

Competition, Cooperation, and Social Perceptions - Online Appendix

Jeanne Hagenbach and Rachel Kranton

December 2024

We report below the consent form and the full experimental instructions for the main experiment and for the complementary experiments. In italics, we give additional information to the reader that was not seen by subjects.

1. Consent Form

This study, run by researchers at Duke University (USA) and at Sciences Po (France), concerns how people make choices in strategic contexts.

For completing the study, you will be paid \$1.00. In this study, we will ask you to answer a set of questions about yourself (including your political leaning and demographics), be placed in a work setting with another participant and do a counting task, and answer questions about this participant and yourself. This study should take about 8 minutes to complete.

On average, you can additionally expect to earn a bonus payment up to about \$1.20 depending on your answers, your performance in the counting task, and possibly the performance of other participants.

We will not ask your name at any point during the study, so your responses can never be connected with you. Data collected in this study (without your Prolific ID), coupled with data collected about you by Prolific, may be shared with other researchers or used for future studies.

Your participation is voluntary. You can withdraw at any time by closing the survey. However, to receive your completion code for payment, you must reach the last screen.

We know of no risks resulting from participating in the study. If you have questions about this research, you may send a message to the researchers via Prolific. If you have any questions concerning your rights as a participant in this research study, you may contact the Duke University Campus Institutional Review Board at campusirb@duke.edu, referencing Protocol ID #2019-0170.

Please indicate below whether you consent to take part in this study. *Yes or No*

2. Experimental Instructions for the Main Study: Social Perceptions, Competition vs. Cooperation

Welcome! Thank you for participating in this study. The study will have three parts:

1. Study Questionnaire about yourself.
2. Work Setting involving another participant.
3. Questions about the other participant and yourself.

Each part should take about 2-3 minutes. Altogether, the survey should take about 8 minutes to complete.

During the survey, there will be opportunities to obtain bonus money, which you would receive in addition to the fixed payment of \$1.00 for completing the survey.

Please read each question carefully. It is important that you remove any potential distractions (e.g. phone, music, watches, email).

———New Screen———

Part 1: Study Questionnaire

Please answer each of the following questions carefully. Your answers are important to our study.

Questions are presented in one of ten orders, randomly selected.

Are you married or in a domestic partnership? *Answers:* Yes, No

What is your gender?

Answers: Male, Female, Non-binary

Which of the following two seasons do you like more?

Answers: Spring, Fall

Do you lean closer to the Democratic or Republican party?

Answers: Democratic Party, Republican Party.

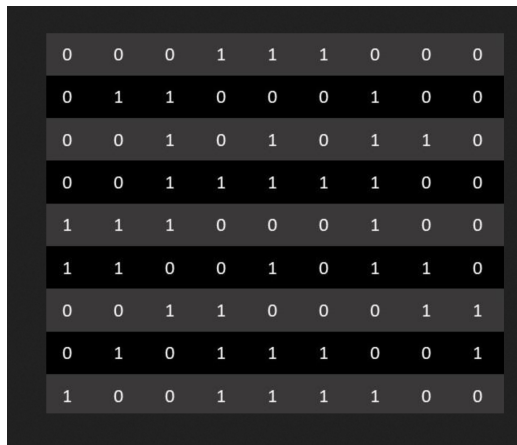
———New Screen———

Part 2: Work Setting & Counting Task

You will now participate in a work setting involving you and another real person who participated in a previous study. This other participant has been randomly selected and will be called “Person A”

What you do here will affect the bonus money that you receive and the bonus money that Person A will receive.

You are asked to do a counting task. This task consists of counting the number of 1s in different tables containing 0s and 1s like this one:



0	0	0	1	1	1	0	0	0
0	1	1	0	0	0	1	0	0
0	0	1	0	1	0	1	1	0
0	0	1	1	1	1	1	0	0
1	1	1	0	0	0	1	0	0
1	1	0	0	1	0	1	1	0
0	0	1	1	0	0	0	1	1
0	1	0	1	1	1	0	0	1
1	0	0	1	1	1	1	0	0

You will be given 3 minutes to count the 1s in as many tables as possible, up to 20 tables. Your performance will correspond to the number of tables in which you counted the 1s correctly.

