

APPENDIX A: Instructions

(Prisoner's Dilemma)

INSTRUCTIONS (room R)

Thank you for participating in this experiment. You will receive \$5 for your participation, in addition to other money to be paid as a result of decisions made in the experiment.

There are 20 people participating in this session. They have been randomly divided into two rooms, each with 10 people. You are in room **R**, this means you are a **Row decider**.

There will be ten rounds in this session, and each person will make two decisions, one in each room. You have a card with a green number and a card with a (different) yellow number. These numbers will determine when and where you make decisions.

Your **green number** indicates the round during which it will be your turn to make a decision in the **room where you are now (room R)**.

Your **yellow number** indicates the round during which it will be your turn to **go to the other room (room C)** and make a decision there.

In each round there are two people making a decision. Each person will be making a simultaneous choice between A and B in the following decision matrix:

| | | Column | |
|-----|---|--------|-------|
| | | A | B |
| Row | A | 5 , 5 | 1 , 7 |
| | B | 7 , 1 | 2 , 2 |

In each cell, the first number represents the outcome for the Row decider and the second number represents the outcome for the Column decider.

Thus, if both people choose A, the Row decider receives 5 and the Column decider receives 5. If both people choose B, the Row decider receives 2 and the Column decider receives 2. If the Row decider chooses A and the Column decider chooses B, the Row decider receives 1 and the Column decider receives 7. If the Row decider chooses B and the Column decider chooses A, the Row decider receives 7 and the Column decider receives 1.

The other nine members of each room also have a financial stake in the outcome – each person not making a decision receives 1/3 of the amount shown for the realized outcome.

Thus, if both deciders choose A, every inactive person in room R receives 5/3 and every inactive person from room C receives 5/3. If both deciders choose B, every inactive person from room R receives 2/3 and every inactive person from room C receives 2/3. If the Row decider chooses A and the Column decider chooses B, every inactive person from room R receives 1/3 and every inactive person from room R receives 7/3. If the Row decider chooses B and the Column decider chooses A, every inactive person from room R receives 7/3 and every inactive person from room R receives 1/3.

Each unit is worth \$0.50 in actual money (2 units = \$1) that will be paid in cash at the end of the experiment.

All people in the room (except for the person from the other room) will be able to watch the decider who belongs to their room make his or her choice (however, no verbal comments are permitted).

The decision of the person who walks into the room, on the other hand, is made privately.

The outcome of the joint decision is immediately revealed to all people in the room.

After the 10 rounds are completed, we will total each person's earnings (from the outcomes of the two self-made decisions, as well as the other 18 outcomes), add the \$5 show-up fee, and pay each person individually and privately, using the numbers on your two cards to identify your decisions.

Please feel free to ask questions.

(Battle of the Sexes)

INSTRUCTIONS (room R)

Thank you for participating in this experiment. You will receive \$5 for your participation, in addition to other money to be paid as a result of decisions made in the experiment.

There are 20 people participating in this session. They have been randomly divided into two rooms, each with 10 people. You are in room **R**, this means you are a **Row decider**.

There will be ten rounds in this session, and each person will make two decisions, one in each room. You have a card with a green number and a card with a (different) yellow number. These numbers will determine when and where you make decisions.

Your **green number** indicates the round during which it will be your turn to make a decision in the **room where you are now (room R)**.

Your **yellow number** indicates the round during which it will be your turn to **go to the other room (room C)** and make a decision there.

In each round there are two people making a decision. Each person will be making a simultaneous choice between A and B in the following decision matrix:

| | | Column | |
|-----|---|--------|-------|
| | | A | B |
| Row | A | 3 , 1 | 0 , 0 |
| | B | 0 , 0 | 1 , 3 |

In each cell, the first number represents the outcome for the decider Row and the second number represents the outcome for the decider Column.

Thus, if both people choose A, the decider Row receives \$3 and the decider Column receives \$1. If both people choose B, the decider Row receives \$1 and the decider Column receives \$3. If non-identical letters are chosen, each decider receives 0. These are actual dollars that will be paid in cash.

