9,

while the average across all cases remains 0.6. A high fraction of successful claim transfers among trials does not show that the draw is biased. Decisions have selected the cases observed at trial. The realized success rate can also depart from 0.9 through sampling variation when few cases reach that stage. The report presents mean probability among trial cases separately from the trial rate. Use these measures to explain selection before asking whether the realized outcomes conform to their announced chances.

Feedback script

Ask what B gains from offering fifteen, what B loses when the case is high, and why B accepts a risk of trial. Then compare mean probability across all cases with probability among the cases reaching the draw. Selection occurs through decisions before the random outcome is realized.

3.7 Verifiable communication without a fee

Free disclosure lets A communicate the actual case probability before B offers. The signal is verifiable and can convey only the true value. There are no free-text threats or unverifiable announcements. When B knows the type, B can offer the threshold of fifteen or seventy-five. Under surplus extraction and acceptance at indifference, A obtains the expected outside-option balance whether disclosing or facing the screening offer. Better arguments therefore need not improve the informed party's expected money. B can adjust the proposal and capture the saving from avoiding trial. The information benefits its recipient's choice even when its sender does not gain.

Consider a high A expecting an offer of fifteen without disclosure. Rejection gives an expected balance of 225. If A discloses and B offers seventy-five, acceptance produces 225. A gains no expected money but avoids risk. B improves from forty-five to seventy-five. A low A may receive fifteen through either route and finish with 165. The value of information depends on who uses it and how the saving is divided. Choosing disclosure may reflect risk aversion, expectations of generosity, or a desire to resolve the dispute, as well as expected own money.

Silence can also convey information. If only high types disclose, B may interpret silence as a low case; if everyone remains silent, B retains the initial distribution. Beliefs following an unexpected message matter for a complete equilibrium analysis. This guide does not assign one universal disclosure equilibrium to the preset. Compare communication by type, changes in estimates, and subsequent proposals. Before attributing behavior to Bayesian updating, verify that the observed message pattern would support the proposed update and that the comparison did not simultaneously change the communication fee. A student's verbal explanation after the activity can clarify possibilities but is not a randomized test of them.

3.8 Costly disclosure and sunk expenditure

Costly disclosure charges A five ECU under either settlement or trial. Once A communicates, rejecting or accepting no longer avoids that expenditure. A's transfer threshold against trial remains fifteen or seventy-five; the final balance falls five relative to the equivalent no-fee path. Subtracting five again from the reservation transfer would incorrectly count a cost present in both alternatives. The initial communication decision must compare paths before spending, when the fee remains avoidable. This is a concrete way to teach the distinction between deciding whether to incur a cost and deciding what to do after it has been incurred.

A high A who discloses, receives seventy-five, and accepts finishes with 220. By remaining silent,

facing the screening offer, and rejecting, A expects 225. Under those monetary expectations, disclosure is unattractive. A risk-averse person may nevertheless prefer secure settlement, or A may expect a transfer above eighty after disclosure. The conditional prediction specifies the question rather than treating all costly communication as an error. Reconstruct beliefs and preferences before assigning that label. Likewise, communication costs observed in a class do not establish that information always reduces welfare: information may prevent enough costly trials to more than offset those costs.

An agreement following disclosure has a resource cost of five, making the A/B sum 295. Disclosure followed by trial makes the sum 265. Without disclosure, settlement preserves 300 and trial leaves 270. The report adds resource losses rather than the offer amount. To assess disclosure efficiency, include communication expenditure and any avoided trials. A lower litigation rate can coexist with a small net saving or a lower balance for A. Reporting both dimensions distinguishes resolution, distribution, and material efficiency. Ask students whose position improves, which resources are saved, and whether those two answers necessarily coincide.

3.9 Changing the trial cost

Low- and high-cost presets retain the probability of 0.6, claim of one hundred, and single-offer sequence. Each party pays five in the low-cost preset and twenty-five in the high-cost preset. Settlement intervals become 55 to 65 and 35 to 85 respectively. Avoiding trial generates a joint saving of ten or fifty. Under the minimum-offer benchmark, B proposes 55 or 35. A retains the expected trial balance while B captures the saving. An offer falling as costs rise does not mean that settlement has become less attractive to both parties. It reflects the interaction between outside options and proposal power.

