Supplementary Material for "App-based experiments" by Paolo Pin and Tiziano Rotesi

Appendix A   Description of the app App Lab

App Lab is a cross-platform app for Android and iOS devices. The core function of this app allows researchers to distribute experiment links to users who have signed up to participate.

After downloading the app, participants can generate a username and password for logging in. Once connected to their accounts, they can subscribe to available experiments. These subscribed experiments will subsequently appear in a dedicated section of the app.

Figure A1 displays screenshots of the main sections of the app. On the left is the page listing active experiments to which the user has subscribed. The center page allows users to subscribe to new experiments. For this particular experiment, we utilized the option at the top, with participants employing a code we dispatched to them via email. On the right is an example of the interface while playing a game.

During the execution of experiments, the researcher has the ability to integrate links to web pages. In this particular project, we utilized oTree hosted on a Heroku server. Nevertheless, it is also possible to use other services such as Qualtrics. When a participant taps on a tile to initiate an experiment, the app takes on the role of a browser, subsequently loading the required content.
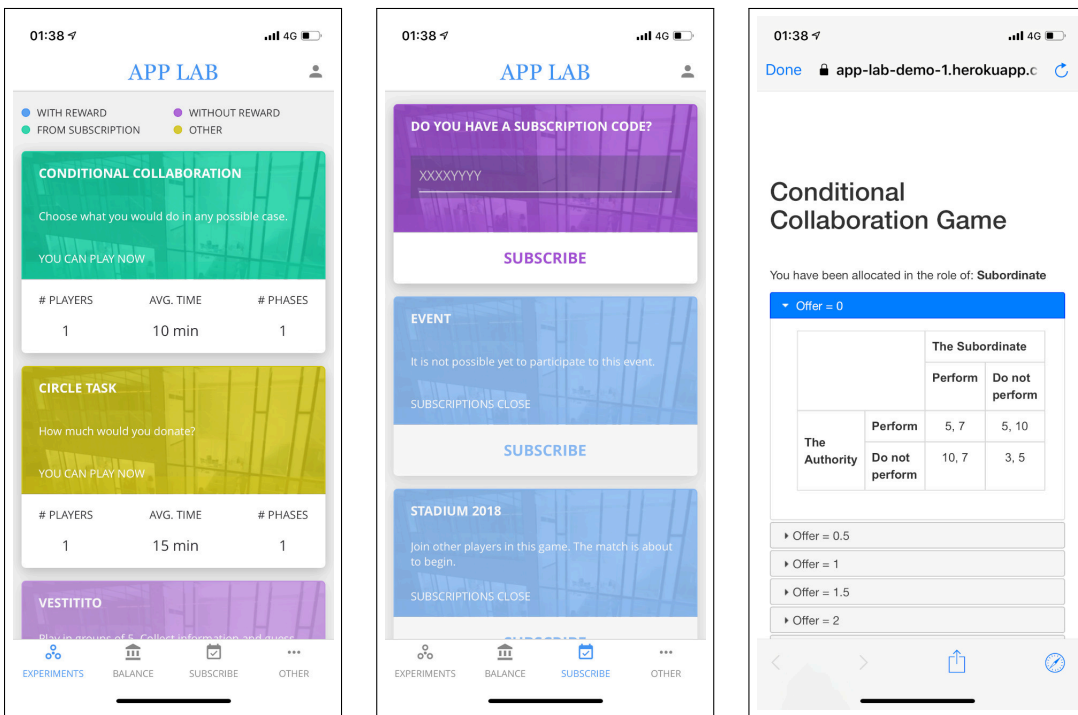
Figure A1: Screenshots of the interface.

Appendix B Ancillary tasks

As outlined in Section 2, some tasks were followed by ancillary questions designed to measure beliefs about oneself or other players. Table A1 presents a comparison of results from these elicitations in both the app and the lab. Consistent with the results from Table 4, we find no significant differences between the two treatments.