The other nine members of each room also have a financial stake in the outcome – each person not making a decision receives 1/3 of the amount shown for the realized outcome.

Thus, if both deciders choose A, every person in room R receives \$1 and every person in room C receives \$1/3. If both deciders choose B, every person in room R receives \$1/3 and every person in room C receives \$1. If non-identical letters are chosen, everyone receives 0. These are also actual dollars that will be paid in cash.

All people in the room (except for the person from the other room) will be able to watch the decider who belongs to their room make his or her choice (however, no verbal comments are permitted).

The decision of the person who walks into the room, on the other hand, is made privately.

The outcome of the joint decision is immediately revealed to all people in the room.

After the 10 rounds are completed, we will total each person's earnings (from the outcomes of the two self-made decisions, as well as the other 18 outcomes), add the \$5 show-up fee, and pay each person individually and privately, using the numbers on your two cards to identify your decisions.

Please feel free to ask questions.

(Battle of the Sexes: No Shared payoff)

INSTRUCTIONS (room R)

Thank you for participating in this experiment. You will receive \$8 for your participation, in addition to other money to be paid as a result of decisions made in the experiment.

There are 20 people participating in this session. They have been randomly divided into two rooms, each with 10 people. You are in room **R**, this means you are a **Row decider**.

There will be 20 rounds in this session, and each person will make four decisions, two in each room. You have a two card with green numbers and two cards with (different) yellow numbers. These numbers will determine when and where you make decisions.

Your **green numbers** indicate the rounds during which it will be your turn to make a decision in the **room where you are now (room R)**.

Your **yellow numbers** indicate the rounds during which it will be your turn to **go to the other room (room C)** and make a decision there.

In each round there are two people making a decision in each room. Each person will be making a simultaneous choice between A and B in the following decision matrix:

| | | Column | |
|-----|---|--------|------|
| | | A | B |
| Row | A | 3, 1 | 0, 0 |
| | B | 0, 0 | 1, 3 |

In each cell, the first number represents the outcome for the Row decider and the second number represents the outcome for the Column decider.

Thus, if both people choose A, the Row decider receives 3 and the Column decider receives 1. If both people choose B, the Row decider receives 1 and the Column decider receives 3. If the Row decider chooses A and the Column decider chooses B, the Row decider receives 0 and the Column decider receives 0. If the Row decider chooses B and the Column decider chooses A, the Row decider receives 0 and the Column decider receives 0. The payment to the other people in the room is not affected by what the two people playing choose to do.

Each unit is worth \$1 in actual money that will be paid in cash at the end of the experiment.

All people in the room (except for the person from the other room) will be able to watch the decider who belongs to their room make his or her choice (however, no verbal comments are permitted).

The decision of the person who walks into the room, on the other hand, is made privately.

The outcome of the joint decision is immediately revealed to all people in the room.

After the 20 rounds are completed, we will total each person's earnings and pay each person individually and privately, using the numbers on your four cards to identify your decisions.

Please feel free to ask questions.

(Split audience)

INSTRUCTIONS (room R)

Thank you for participating in this experiment. You will receive \$5 for your participation, in addition to other money to be paid as a result of decisions made in the experiment.

There are 32 people participating in this session. They have been randomly divided into two rooms, each with 16 people. You are in room **R**, this means you are a member of the **Row group**.

Half of the people in this room will function as the audience and the other half of the people in this room will make decisions. The people in the audience will remain in Room R, while the deciders will wait in another room until it is time for their decisions.

There will be eight rounds in this session, and each non-audience person will make two decisions, one in each room. Such people will have a card with a green number and a card with a (different) yellow number. These numbers will determine when and where they shall make decisions.

For the deciders:

The **green number** indicates the round during which it will be time to make a decision in the **room where you are now (room R)**.

The **yellow number** indicates the round during which it will be time to **go to the other room (room C)** and make a decision there.