Expected trial balances are 205 for A and 85 for B with low costs, and 185 for A and 65 for B with high costs. A transfer of sixty produces 210 and 90 under either preset. Improvement over trial is five per person in the first and twenty-five in the second. Hold the transfer constant in this exercise to isolate the outside-option change. Then allow the strategic offer to adjust and discuss bargaining power. Separating the exercises prevents a larger available surplus from being confused with the division predicted by a particular proposal procedure. It also illustrates why observing an amount without its cost environment can be misleading.

Read trial rates, offers, and resource losses together. A lower trial rate under high costs can coexist with a higher average loss when each remaining trial is much more expensive. Ten percent trials costing fifty lose five ECU per case, while thirty percent trials costing ten lose three. Agreement frequency describes resolution; mean loss also captures cost intensity. A useful comparison holds information, matching, and case count constant. Spier's work on fee rules and Sullivan's work on delay provide academic context, but the numerical values here are an original classroom calibration rather than reproduced experimental parameters.

3.10 Loser-pays allocation

This preset preserves a total trial expense of thirty but assigns it entirely to the losing party. If A receives the hundred-ECU transfer, B pays thirty, producing balances of 250 and 20. If A does not receive it, A pays thirty, producing 120 and 150. The sum remains 270. Expected costs are twelve for A and eighteen for B because A loses with probability 0.4 and B with probability 0.6. Expected balances are 198 and 72. The settlement interval shifts to 48 through 78, and B proposes 48 under acceptance at indifference.

The interval still has width thirty, but its location and risk change. A now faces outcomes of 120

and 250 rather than 135 and 235. B faces 20 and 150 rather than 35 and 135. A lower trial rate may be compatible with risk aversion even though total saving per avoided trial is unchanged. Calculate the expectation shift first, then discuss dispersion. Do not present the preset as reproducing current American, English, or other national procedural law. It represents a generic allocation of thirty to the draw's loser. Related institutional research motivates the question but does not make this simplified rule an exact implementation of any legal system.

3.11 Alternating offers and entry costs

The delay preset permits B/A/B proposals and charges each party two ECU on entering the second stage and another two on entering the third. Accumulated cost per person is zero, two, or four depending on the terminal stage. Settlement in stage two leaves a pair total of 296, while settlement in stage three leaves 292. Trial after the third rejection leaves 262. Stage expenditures are never refunded. Only reached stages are charged, rather than charging all three in advance. This feature makes the loss from prolonged bargaining visible even when the parties eventually agree and avoid trial altogether.

Backward induction begins at the last stage. B proposes 45 in stage three to match A's immediate trial alternative. In stage two, A knows B can reject, pay two more, and obtain 105 at the third stage before accounting for already sunk expenses. B accepts a request of 47 because 150 minus 47 equals 105 minus two. In stage one, B anticipates that request and A anticipates spending two to receive 47. An offer of 45 matches that continuation. With acceptance at indifference, the reference sequence is 45/47/45, with immediate settlement in the first stage.

Do not use the immediate-trial interval as the sole outside option at every stage. Rejecting the first offer opens another proposal, rather than activating the draw. Continuation payoffs depend on who proposes next and which extra expenses will be incurred. The two ECU already paid to enter stage two appear under both acceptance and rejection and cancel in the current comparison. The two payable to enter stage three do not cancel. Ask which cost can still be avoided before solving each choice. This introduces sequential reasoning through a concrete financial question without assuming that students already know the formal terminology.

3.12 Recommendations and bilateral consent

The automatic amount of sixty divides the reference's expected saving equally: each party gains fifteen relative to trial. Each must approve independently. A veto activates trial, without later ordinary bargaining. Sixty is strictly preferable for both under risk neutrality and concern for own money. Acceptance nevertheless remains a human choice and is not imposed by the program. Responses may reflect distributional standards, attitudes toward the draw, or expectations about the counterpart. The preset records those votes while preserving the distinction between a suggestion and a binding third-party decision. The announced amount is a classroom rule, not a judicial assessment of a case.

In the human preset, C chooses the amount and receives 150 regardless of the recommendation, votes, or outcome. There is no settlement bonus or rejection penalty. C's monetary benchmark is indifference among all recommendations, so no single amount uniquely maximizes C's own payment. For A and B, the weak interval 45 to 75 supports bilateral monetary consent. An interior amount strictly improves both expected balances. Compare C's choices with that interval and examine votes by position without identifying individual recommenders or vetoing participants. A useful interpretation asks what standard the recommendation implements, rather than presuming that neutrality means equal final earnings.