Table A1: Ancillary tasks

	Treatment		Mean		Variance
	Lab	App	Difference	p-value	p-value
	(1)	(2)	(3)	(4)	(5)
Counting 1s, Beliefs on self	13.059	13.162	0.103	0.920	0.176
(out of 5)	(0.782)	(0.656)	(1.024)	[1.000]	
Counting 1s, Beliefs on others	3.863	3.899	0.036	0.915	0.452
(own ranking out of 10)	(0.245)	(0.237)	(0.341)	[1.000]	
Raven, Beliefs on self	2.582	2.680	0.099	0.543	0.349
(out of 5)	(0.120)	(0.109)	(0.162)	[1.000]	
Raven, Beliefs on others	4.573	4.754	0.181	0.532	0.753
(own ranking out of 10)	(0.216)	(0.195)	(0.290)	[1.000]	
CRT, Beliefs on self	2.118	2.156	0.038	0.799	0.692
(out of 5)	(0.107)	(0.101)	(0.147)	[1.000]	
CRT, Beliefs on others	5.436	5.320	-0.117	0.707	0.165
(own ranking out of 10)	(0.229)	(0.210)	(0.310)	[1.000]	
Prisoner's dilemma, Beliefs	52.789	54.802	2.013	0.618	0.993
(% of others playing A)	(2.894)	(2.794)	(4.026)	[1.000]	
Stag hunt, Beliefs	67.764	69.496	1.732	0.610	0.948
(% of others cooperating)	(2.534)	(2.265)	(3.388)	[1.000]	
Hawk-Dove, Beliefs	55.532	55.852	0.320	0.913	0.062
(% of others yielding)	(2.275)	(1.859)	(2.914)	[1.000]	
Ultimatum Game, Beliefs on others	5.935	5.790	-0.145	0.526	0.998
(kept by A)	(0.168)	(0.156)	(0.229)	[1.000]	
Ultimatum Game, Beliefs on others	61.880	58.017	-3.863	0.408	0.856
(reject if offered 1)	(3.401)	(3.190)	(4.659)	[1.000]	
Trust Game, Beliefs on others	1.891	2.025	0.134	0.377	0.565
(sent by A)	(0.105)	(0.108)	(0.151)	[1.000]	
The Dice Sum, Beliefs on others	17.330	17.033	-0.297	0.565	0.793
(reported sum)	(0.368)	(0.360)	(0.515)	[1.000]	
The Dice count 6, Beliefs on others	2.971	3.066	0.094	0.669	0.403
(reported 6s)	(0.172)	(0.140)	(0.220)	[1.000]	

Notes: Column (1) refers to participants in the BELSS Lab at Bocconi University. Column (2) refers to participants who answered using App Lab. Column (3) reports the difference between columns (1) and (2). Column (4) reports p-values for the test of equality between the Lab and App groups. In brackets, p-values adjusted for multiple hypotheses testing calculated according to Romano and Wolf (2005a,b, 2016) as implemented in Clarke (2021). Column (5) reports p-values for the Brown–Forsythe test for the equality of group variances. * p<0.05, ** p<0.01, *** p<0.001. Standard Errors are in parentheses.

Appendix C Instructions

Below we report the instructions in boxes. Consecutive screens are indicated by lines
"Click Next to proceed". The subjects did not see the blue-colored text, which we
add here to indicate the task or to facilitate understanding.

CONSENT FORM

This research study is conducted under the supervision of Professor Paolo Pin. This is part of a project aimed at studying respondents' behavior inside and outside the laboratory. If you have any questions about this research you can contact Paolo Pin at paolo.pin@unibocconi.it .

Voluntary Participation

Participation is voluntary. You may stop at any time and you are free to choose question that you don't want to answer. The withdrawal involves no penalty. Questions that are not completely answered will not be paid, if extracted at random.

Procedure, duration, and compensation

This experiment consists of several questions, many of which can earn you money. At the end of the experiment, we will choose at random two questions and pay you according to the answers you provided (each participant will be paid based on a different draw). You will be rewarded for the quality of your decisions, so please pay close attention to each question.

The experiment is expected to last approximately 60 minutes and pay up to 24 euro upon completion. By completing the questions you will earn at least 4 euro. We will then choose at random two questions that would make you earn up to 10 euro each (approximately, more details will be given to you in the text of each question). The actual amount you will earn will depend on your decisions and possibly on other participants' decision.