In each round there are two people making a decision in each room. Each person will be making a simultaneous choice between A and B in the following decision matrix:

| | | Column | |
|-----|---|--------|-------|
| | | A | B |
| Row | A | 3 , 1 | 0 , 0 |
| | B | 0 , 0 | 1 , 3 |

In each cell, the first number represents the outcome for the decider Row and the second number represents the outcome for the decider Column.

The other 15 members of each room also have a financial stake in the outcome – each person not making a decision receives 1/3 of the amount shown for the realized outcome.

Thus, if both deciders choose A, the Row decider receives \$3 and the Column decider receives \$1; every non-decider in the Row group receives \$1 and every non-decider in the Column group receives \$1/3. If both deciders choose B, the Row decider receives \$1 and the Column decider receives \$3; every non-decider in the Row group receives \$1/3 and every non-decider in the Column group receives \$1. If non-identical letters are chosen, everyone receives 0. These are actual dollars that will be paid in cash.

Each person making a decision in the room will pass, face down, one of the decision cards to the experimenter, who will reveal the choices when both cards have been passed. All people in the room will be able to observe the outcome. However, no verbal comments are permitted at any time during the experiment.

After the eight rounds are completed, we will total each person’s earnings, add the \$5 show-up fee, and pay each person individually and privately, using the numbers on your two cards to identify your decisions. Audience members receive an extra \$1.

Please feel free to ask questions.

(Tajfel treatment, no common payoffs)

INSTRUCTIONS

Thank you for participating in this experiment. You will receive \$5 for your participation, in addition to other money to be paid as a result of decisions made in the experiment.

There are 20 people participating in this session. You have been divided into two groups, each with 10 people. One group is the green group, the other is the yellow group.

There will be 10 rounds in this session, and each person will make a decision in each round. Each period you will be paired with another person in the room. In some periods, you will be paired with someone in your color group, while in other periods you will be paired with someone in the other color group. Before each period, we will come to your seat and give you a slip of paper that indicates the color group of the person with whom you will be paired in the next period.

We have a pairing scheme (using the identification numbers) that guarantees that no one will ever be paired twice with the same person.

Each person will be making a simultaneous choice between A and B in the following decision matrix:

| | | Other person | |
|-----|---|--------------|-------|
| | | A | B |
| You | A | 5 , 5 | 1 , 7 |
| | B | 7 , 1 | 2 , 2 |

In each cell, the first number represents the outcome for you and the second number represents the outcome for the other person.

Thus, if both people choose A, you would receive 5 and the other person would receive 5. If both people choose B, you would receive 2 and the other person would receive 2. If you choose A and the other person chooses B, you would receive 1 and the other person would receive 7. If you choose B and the other person chooses A, you would receive 7 and the other person would receive 1.

You will make 10 such decisions over the course of the experiment. You will learn the outcome of each decision after each round.

Each unit is worth \$0.50 in actual money (2 units = \$1) that will be paid in cash at the end of the experiment.

After the 10 rounds are completed, we will total each person's earnings, and pay each person individually and privately, using your identification number.

Please feel free to ask questions.

APPENDIX B: Frequency of outcomes

Table B1: Frequency of outcomes in the Battle of the Sexes, by audience and feedback. In this and the following tables, we report in parenthesis the number of observations in each category. NSP is the treatment with no shared payoffs among group members.

| | | | | | |
|------------------------------------|---------------------|------------------------|----------------------------------|---------------------|------------------------|
| No Audience No Feedback | Guest Aggressive | Guest Accommodating | Audience No Feedback | Guest Aggressive | Guest Accommodating |
| Host | .268 | .268 | Host | .333 | .400 |
| Aggressive | (15) | (15) | Aggressive | (20) | (24) |
| Host | .321 | .143 | Host | .150 | .117 |
| Accommodating | (18) | (8) | Accommodating | (9) | (7) |
| No Audience Feedback | Guest Aggressive | Guest Accommodating | Audience Feedback | Guest Aggressive | Guest Accommodating |
| Host | .375 | .286 | Host | .214 | .732 |
| Aggressive | (21) | (16) | Aggressive | (12) | (41) |
| Host | .268 | .071 | Host | .000 | .054 |
| Accommodating | (15) | (4) | Accommodating | (0) | (3) |
| Split Audience | Guest Aggressive | Guest Accommodating | Audience Feedback NSP | Guest Aggressive | Guest Accommodating |
| Host | .386 | .364 | Host | .330 | .383 |
| Aggressive | (17) | (16) | Aggressive | (37) | (43) |
| Host | .091 | .159 | Host | .214 | .071 |
| Accommodating | (4) | (7) | Accommodating | (24) | (8) |