BEER LabCase 2 of 10

Your position: A

Propose an amount

Stage 2

Probability that the draw activates the transfer: 60%.

If a draw takes place, A and B each pay 15 ECU. These costs are deducted in addition to any transfer.

There are up to three proposals: first B, then A, and finally B. The amount always means a transfer from B to A. If the first or second proposal is declined, both people pay 2 ECU when moving to the next stage. Paid costs are not refunded. If the third proposal is declined, the draw takes place.

Cost per person already paid when changing stages: 2 ECU.

How many ECU do you propose that B transfer to A?

Enter a whole number between 0 and 100. The other person decides whether to accept.

Continue

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Figure 3.1: A makes the second proposal, but it still denotes a transfer from B to A. Entry into this stage has already been paid.

The automatic/human comparison keeps the two-approval protocol but changes the source, range of possible amounts, and group size. The basic reference has B proposing and A responding, so comparing it with recommendations additionally changes proposal and consent rights. Do not attribute the full difference to legitimacy of a neutral person. Belarouci, Lenglin, and Suchon study recommendations in unstructured bargaining and find reduced delay without an average improvement in agreement probability. Our discrete procedure studies bilateral acceptance but does not replicate their conversations or timing measures. Its findings can support a discussion of recommendations while remaining distinct from a replication of the published experiment.



BEER Lab

Case 1 of 10

Your position: A

Respond to the proposal

Proposed amount from B to A: 0 ECU.

A and B respond separately. Responses are not shown until both have been recorded. If either declines, the draw takes place.

If a draw takes place, A and B each pay 15 ECU. These costs are deducted in addition to any transfer.

☐ Accept the proposed transfer

☐ Decline and activate the draw

Continue

Powered by [oTree](#)

Figure 3.2: A and B respond independently. A recommendation requires two approvals and preserves the right to reject.

Attention

A nonbinding recommendation must preserve an effective veto: here, any veto leads to trial. Do not call this arbitration. C cannot determine the outcome, and agreement requires both parties' approval.

Report and data interpretation

4.1 Reveal controls and completed observations

The report opens with progress visible and aggregates hidden until the instructor selects Reveal results. The same control hides them again. This supports the timing of classroom discussion but does not replace instructor authentication. Avoid projecting the tab during decisions if other groups' aggregates could influence behavior. Progress counts completed cases over planned cases. Four participants playing ten cases create twenty potential observations, rather than forty: an observation is a pair-case. Six participants in trios also create twenty. Participant count and case count measure different things; keep that distinction explicit when students read the denominators.

An incomplete case remains excluded from offers, rates, balances, and charts until settlement is complete. It is neither a trial observation nor a zero-payoff observation. An empty session displays a clear message while retaining the planned denominator. A partial session includes its completed cases only. For a single interaction, the report collects the only active round even when accessed from a later technical round. This makes the one-case ending verifiable without confusing the app's capacity with the selected session length. A report showing no complete cases can therefore be functioning correctly while participants are still deciding.