Person A has done this exact same task previously and we recorded his or her performance.

Subject is randomly assigned to Competition or Cooperation treatment.

——New Screen——

Text for Competition Treatment only.

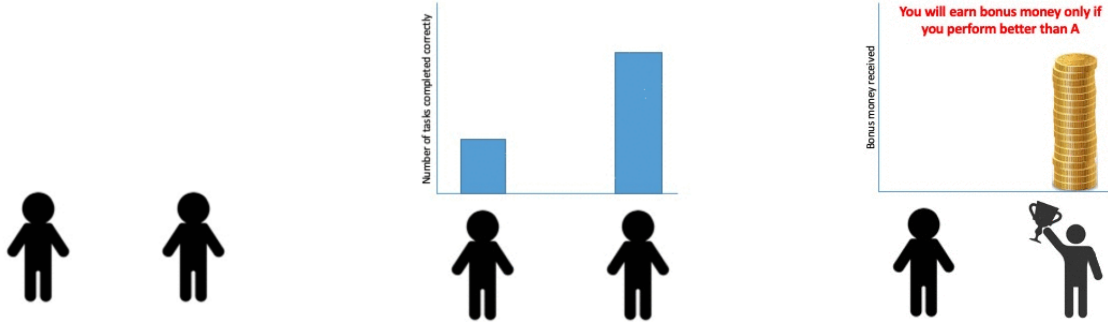
Payment

If your performance in the counting task is better than that of Person A, you will earn 0.40 bonus pay for each table that you counted correctly, and Person A will earn no bonus money.

If Person A’s performance in the counting task is better than yours, you will earn no bonus money, and Person A will earn 0.40 bonus pay for each table that he or she counted correctly.

In short, you will earn bonus money only if you perform better than Person A.

Images below are displayed as a gif.



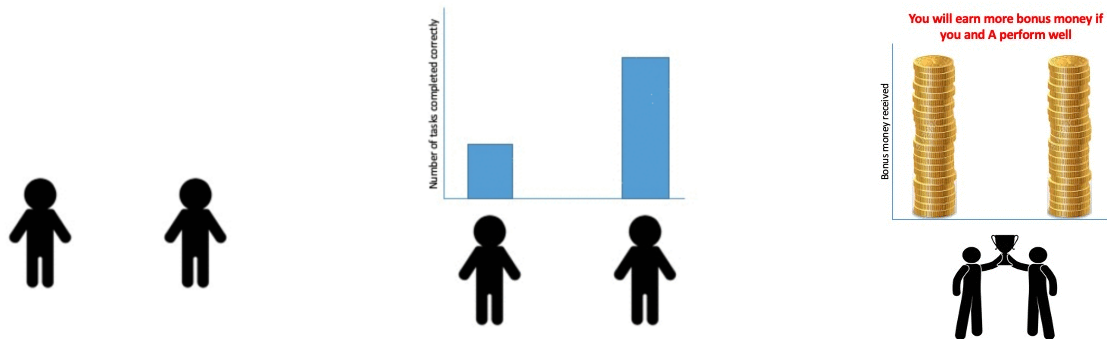
Text for Cooperation Treatment only.

Payment

For each table that you count correctly, both you and Person A will each earn 0.10 bonus pay. For each table that Person A counted correctly, both you and Person A will each earn 0.10 bonus pay.

In short, you will earn more bonus money if both you and Person A together perform well.

Images below are displayed as a gif.



—New Screen—

Person A answered the *Study Questionnaire*, just as you did in Part 1 of the survey. The next page will display Person A's answers for 10 seconds, after which you will advance automatically to the counting task.

——New Screen——

Person A answered the Study Questionnaire, just as you did in Part 1 of the survey. This page will display Person A's answers for 10 seconds, after which you will advance automatically to the counting task.