Table B2: Frequency of outcomes in the Prisoner's Dilemma, by audience and feedback

| | | | | | |
|------------------------------------|---------------------|------------------|---------------------------------|----------------------|------------------|
| No Audience No Feedback | Guest Cooperates | Guest Defects | Audience No Feedback | Guest Cooperates | Guest Defects |
| Host | .208 | .292 | Host | .260 | .180 |
| Cooperating | (10) | (14) | Cooperating | (13) | (9) |
| Host | .313 | .187 | Host | .320 | .240 |
| Defecting | (15) | (9) | Defecting | (16) | (12) |
| No Audience Feedback | Guest Cooperates | Guest Defects | Audience Feedback | Guest Cooperating | Guest Defects |
| Host | .293 | .328 | Host | .060 | .220 |
| Cooperating | (17) | (19) | Cooperating | (3) | (11) |
| Host | .155 | .224 | Host | .280 | .440 |
| Defecting | (9) | (13) | Defecting | (14) | (22) |

Table B3: Frequency of outcomes in the anonymous Prisoner's Dilemma, by common vs. no common payoffs and in-group vs. out-group

| Out-group, No Common Payoff | Cooperates | Defects | Out-group, Common Payoff | Cooperates | Defects |
|------------------------------------|--------------|--------------|---------------------------------|--------------|---------------|
| Cooperates | .068 (12) | .193 (34) | Cooperates | .074 (14) | .200 (38) |
| Defect | .216 (38) | .523 (92) | Defect | .110 (21) | .617 (117) |
| In-group, No Common Payoff | Cooperates | Defects | In-group, Common Payoff | Cooperates | Defects |
| Cooperates | .104 (17) | .158 (26) | Cooperates | .312 (50) | .181 (29) |
| Defect | .226 (37) | .512 (84) | Defect | .281 (45) | .225 (36) |

APPENDIX C: Statistical tests

Table C1: Comparisons and Tests for the Battle of the Sexes. The Z-statistic is for the Wilcoxon-Mann-Whitney test, ***, **, and * indicate 1%, 5%, and 10% significance, respectively, two-tailed tests. *p*-values are in brackets.

| | | Aggressive Host | Accommodating Guest |
|--|--|---------------------|------------------------|
| Null Hypothesis | | <i>Z</i> -statistic | |
| Equals | | | |
| Audience | No audience | -3.99*** [0.000] | -3.97*** [0.000] |
| Feedback | No feedback | -2.78*** [0.005] | -1.60 [0.110] |
| No audience, no feedback | Audience, Feedback | -4.96*** [0.000] | -4.05*** [0.000] |
| Split audience | Audience, Feedback | -2.81*** [0.005] | -2.78*** [0.005] |
| Split audience | No audience, no feedback | 2.20** [0.028] | 1.12 [0.267] |
| Split audience | No audience, Feedback | 0.97 [0.335] | 1.66* [0.098] |
| Split audience | No audience | 1.78* [0.076] | 1.58 [0.115] |
| Audience & feedback, with shared payoff | Audience & feedback, no shared payoff | 3.48*** [0.001] | 4.06*** [0.000] |

Table C2: Comparisons and Tests for the Prisoner's Dilemma. The Z-statistic is for the Wilcoxon-Mann-Whitney test, ***, **, and * indicate 1%, 5%, and 10% significance, respectively, two-tailed tests. *p*-values are in brackets.