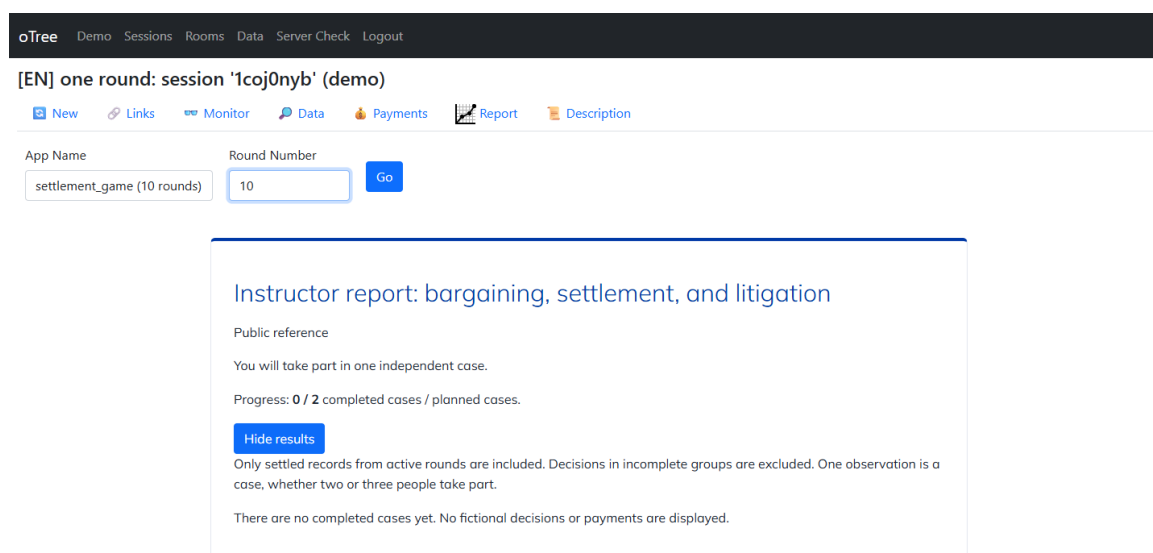


Figure 4.1: The empty report states that no cases are complete. Missing decisions are not replaced by fictional results.

oTree Demo Sessions Rooms Data Server Check Logout

[EN] Private information: session '9uto7hz2' (demo)

[New](#)
[Links](#)
[Monitor](#)
[Data](#)
[Payments](#)
[Report](#)
[Description](#)

App Name: Round Number: [Go](#)

Instructor report: bargaining, settlement, and litigation

Private information

Positions remain unchanged. Groups are reassigned between cases, avoiding consecutive meetings with the other A/B participant when alternatives exist. With few groups, later meetings can repeat.

Progress: **2 / 20** completed cases / planned cases.

Aggregates are hidden. Reveal the report when you are ready to start the discussion.

[Reveal results](#)

Figure 4.2: During play, progress remains visible and aggregates stay hidden until the instructor explicitly reveals them.

Agreement rate 50.0% n=20	Draw rate 50.0% n=20
Mean first proposal by B 58.00 n=20	Mean agreed transfer 60.00 n=10
A's balance 207.50 n=20	B's balance 77.50 n=20
Resource costs per case 15.00 n=20	Combined balance of A and B 285.00 n=20
Mean probability across all cases 72.00 n=20	Mean probability among cases with a draw 78.00 n=10
Mean absolute error in B's final estimate (percentage points) 30.00 n=20	

Figure 4.3: Reveal indicators after decisions. Their denominators help distinguish overall case probability from probability among trials.

4.2 Numerators, denominators, and distributions

Settlement rate divides agreements by complete cases. Trial rate divides trials by the same denominator, and the two sum to one hundred percent. Mean first offer uses only complete cases with a first proposal by B. Recommendation presets have none, and the report must not substitute sixty for that missing mean. Mean agreed transfer uses agreements only. Average A and B balances and resource cost use all complete cases. Each indicator displays its n. Differences in denominators are a feature of the measures, not an inconsistency to conceal. An average among agreements describes a selected subset, not every attempted case.

Histograms distinguish B's first proposals, A's second requests, agreed transfers, and recommendations. Each displays counts by amount interval, accepted counts, and percentages of its relevant observations. If four of ten first proposals fall in a bin, its bar represents forty percent of proposals, rather than participants or agreements. The accepted column helps identify bins with rejection, but it is not itself an acceptance rate until divided by proposals within that bin. An empty interval need not be infeasible; nobody may have selected it in the class. Binning supports projection but conceals variation among amounts within the same interval.

First proposals by B (n=20)

Interval (ECU)	Observations	Accepted	Distribution (%; n=20)
0-20	2	0	 10.0%
21-41	0	0	0.0%
42-62	16	10	 80.0%
63-83	0	0	0.0%
84-100	2	0	 10.0%

Figure 4.4: The first-offer distribution belongs to B. Read the proposed amount and A's response as separate decisions.

The round table presents cases, first-proposal count, mean offer, settlement rate, resource cost, and balances by position. Declining offers may accompany fewer trials, but a descriptive table does not establish which change caused the other. Random case composition can also vary across rounds. Information presets display absolute error of B's second estimate relative to the selected probability, in percentage points. The target is not the draw's binary outcome. An estimate of sixty has an error of thirty in a high case even when that case ends without a transfer. This keeps forecast precision distinct from whether a particular event happened.