Person A's answers are displayed here in the same order as the questions were asked the subject. An example of the display follows:

These are Person A's answers to the Study Questionnaire:

Person A's answers to the Study Questionnaire

Not married or in a domestic partnership

Female

Prefers spring

Closer to the Democratic party

This page will automatically advance in 10 seconds.

——New Screen——

When you are ready to start the counting task, click NEXT.

Text for Competition Treatment only.

Remember, you will have to perform better than Person A to earn bonus payment.

Text for Cooperation Treatment only.

Remember, you will earn more bonus money if both you and Person A together perform well.

——New Screen——

You have 3 minutes to count the 1's in as many tables as possible.

This page will automatically advance after 3 minutes.

Please indicate how many 1's appear in the table below.

Twenty tables are displayed with boxes for answers. Digital countdown clock appears before every table. After 3 minutes, the subject moves automatically to the next screen.

——New Screen——

Time is up. You will learn how much bonus money you earned at the end of the study.

——New Screen——

Part 3: Questions about Another Participant and Yourself

Please answer a few questions about you and Person A.

The question about common answers is asked first in the first experimental session and asked second in the second session.

You answered the Study Questionnaire at the beginning of the survey. How many answers do you have in common with Person A? You will earn a bonus of

\$0.10 if you are exactly correct

\$0.05 if you are within 1 of the correct number

\$0 if you are 2 or more outside the correct number

Pull-down menu of 4,3,2,1,0

——New Screen——

How similar are you to Person A?

Answers: Not similar at all, Not similar, Neutral, Similar, Very similar

——New Screen——

How much do you agree with the following statements?

I am a competitive person.

Answers: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree

I like working in teams.

Answers: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree

I like working by myself.

Answers: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree

——New Screen——

Subject answers a demographic questionnaire: year of birth, state and county of residence, level of education.

———New Screen———

Thank you for taking part in our study!

Since you counted x tables correctly, and Person A counted y tables correctly, you will receive the following payments if your submission is approved.

- \$1.00 for study completion.
- As bonus payment, you will earn
 - \$ b from Part 2 of the study
 - \$ c from Part 3 of the study

After you complete your submission, you will be redirected to Prolific where you can submit your completion code. Please reach out to us if you experience technical difficulties or if you do not hear back from us in the next few weeks. You can also leave an anonymous comment here. *Text box.*

Redirection to the Prolific website.

3. Experimental Instructions for the Control Study with Piece-Rate Payments and Social Perceptions

Welcome! Thank you for participating in this study. The study will have three parts:

1. Study Questionnaire about yourself.
2. Work Setting.
3. Questions about another participant and yourself.

Each part should take about 2-3 minutes. Altogether, the survey should take about 8 minutes to complete.

During the survey, there will be opportunities to obtain bonus money, which you would receive in addition to the fixed payment of \$1.00 for completing the survey.

Please read each question carefully. It is important that you remove any potential distractions (e.g. phone, music, watches, email).

——New Screen——

Part 1: Study Questionnaire

Please answer each of the following questions carefully. Your answers are important to our study.

Questions are presented in one of ten orders, randomly selected.

Are you married or in a domestic partnership?

Answers: Yes, No

What is your gender?

Answers: Male, Female, Non-binary

Which of the following two seasons do you like more?

Answers: Spring, Fall

Do you lean closer to the Democratic or Republican party?

Answers: Democratic Party, Republican Party.

——New Screen——

Part 2: Work Setting & Counting Task

You will now participate in a work setting. What you do here will affect the bonus money that you receive.

You are asked to do a counting task. This task consists of counting the number of 1s in different tables containing 0s and 1s like this one:

You will be given 3 minutes to count the 1s in as many tables as possible, up to 20 tables. Your performance will correspond to the number of tables in which you counted the 1s correctly.