| | | Host Cooperates | Guest Cooperates |
|--------------------------|--------------------|---------------------|-------------------|
| Null Hypothesis | | <i>Z</i> -statistic | |
| Equals | | | |
| Audience | No audience | 2.96*** [0.031] | 0.30 [0.000] |
| Feedback | No feedback | 0.09 [0.926] | 2.19** [0.028] |
| No audience, no feedback | Audience, feedback | 2.23** [0.026] | 1.81* [0.072] |

APPENDIX D: Session-level Data

Table D1: Frequency of choices in the Battle of the Sexes, by treatment and session.

| Treatment & session | Aggressive Host | Accommodating Guest |
|---|-----------------|---------------------|
| Audience & Feedback, Session 1 | .950 | .750 |
| Audience & Feedback, Session 2 | .875 | .875 |
| Audience & Feedback, Session 3 | 1.000 | .700 |
| | | |
| Audience & No Feedback, Session 1 | .700 | .500 |
| Audience & No Feedback, Session 2 | .650 | .250 |
| Audience & No Feedback, Session 3 | .850 | .750 |
| | | |
| No Audience & Feedback, Session 1 | .800 | .350 |
| No Audience & Feedback, Session 2 | .438 | .375 |
| No Audience & Feedback, Session 3 | .700 | .350 |
| | | |
| No Audience & No Feedback, Session 1 | .444 | .222 |
| No Audience & No Feedback, Session 2 | .500 | .389 |
| No Audience & No Feedback, Session 3 | .650 | .600 |
| | | |
| Split Audience, Session 1 | .643 | .286 |
| Split Audience, Session 2 | .938 | .562 |
| Split Audience, Session 3 | .643 | .714 |
| | | |
| Audience & Feedback, No Shared Payoff, Session1 | .583 | .222 |
| Audience & Feedback, No Shared Payoff, Session2 | .950 | .700 |
| Audience & Feedback, No Shared Payoff, Session3 | .583 | .417 |

Table D2: Frequency of choices in the Prisoner’s Dilemma, by treatment and session.

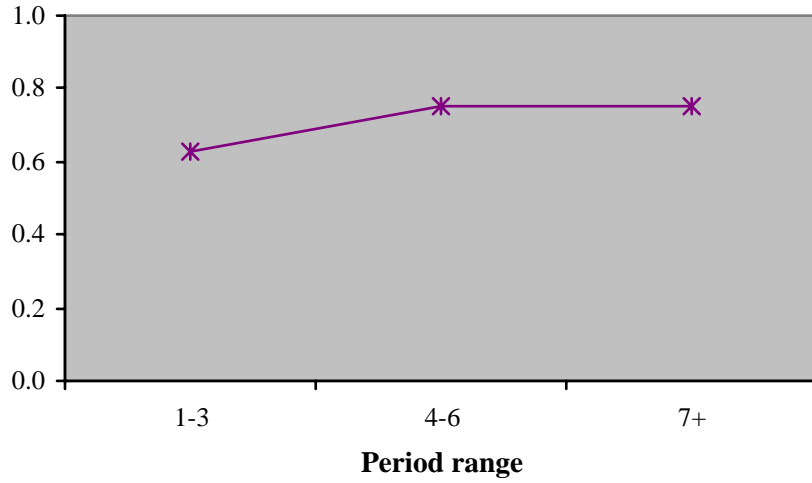
| Treatment & session | Host Cooperates | Guest Cooperates |
|--------------------------------------|-----------------|------------------|
| Audience & Feedback, Session 1 | .286 | .500 |
| Audience & Feedback, Session 2 | .300 | .250 |
| Audience & Feedback, Session 3 | .250 | .312 |
| | | |
| Audience & No Feedback, Session 1 | .444 | .444 |
| Audience & No Feedback, Session 2 | .375 | .625 |
| Audience & No Feedback, Session 3 | .500 | .688 |
| | | |
| No Audience & Feedback, Session 1 | .667 | .389 |
| No Audience & Feedback, Session 2 | .500 | .450 |
| No Audience & Feedback, Session 3 | .700 | .500 |
| | | |
| No Audience & No Feedback, Session 1 | .625 | .625 |
| No Audience & No Feedback, Session 2 | .438 | .438 |
| No Audience & No Feedback, Session 3 | .438 | .500 |