After the end of the experiment, you will receive an email telling you how much you earned during the experiment. In the next few days, you will receive an Amazon Gift Card with the corresponding amount. We will send the Amazon gift card to the email address you used to subscribe to the experiment, please send us a message in case you want to use a different address (write to tiziano.rotesi@unibocconi.it to receive more information).

Foreseeable risks and deception

While participating to this study, there are no foreseeable risks beyond those ordinarily encountered in daily life or during routine physical or psychological examinations or tests. The experiment does not contain questions that make use of deception.

Additional Information: Data Privacy and Management

UNIVERSITA' COMMERCIALE "LUIGI BOCCONI" (hereinafter referred to as "Bocconi University"), having its registered office in Milano at via Sarfatti 25, hereby declares that it falls within the field of application of the General Data Protection Regulation n. 679/2016 dealing with the protection of personal data with reference to the use of the data subject's personal data that is being collected as part of this research project.

Researchers' and Ethical Review Board Contact Information

This research is being undertaken by Prof. Paolo Pin paolo.pin@unibocconi.it and Tiziano Rotesi tiziano.rotesi@unibocconi.it at Bocconi University.

All the text and images showed on screen, the choices made by the participants, and the time spent on each page will be recorded and will be part of the data collected during this research.

If participants have any questions about how the research was undertaken, who will have access to and control of the data, and in case participants want to provide feedback, ask questions, or inquire about the results of the study, they should contact the researcher and/or the administrator of the Ethics Review Board at Bocconi University at ethics@unibocconi.it .

Confidentiality and Security Measures

Responses will be kept completely private. Researchers will receive pseudonymized data and implement computational and physical safeguards to mask participants' identities. Data received will be stored in password protected files in computers inside locked offices. Data that would allow to link pseudonyms to participants' identities will be kept separated from the files containing the responses, in a server protected with two step authentication procedures.

In the event of publication or presentation, no identifying information will be disclosed.

Data Sharing

The above mentioned pseudonymized data will not be shared with subjects different from the researchers mentioned above.

Data about respondents collected for the purposes of this project and similar future projects may be transferred to and stored at a destination in the United States of America, therefore outside the European Economic Area ("EEA"), for example where it is processed by an organization operating outside the EEA who works for us or for one of our suppliers, or where personal data is processed by one of our suppliers who is based outside the EEA or who uses storage facilities outside the EEA. This process will be subject to appropriate safeguards to protect the security and confidentiality of your Data.

Data Subject's Rights

- Data subjects shall have the rights described in the articles 15, 16, 17 and 18. In particular, for example, data subjects can require accessing to, correcting, erasing the personal data and restricting our data processing activities.
- Please note that the above rights are not absolute, and we may be entitled to refuse requests where exceptions apply. Consider the following in particular:
    - the right to erasure shall not apply when is likely to render impossible the achievement of the research purposes;

If you have given your consent and you wish to withdraw it, please contact the researcher using the contact details set out above. Please note that where our processing of your personal data

relies on your consent and where you then withdraw that consent, its withdrawal shall not cause any effect in the lawfulness of the previously processed Data.

Research Participant Declaration

(for those coming to the BELSS lab)

I confirm that I received the information that precedes, and I declare having read and understood its content. I confirm that I am 18 years of age or older, and volunteer to take part in this research. (Consent for minors or incapacitated individuals should be obtained from their legal tutors). Taking note that my Data are processed in full compliance with the Law, I freely consent to my Data to be used in the manner and uses described. I also declare having understood my rights and limitations, as well as how to exercise them.

Participant Name

Signature:

Date:

Research Participant Declaration
(for those answering using App Lab)

By checking the box below and proceeding, I confirm that I received the information that precedes, and I declare having read and understood its content. I confirm that I am 18 years of age or older, and volunteer to take part in this research. Taking note that my Data are processed in full compliance with the Law, I freely consent to my Data to be used in the manner and uses described. I also declare having understood my rights and limitations, as well as how to exercise them.

I agree to the terms and conditions: [ ] <- check

By checking the box below and proceeding, I certify that the responses I provide in this survey are mine alone, and were not reached in consultation with anyone else.

These responses will be my own [ ] <- check

Click "Next" to proceed.