Payment

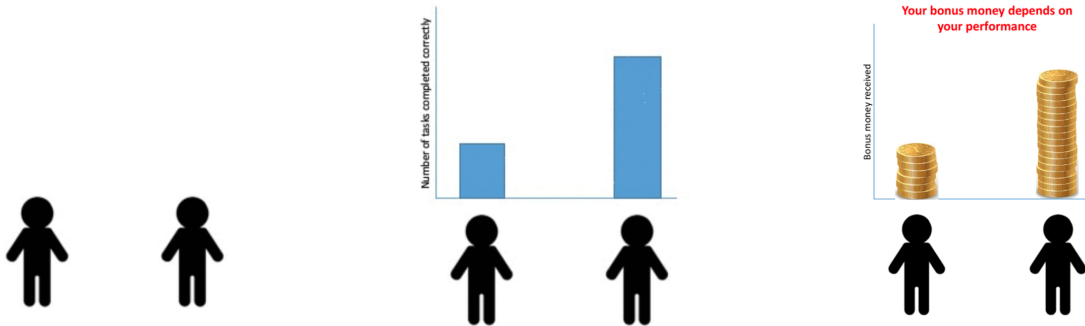
You will earn \$0.20 bonus pay for each table that you count correctly. **In short, you will earn more bonus money if you perform well.**

Another *real person* completed this exact same task in a previous study. This other participant has been randomly selected and will be called “Person A.” Your

0	0	0	1	1	1	0	0	0
0	1	1	0	0	0	1	0	0
0	0	1	0	1	0	1	1	0
0	0	1	1	1	1	1	0	0
1	1	1	0	0	0	1	0	0
1	1	0	0	1	0	1	1	0
0	0	1	1	0	0	0	1	1
0	1	0	1	1	1	0	0	1
1	0	0	1	1	1	1	0	0

bonus does not depend on the performance of Person A but this person also earned \$0.20 bonus pay for each table that A counted correctly.

Images below are displayed as a gif.



————New Screen————

Person A answered the *Study Questionnaire*, just as you did in Part 1 of the survey. The next page will display Person A’s answers for 10 seconds, after which you will advance automatically to the counting task.

————New Screen————

Person A answered the Study Questionnaire, just as you did in Part 1 of the survey. This page will display Person A’s answers for 10 seconds, after which you will advance automatically to the counting task.

Person A’s answers are displayed here in the same order as the questions were asked the subject. An example of the display follows:

These are Person A's answers to the Study Questionnaire:

Person A's answers to the Study Questionnaire

Not married or in a domestic partnership

Female

Prefers spring

Closer to the Democratic party

This page will automatically advance in 10 seconds.

——New Screen——

When you are ready to start the counting task, click NEXT.

Remember, you will earn more bonus money if you perform well.

——New Screen——

You have 3 minutes to count the 1's in as many tables as possible.

This page will automatically advance after 3 minutes.

Please indicate how many 1's appear in the table below.

Twenty tables are displayed with boxes for answers. Digital countdown clock appears before every table. After 3 minutes, the subject moves automatically to the next screen.

——New Screen——

Time is up. You will learn how much bonus money you earned at the end of the study.

——New Screen——

Part 3: Questions about Another Participant and Yourself

Please answer a few questions about you and Person A.

The question about common answers is asked first in the first experimental session and asked second in the second session.

You answered the Study Questionnaire at the beginning of the survey. How many answers do you have in common with Person A? You will earn a bonus of

\$0.10 if you are exactly correct

\$0.05 if you are within 1 of the correct number
\$0 if you are 2 or more outside the correct number

Pull-down menu of 4,3,2,1,0

——New Screen——

How similar are you to Person A?

Answers: Not similar at all, Not similar, Neutral, Similar, Very similar

——New Screen——

How much do you agree with the following statements?

I am a competitive person.

Answers: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree

I like working in teams.

Answers: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree

I like working by myself.

Answers: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree

——New Screen——

Subject answers a demographic questionnaire: year of birth, state and county of residence, level of education.

——New Screen——

Thank you for taking part in our study!

Since you counted x tables correctly, you will receive the following payments if your submission is approved:

- \$1.00 for study completion.
- As bonus payment, you will earn

- \$b from Part 2 of the study
- \$c from Part 3 of the study

After you complete your submission, you will be redirected to Prolific where you can submit your completion code. Please reach out to us if you experience technical difficulties or if you do not hear back from us in the next few weeks. You can also leave an anonymous comment here. *Text box.*

Redirection to the Prolific website.