4.3 Comparisons and private export

One report describes one session and preset. To compare treatments, create comparable sessions and read their reports together or privately export the records. No control invents results for an unplayed treatment. Record actual attendance, language, matching, incentives, order, and connection problems. Differences in those features can explain mean differences. Separate extension presets support interpretable comparisons. Combining information, delay, and recommendation parameters in class requires reviewing the logic of that new intervention first. The delivered package contains no automatic factorial design merging every mechanism; a larger set of combinations would require its own theoretical and instructional justification.

Evolution across cases

Case	Observations	First proposals recorded	Mean first proposal by B	Agreement rate	Resource costs per case	A	B
1	2	2	0.00	100.0%	0.00	150.00	150.00
2	2	2	60.00	100.0%	4.00	213.00	83.00
3	2	2	60.00	100.0%	8.00	206.00	86.00
4	2	2	60.00	0.0%	38.00	231.00	31.00
5	2	2	60.00	100.0%	0.00	210.00	90.00
6	2	2	60.00	100.0%	4.00	213.00	83.00
7	2	2	100.00	100.0%	8.00	246.00	46.00
8	2	2	60.00	0.0%	38.00	181.00	81.00
9	2	2	60.00	100.0%	0.00	210.00	90.00
10	2	2	60.00	100.0%	4.00	213.00	83.00

Figure 4.5: Round evolution includes complete cases only and separately states how many first proposals contribute to each mean.

The export has one row per person and complete case. It contains parameters, position, own balance, proposals, responses, estimates, and group variables. Group variables repeat twice for pairs and three times for trios. For settlement rates, deduplicate by session, round, and group. For balances by role, retain the relevant position's row. C is reported separately. Do not add C's 150 to the A/B total of 300 when comparing efficiency across presets: that introduces another endowment without modeling the recommender's time cost. Within a human group, total conservation is 450 minus resources spent, while the parties' subtotal remains 300 minus those resources.

Session and participant codes support technical tracking and are pseudonyms, not guarantees of anonymity if linked to names elsewhere. The custom report contains no individual identifiers. Keep exports in approved laboratory storage and project aggregates only. The family collects no personal characteristics. Studying differences by demographic groups would require an additional design and should not be added silently to this package. Restrict access to participant links because they allow decisions, and restrict access to detailed exports because a small class may permit informal inference even without names in the file.

Class plans, exercises, and support

5.1 Observable objectives and teaching sequence

After the activity, students should be able to reconstruct a balance, distinguish a transfer from expenditure, calculate an expected alternative, identify a settlement interval, and explain at least one mechanism through which a dispute continues. For a law class, add the distinction between party autonomy and an imposed outcome. For an economics class, add the distinction between joint efficiency and distribution. Assess those abilities with a calculation or short explanation using the game's amounts. Asking whether the experience was interesting or whether students agreed with the outcome does not demonstrate that they can reconstruct the incentive problem.

Before play, describe the problem neutrally: two positions decide a transfer and face a costly alternative procedure. Do not announce that every pair ought to settle. Allow private reading and comprehension without projecting role-specific information. During decisions, use the Monitor to locate waits and reserve the report for discussion. After play, ask each person to reconstruct their own balance before revealing aggregates. This separates a calculation difficulty from a behavioral interpretation and allows the first to be corrected without invalidating an admissible choice. A participant can understand the lottery and still prefer to reject a proposal for reasons outside the monetary benchmark.

Discussion can proceed in four steps. First ask what was observed: agreement frequency, amounts, and costs. Next reconstruct the trial alternative and reference interval. Third compare the minimum-offer prediction with the distribution and consider compatible explanations. Finally choose an extension to contrast a proposed mechanism. For an information explanation, compare presets sharing the same probability distribution. For risk attitudes, compare separate fees and loser-pays costs while keeping total expense constant. For autonomy, compare recommendation sources and inspect each position's vote. This sequence moves from evidence to a conditional explanation before introducing an additional institutional comparison.

Feedback script

Begin with "What decisions do we observe?" and then ask "What alternative did each position face?". Only then ask which mechanism might explain the difference. Finish by requesting an additional comparison that could distinguish that explanation from another compatible one.