You will be given a limited amount of time to answer each question. On the top of each page you will see a timer, telling you how the time you have left for the current question. Please make sure to give an answer before the time is up, otherwise you will not be able to receive a payment for the question. In case you close the app or you lose connection, try to go back to the experiment by opening the app again as soon as possible.

Let's get started!

Click "Next" to proceed.

(Task - Risky Project 50%)

You can invest in a risky project if you would like. You can invest up to 4€ or you can choose to keep them.

The risky project has a 50% chance of success:

- If the project is successful, you will receive 2.5 times the amount you chose to invest.
- If the project is unsuccessful, you will lose the amount invested.

Please, choose how many cents you want to invest in the risky project. Note that you can pick any number between 0 and 400, including 0 or 400.

[slider 0 to 400]

Click "Next" to proceed.

(Task - Risky Project 35%)

You can invest in a risky project if you would like. You can invest up to 3.5€ or you can choose to keep them.

The risky project has a 35% chance of success:

- If the project is successful, you will receive 3 times the amount you chose to invest.
- If the project is unsuccessful, you will lose the amount invested.

Please, choose how many cents you want to invest in the risky project. Note that you can pick any number between 0 and 350, including 0 or 350.

[slider 0 to 350]

Click "Next" to proceed.

(Task - Gamble Choice)

You now can choose one among six different gambles, listed below. Each gamble has two possible outcomes ("Low" or "High"), that occur with probability 0.5.

Your compensation will be determined by your choice and the realization of the random value (either "Low" or "High"). For example, if you select Gamble 2 and "High" occurs, you will be paid 6€, while if instead "Low" occurs, you will be paid 4€.

Please, select the gamble you prefer:

	Payoff if Low	Payoff if High	Prob. Low	Prob. High
Gamble 1	4.65€	4.65€	0.5	0.5
Gamble 2	4€	6€	0.5	0.5
Gamble 3	3.4€	7.2€	0.5	0.5
Gamble 4	2.7€	8.6€	0.5	0.5
Gamble 5	2€	10€	0.5	0.5
Gamble 6	0.5€	11.5€	0.5	0.5

Click "Next" to proceed.

(Task – Safe Gambles)

In the next set of nine (9) decision, you will be asked to choose between playing two Gambles, A and B. Here is an example:

	Payoff if Low	Payoff if High	Prob. Low	Prob. High
Gamble A	4€	5€	0.5	0.5
Gamble B	0.25€	9.6€	0.5	0.5

Each gamble has two possible outcomes ("Low" or "High"). Your compensation will be determined by your choice and the realization of the random value (either "Low" or "High"). For example, if you select Gamble A and "High" occurs, you will be paid 5€, while if instead "Low" occurs, you will be paid 4€.

Click "Next" to proceed.

Which of the two gambles do you prefer?

1.	Payoff if Low	Payoff if High	Prob. Low	Prob. High
Gamble A	4€	5€	0.9	0.1
Gamble B	0.25€	9.6€	0.9	0.1

2.	Payoff if Low	Payoff if High	Prob. Low	Prob. High
Gamble A	4€	5€	0.8	0.2
Gamble B	0.25€	9.6€	0.8	0.2

3.	Payoff if Low	Payoff if High	Prob. Low	Prob. High
Gamble A	4€	5€	0.7	0.3
Gamble B	0.25€	9.6€	0.7	0.3

4.	Payoff if Low	Payoff if High	Prob. Low	Prob. High
Gamble A	4€	5€	0.6	0.4
Gamble B	0.25€	9.6€	0.6	0.4

5.	Payoff if Low	Payoff if High	Prob. Low	Prob. High
Gamble A	4€	5€	0.5	0.5
Gamble B	0.25€	9.6€	0.5	0.5

6.	Payoff if Low	Payoff if High	Prob. Low	Prob. High
Gamble A	4€	5€	0.4	0.6
Gamble B	0.25€	9.6€	0.4	0.6

7.	Payoff if Low	Payoff if High	Prob. Low	Prob. High
Gamble A	4€	5€	0.3	0.7
Gamble B	0.25€	9.6€	0.3	0.7

8.	Payoff if Low	Payoff if High	Prob. Low	Prob. High
Gamble A	4€	5€	0.2	0.8
Gamble B	0.25€	9.6€	0.2	0.8

9.	Payoff if Low	Payoff if High	Prob. Low	Prob. High
Gamble A	4€	5€	0.1	0.9
Gamble B	0.25€	9.6€	0.1	0.9

Click "Next" to proceed.