Table D3: Frequency of choices in the anonymous Prisoner’s Dilemma, by treatment and session

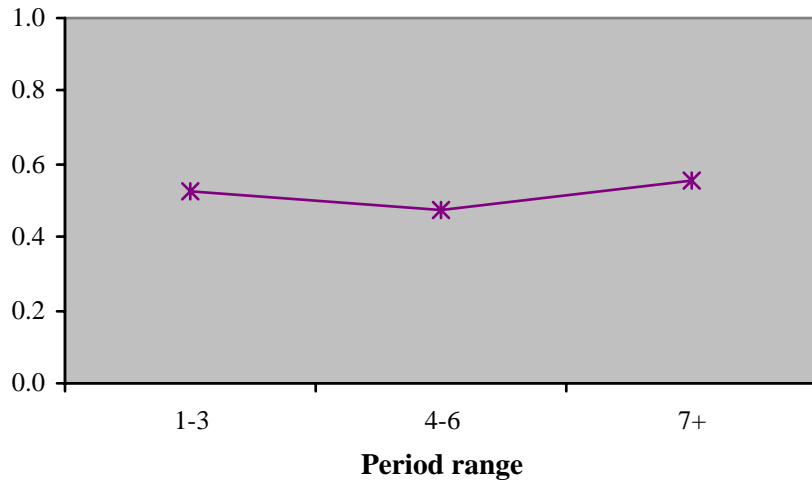
| Treatment & session | Cooperation with in-group | Cooperation with out-group |
|---------------------------------------|---------------------------|----------------------------|
| No Common In-group Payoffs, Session 1 | .333 | .250 |
| No Common In-group Payoffs, Session 2 | .275 | .238 |
| No Common In-group Payoffs, Session 3 | .290 | .280 |
| No Common In-group Payoffs, Session 4 | .300 | .310 |
| | | |
| Common In-group Payoffs, Session 1 | .375 | .150 |
| Common In-group Payoffs, Session 2 | .662 | .320 |
| Common In-group Payoffs, Session 3 | .575 | .210 |
| Common In-group Payoffs, Session 4 | .562 | .210 |

APPENDIX E: Play Over Time

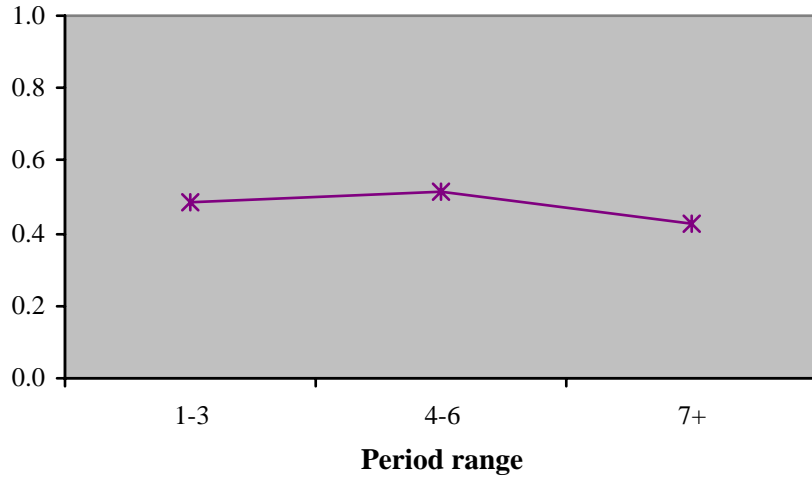
Battle of the Sexes Hosts Aggressive Play over Time



Battle of the Sexes Guests Accomodating Play over Time



Prisoner's Dilemma Hosts Cooperation Rates over Time



Prisoner's Dilemma Guest Cooperation Rates over Time