There is no need to play every preset in one class. A short sequence can use one reference interaction and a public/private information comparison across different groups. A longer sequence can devote one class to bargaining and costs and another to information and recommendations. When the same students play several treatments, record their order and acknowledge learning and carryover. For a cleaner mechanism comparison, assign groups before observing results and maintain the same

general instructions and incentives. That discipline improves discussion even when attendance is too small for formal estimation. Classroom choice of comparisons should follow the question, rather than trying to exhaust a catalog.

5.2 Worked exercises

Exercise one. B offers fifty in the reference. Calculate settlement and expected trial balances, then identify who captures the saving. Settlement produces 200 for A and 100 for B. Outside options are 195 and 75. A captures five and B captures twenty-five, adding to thirty. Both strictly improve under risk neutrality. If someone argues that B wins because B retains one hundred while A receives only fifty, remind the class that A also retains the initial endowment. The transfer and final balance are different quantities. Ask students to state both before making a distributional judgment.

Exercise two. Compare an offer of forty under high and low trial costs. With high costs, outside options are 185 and 65; settlement gives 190 and 110, improving both. Under low costs, A expects 205 and rejects forty in the benchmark, although B would prefer settlement. An amount is not universally acceptable regardless of alternatives. Identify A's threshold first, then introduce distributive arguments. Ask whether a participant might still accept an amount below the expected monetary threshold and what preference would support that choice. The answer must distinguish expected money from utility rather than simply labelling the choice irrational.

Exercise three. Under private information, B offers fifteen. Calculate trial frequency and expected balances by type. Low A accepts and receives 165, leaving B 135. High A rejects and expects 225, leaving B an expectation of 45. With equally likely types, A averages 195 and B ninety. Average resource loss is fifteen because half the cases incur thirty. Under the public control with proposals fifteen and seventy-five, A retains an average of 195, B reaches 105, and resources are preserved. Information improves B's mean and the joint sum here without raising A's mean. Use the example to challenge a general claim that disclosure necessarily rewards the informed party.

Exercise four. High A discloses at a fee of five and receives an offer of seventy-five. Compare acceptance with rejection after disclosure. Acceptance yields 220, while rejection gives an expectation of 220: 150 plus ninety minus fifteen minus five. The reservation transfer remains seventy-five. Before disclosure, A could expect 225 by facing the screening offer and going to trial. The communication decision and the later response therefore require different comparisons. Ask students to mark the moment when five remained avoidable. If they subtract the fee only from settlement, have them reconstruct the actual trial ledger under disclosure as well.

Exercise five. Under loser pays, calculate B's balance in each draw outcome and the maximum risk-neutral transfer B would pay to avoid trial. B receives twenty if the transfer is activated and 150 otherwise. The expectation is seventy-two, allowing an agreed transfer up to seventy-eight. A requires forty-eight. The interval is thirty wide, matching the reference width while shifting by three. Equal width does not imply equal lotteries because fees are now concentrated in the unfavorable outcome. A useful extension asks how a risk-averse party might assess that concentration even if expected monetary payments were held constant.

Exercise six. In the delay preset, parties reject the first two offers and settle at sixty in stage three. A receives 206 and B 86 after four of delay cost each; their sum is 292. If they reject again and the draw activates the transfer, A receives 231 and B 31, with sum 262. Do not subtract six of delay: the first stage has no entry fee, and only two transitions cost two each. For strategic reasoning, start at stage three and distinguish sunk expenditures from additional expenses. The package's weak monetary proposal sequence is 45/47/45, with immediate agreement if the tie convention holds.

Exercise seven. Twenty cases are complete, with eight agreements and twelve trials; four cases disclosed at a fee of five. Agreement rate is forty percent and trial rate sixty percent. Resources lost are twelve times thirty plus four times five, totaling 380, or nineteen per case. Mean joint A/B balance is 281. Mean agreed transfer divides by eight, while mean cost divides by twenty. An export with forty participant rows must first be reduced to twenty case records for these rates. Repeated group variables do not create forty independent agreement decisions. Explain why the same deduplication matters even more when human groups generate three rows per case.