In the following table you can see the payoff you get under each gamble.

Here is an example:

	Payoff if Low	Payoff if High
Gamble A	4€	5€
Gamble B	0.25€	9.6€

In the table below you can see your choices for each pair of gambles, with the probability of high/low state.

Choice Number	Probability Low	Probability High	You chose Gamble	Would you like to change your choice?
1	0.9	0.1	X	Yes/No
2	0.8	0.2	X	Yes/No
3	0.7	0.3	X	Yes/No
4	0.6	0.4	X	Yes/No
5	0.5	0.5	X	Yes/No
6	0.4	0.6	X	Yes/No
7	0.3	0.7	X	Yes/No
8	0.2	0.8	X	Yes/No
9	0.1	0.9	X	Yes/No

(Where X is the choice made in the previous points.)

Click "Next" to proceed.

(Task – Dictator Game)

You now have 10€ to be divided between you and another, randomly chosen, survey participant.

All other survey participants will be given the same choice: that is, they will be given 10€ to divide between themselves and another participant.

Payoffs are distributed according to the function reported in the following graph, where you can see on the X axis your payoff and on the Y axis your partner's.

Your payoff from this section will be how much you allocate to yourself, plus the amount allocated to you by another randomly chosen participant. Note that the recipient, the participant that receives money from you, and the participant that you receive money from will be different, and both will be chosen randomly.

Circle Task
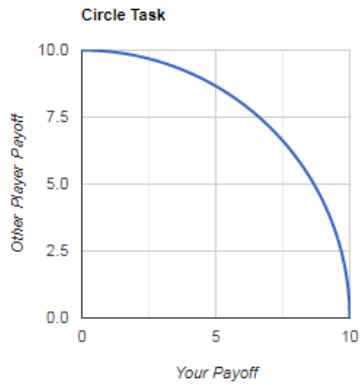
Your payoff:
Your partner's payoff:

Click "Next" to proceed.

(Task - Counting 1s)

This task asks you to count the number of ones in a series of matrices (all matrices have the same size). You will be given 5 minutes to count ones in how many matrices as possible. You will be paid 40 cents per matrix, if the number of ones is correct.

Click "Next" to proceed.

(Show 8x8 matrices, with entries 0's and 1's)

Select the number of ones in the matrix.

[INSERT NUMBER]

Click "Next" to proceed.

For how many matrices do you think you have correctly counted the number of ones? You will earn 1€ if the number is correct.

Click "Next" to proceed.

Your score has been compared with the one of 10 other players, randomly chosen among the other participants. How many of them do you think counted more matrices correctly than you? You will earn 1.5€ if you answer is correct.
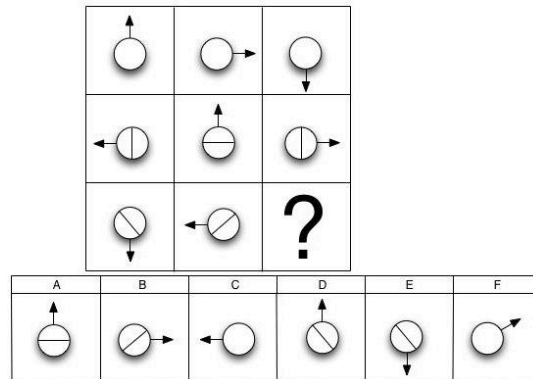
[choose 0 to 10]

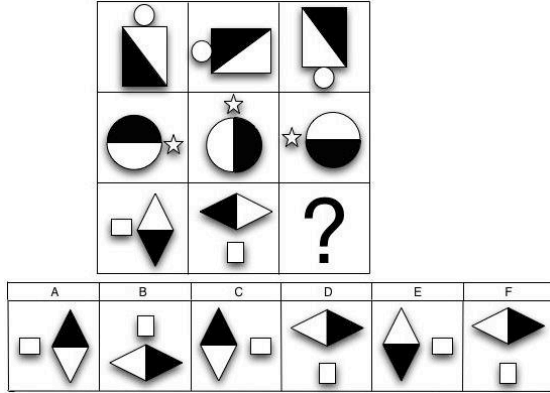Click "Next" to proceed.