4. Experimental Instructions for the Control Study with Non-Social Perceptions, Competition vs. Cooperation

Welcome! Thank you for participating in this study. The study will have three parts:

1. Simple game with the computer.
2. Work Setting involving another participant.
3. Survey questions.

Each part should take about 2-3 minutes. Altogether, the survey should take about 8 minutes to complete.

During the survey, there will be opportunities to obtain bonus money, which you would receive in addition to the fixed payment of \$1.00 for completing the survey.

Please read each question carefully. It is important that you remove any potential distractions (e.g. phone, music, watches, email).

——New Screen——

Part 1: Simple Game with the Computer

You will now play a simple game to randomly select four features of a scene in nature.

The following four clicks are presented in one of ten orders, randomly selected.

——New Screen——

Please click so that the computer chooses the landscape: Mountains or River *Click Here button*

——New Screen——

The screen displays what the computer selected, namely Mountains or River

——New Screen——

Please click so that the computer chooses the season: Spring or Fall *Click Here button*

——New Screen——

The screen displays what the computer selected, namely Spring or Fall

——New Screen——

Please click so that the computer chooses the weather: Rainy or Sunny *Click Here button*

——New Screen——

The screen displays what the computer selected, namely Rainy or Sunny

——New Screen——

Please click so that the computer chooses the location: East or West *Click Here button*

——New Screen——

The screen displays what the computer selected, namely East or West

——New Screen——

Part 2: Work Setting & Counting Task

You will now participate in a work setting involving you and *another real person* who participated in a previous study. This other participant has been randomly selected and will be called “Person A”

What you do here will affect the bonus money that you receive and the bonus money that Person A will receive.

You are asked to do a counting task. This task consists of counting the number of 1s in different tables containing 0s and 1s like this one:

You will be given 3 minutes to count the 1s in as many tables as possible, up to 20 tables. Your performance will correspond to the number of tables in which you counted the 1s correctly.

0	0	0	1	1	1	0	0	0
0	1	1	0	0	0	1	0	0
0	0	1	0	1	0	1	1	0
0	0	1	1	1	1	1	0	0
1	1	1	0	0	0	1	0	0
1	1	0	0	1	0	1	1	0
0	0	1	1	0	0	0	1	1
0	1	0	1	1	1	0	0	1
1	0	0	1	1	1	1	0	0

Person A has done this exact same task previously and we recorded his or her performance.

Subject is randomly assigned to Competition or Cooperation treatment.

Text for Competition Treatment only.

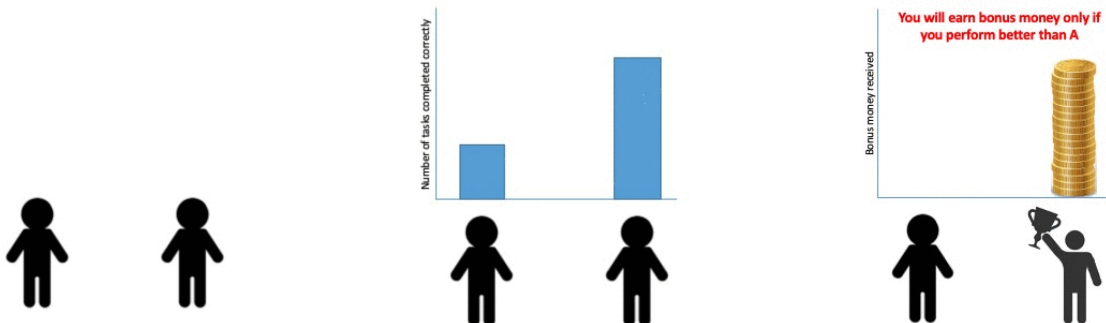
Payment

If your performance in the counting task is better than that of Person A, you will earn 0.40 bonus pay for each table that you counted correctly, and Person A will earn no bonus money.