5.3 Evidence and critical reading

Bridge presents a teaching simulation of public-law institutions that motivates connecting rules and choices, rather than supplying this family's numerical protocol. Sullivan provides experimental evidence that asymmetric information can delay settlement while observing that the strategic explanation does not account for every result. Pecorino and Van Boening document costly disclosure by participants with strong cases despite a surplus-extraction benchmark predicting none. These readings motivate comparison of conditional predictions and behavior. They do not require a classroom sample to reproduce a published percentage or treat that percentage as a universal target for the report.

Spier develops theoretical arguments about sequential negotiation and cost allocation. Results depend on information and institutional rules; they do not establish that higher costs or loser-pays allocation universally increase agreement. Belarouci, Lenglin, and Suchon examine recommendations preserving party autonomy and distinguish bargaining failure from delay. Our family adopts that conceptual distinction through a discrete proposal rather than open bargaining. Dickinson and Hunnicutt offer related reading about third-party resolution recommendations; their fact-finding protocol is not implemented here. None of these papers makes the 150/100/15 calibration an exact replication. Sources support questions and mechanisms, while the classroom adaptation states its own operational assumptions.

Separate three levels in feedback. A fact is that some pairs rejected a particular offer. A compatible interpretation is that they valued alternatives or distributive norms differently. A further conclusion requiring evidence is that an institution would produce the same effect in real litigation. The classroom controls amounts and sequences but leaves out lawyers, precedent, heterogeneous expenditure, actual duration, enforcement, and nonmonetary value of judgments. Those omissions delimit the represented question. They do not prevent learning to reconstruct incentives, provided that the design is not presented as establishing the behavior of every legal dispute. Ask students which omitted feature might change a particular prediction and through which payoff or information channel.

5.4 Troubleshooting and continuity

When a participant remains on a wait page, identify the missing action in Monitor and check that everyone entered the same session. Repeated refreshing is not a response to the bargaining question, and waiting does not indicate rejection. Preserve the database and request laboratory assistance for a disconnected participant. Reopening the individual link can recover the current state while the session remains available. Any recovery that replaces a person or decision requires documentation; do not fabricate a response to make a group finish. The report preserves completed cases and excludes the pending one, so a technical interruption need not corrupt already completed observations.

If the report appears empty, inspect progress before treating it as a calculation failure: partial

decisions do not enter until the case is settled. If a mean displays a dash, inspect *n*; the preset may have no agreements or no ordinary offers. For a surprising balance, reconstruct the ledger and determine whether trial, communication, or additional stages occurred. If a room shows the wrong language, confirm the selected configuration name. After code updates, restart only this family instance while preserving its database. Refreshing the implementation does not require erasing sessions or reinitializing stored decisions. Keep unrelated laboratory servers running while checking a new family.

Checkpoint

At the end, confirm that groups reached results and the final screen; reveal only aggregate data; export privately if analysis is needed; record the mode, preset, incentives, and problems. Keep rehearsal evidence separate from the class dataset.

5.5 References and package documentation

The following references were verified through publisher pages or author repositories. Numerical values, ten cases, discrete verifiable communication, stage entry costs, and bilateral approval are choices of this teaching adaptation. The design matrix records the mechanism, information, benchmark, roles, flow, payoffs, report, and adaptation for each preset. The bilingual card agrees with catalog metadata. Screenshots come from artificial verification sessions, and both guides include editable sources and figures. This documentation supports inspection before classroom use and makes differences from research protocols explicit without claiming that the new public domain has already been deployed.

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Pecorino, Paul and Mark Van Boening (2015). Costly voluntary disclosure in a screening game. *International Review of Law and Economics*, 44, 16–28. DOI: <https://doi.org/10.1016/j.irle.2015.08.002>.

Spier, Kathryn E. (1992). The Dynamics of Pretrial Negotiation. *The Review of Economic Studies*, 59(1), 93–108. DOI: <https://doi.org/10.2307/2297927>.

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Belarouci, Matthieu, Vincent Lenglin, and Rémi Suchon (2025). Conciliation, Social Preferences, and Pre-Trial Settlement: A Laboratory Experiment. *Review of Law & Economics*, 21(2), 387–442. DOI: <https://doi.org/10.1515/rle-2024-0051>.

Dickinson, David L. and Lynn Hunnicutt (2005). Does Fact-Finding Promote Settlement? Theory and a Test. *Economic Inquiry*, 43(2), 401–416. DOI: <https://doi.org/10.1093/ei/cbi027>. Complementary reading, rather than the implemented protocol.