(Task – Raven's Matrices)

This task asks you to answer correctly five logical questions. You will have up to 30 seconds to answer each question and you will be paid 1.5€ for each question answered correctly.
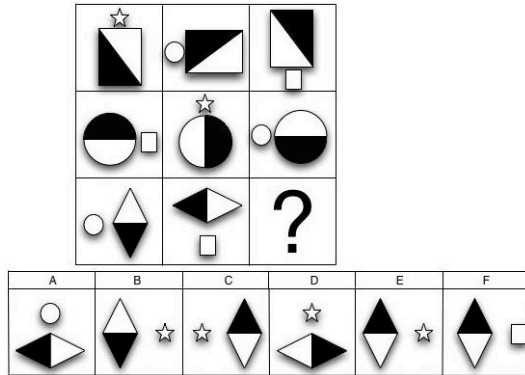
Click "Next" to proceed.
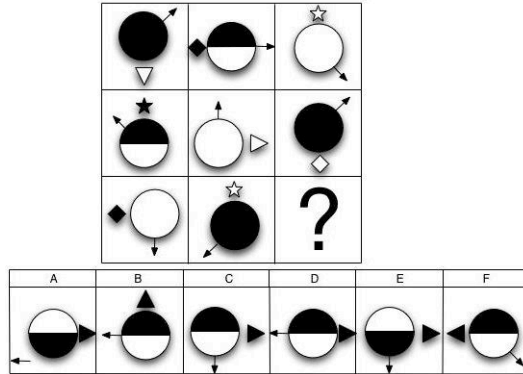

[answer A to F]

Click "Next" to proceed.

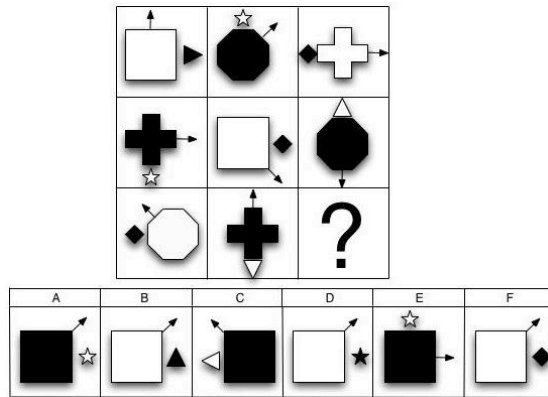[answer A to F]
Click "Next" to proceed

[answer A to F]
Click "Next" to proceed

[answer A to F]
Click "Next" to proceed

[answer A to F]
Click "Next" to proceed.

How many of the 5 questions do you think you solved correctly? You will earn 1€ if the number is correct.

[Slider 0 to 5]

Click "Next" to proceed.

Your score has been compared with the one of 10 other players, randomly chosen among the other participants. How many of them do you think solved more questions correctly than you? You will earn 1.5€ if you answer is correct.

[choose 0 to 10]

(Task - Cognitive Reflection test)

This task asks you to answer correctly five logical questions. You will have up to 20 or 30 seconds to answer each question and you will be paid 1.5€ for each question answered correctly.

Click "Next" to proceed.

A monitor and a keyboard cost 350€ in total. The monitor costs 300€ more than the keyboard. How much does the keyboard cost?

[INSERT NUMBER]

Click "Next" to proceed.

It takes 10 computers 10 minutes to run 10 simulations. How long does it take 200 computers to run 200 simulations?

[INSERT NUMBER]

Click "Next" to proceed.

In Parco Sempione there is a small lake. In the lake, there is a patch of lily pads. The patch doubles in size every day. If it takes 36 days for the patch to cover the entire lake, how many days would it take to cover half the lake?

[INSERT NUMBER]

Click "Next" to proceed.

Professor Rossi spend one-fourth of his life as a boy, one-eighth as a youth, and one-half as an active man. If Professor Rossi spent 8 years as an old wise man, how many years did he spend as an active man?

[INSERT NUMBER]

Click "Next" to proceed.

A 4 meters pole casts a shadow that is 2 meters long on the ground. If the pole was 16 meters in height, how long would the shadow be?