If Person A's performance in the counting task is better than yours, you will earn no bonus money, and Person A will earn 0.40 bonus pay for each table that Person A counted correctly.

In short, you will earn bonus money only if you perform better than Person A.

Images below are displayed as a gif.



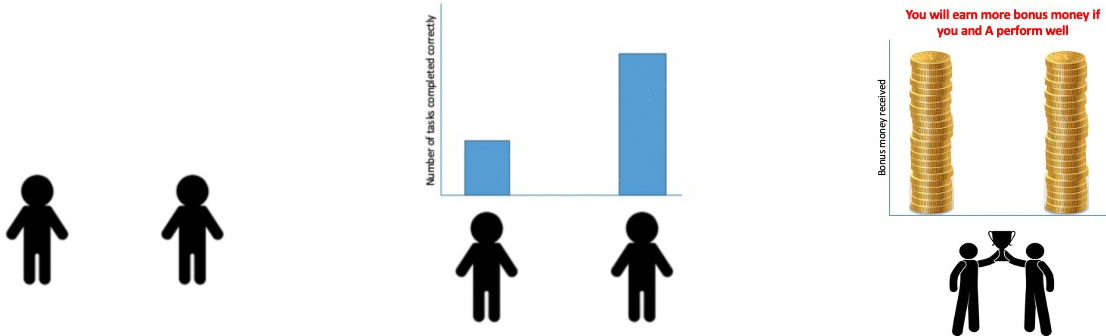
Text for Cooperation Treatment only.

Payment

For each table that you count correctly, both you and Person A will each earn 0.10 bonus pay. For each table that Person A counted correctly, both you and Person A will each earn 0.10 bonus pay.

In short, you will earn more bonus money if both you and Person A together perform well.

Images below are displayed as a gif.



——New Screen——

Before launching the counting task, the computer randomly selected another set of four features describing a scene in nature, from the same possibilities as in Part 1. This page will display these features for 15 seconds, after which you will advance automatically to the counting task.

The four features are displayed here in the same order as the features were selected in Part 1. An example of the display follows:

River
Fall
Sunny
West

——New Screen——

When you are ready to start the counting task, click NEXT.

Text for Competition Treatment only.

Remember, you will have to perform better than Person A to earn bonus payment.

Text for Cooperation Treatment only.

Remember, you will earn more bonus money if both you and Person A together perform well.

——New Screen——

You have 3 minutes to count the 1's in as many tables as possible.

This page will automatically advance after 3 minutes.

Please indicate how many 1's appear in the table below.

Twenty tables are displayed with boxes for answers. Digital countdown clock appears before every table. After 3 minutes, the subject moves automatically to the next screen.

——New Screen——

Time is up. You will learn how much bonus money you earned at the end of the study.

——New Screen——

Part 3: Survey Questions

In Part 1 you played a game with the computer, and the computer randomly selected these four features for a scene in nature:

The exact four features selected in Part 1 are displayed here. An example of the display follows:

Mountain Fall Rainy East

In Part 2 the computer randomly selected four features for another scene in nature.

How many features do the two scenes have in common? You will earn a bonus of

\$0.10 if you are exactly correct

\$0.05 if you are within 1 of the correct number

\$0 if you are 2 or more outside the correct number

Pull-down menu of 4,3,2,1,0

——New Screen——

How much do you agree with the following statements?

I am a competitive person.

Answers: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree

I like working in teams.

Answers: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree

I like working by myself.

Answers: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree

———New Screen———

Subject answers a demographic questionnaire: gender, year of birth, state and county of residence, level of education.

———New Screen———

Thank you for taking part in our study!

Since you counted x tables correctly, and Person A counted y tables correctly, you will receive the following payments if your submission is approved:

- \$1.00 for study completion.
- As bonus payment, you will earn
 - $\$b$ from Part 2 of the study
 - $\$c$ from Part 3 of the study

After you complete your submission, you will be redirected to Prolific where you can submit your completion code. Please reach out to us if you experience technical difficulties or if you do not hear back from us in the next few weeks. You can also leave an anonymous comment here. *Text box.*

Redirection to Prolific website.