[INSERT NUMBER]

Click "Next" to proceed.

How many of the 5 questions do you think you solved correctly? You will earn 1€ if the number is correct.

[Slider 0 to 5]

Click "Next" to proceed.

Your score has been compared with the one of 10 other players, randomly chosen among the other participants. How many of them do you think solved more questions correctly than you? You will earn 1.5€ if you answer is correct.

[choose 0 to 10]

(Task – Strategic reasoning)

You will now play three simple games. In each game you will have to choose one of two actions: A1 or A2. We will randomly pair you with another participant and your payoff will depend on both of your actions. Namely, we will look at the pair of numbers corresponding to both of your actions (A1 or A2 for you, B1 or B2 for your partner). The first (underlined) number of the entry will correspond to your payoff in euro, while the second number in that entry will correspond to the payoff your partner would get.

For example, consider the game below. If you pick A1 and the person you are randomly matched with picked B1, then you would receive 1€, while the other would receive 2€. If you instead pick A1 and the person you are matched with picked B2, you would get 2€ and the other person 0€.

		Other Participant's Action	
		B1	B2
Your Action	A1	1,2	2,0
	A2	0,2	1,1

Click "Next" to proceed.

(Prisoner's dilemma)
Please click on the label of the action you choose to play.

		Other Participant's Action	
		B1	B2
Your Action	A1	6,6	0,10
	A2	10,0	2,2

Click "Next" to proceed.

Now we ask you to make a guess about the other participants who are playing this game and are choosing between action A1 and action A2, except you and the person you were playing with. In your opinion, which is the percentage of players that chose action A1?

Please use the bar below to denote your best guess. Your payoff for this part of the game depends on how good your guess is. You can earn at most 1€ if your guess is correct. You will lose 1 cent for every percentage point increase in the distance between your guess and the true number. For example, if your guess was 10 points higher than the true value you would earn 90 cents. Similarly, if your guess was 5 points lower than the true value you would earn 95 cents.

[slider 0 to 100]

Click "Next" to proceed.

(Stag Hunt)

Please click on the label of the action you choose to play.

		Other Participant's Action	
		B1	B2
Your Action	A1	10,10	0,5
	A2	5,0	2,2

Click "Next" to proceed.

Now we ask you to make a guess about the other participants who are playing this game and are choosing between action A1 and action A2, except you and the person you were playing with. In your opinion, which is the percentage of players that chose action A1?

Please use the bar below to denote your best guess. Your payoff for this part of the game depends on how good your guess is. You can earn at most 1€ if your guess is correct. You will lose 1 cent for every percentage point increase in the distance between your guess and the true number. For example, if your guess was 10 points higher than the true value you would earn 90 cents. Similarly, if your guess was 5 points lower than the true value you would earn 95 cents.

[slider 0 to 100]

Click "Next" to proceed.

(Hawk-Dove)

Please click on the label of the action you choose to play.

		Other Participant's Action	
		B1	B2
Your Action	A1	5,5	5,10
	A2	10,5	2,2

Click "Next" to proceed.

Now we ask you to make a guess about the other participants who are playing this game and are choosing between action A1 and action A2, except you and the person you were playing with. In your opinion, which is the percentage of players that chose action A1?

Please use the bar below to denote your best guess. Your payoff for this part of the game depends on how good your guess is. You can earn at most 1€ if your guess is correct. You will lose 1 cent for every percentage point increase in the distance between your guess and the true number. For example, if your guess was 10 points higher than the true value you would earn 90 cents. Similarly, if your guess was 5 points lower than the true value you would earn 95 cents.

[slider 0 to 100]

Click "Next" to proceed.

(Task - Money Request Game)

You have been randomly paired with another participant to play the Money Request Game. Each player requests an amount of tokens. The amount must be an integer from 1 to 10 tokens (inclusive). Each player will receive the amount they request. BUT: A player will receive an additional amount of 10 tokens if he/she asks for exactly one token less than the other player. You will earn 0.5€ for each token received.

What amount of tokes would you request?

[slider 1 to 10]

Click "Next" to proceed.

(Task - The dice, sum)

In this task you will be asked to report the results from rolls of an electronic die. In this page you can find a die as the one you will use in the next page. You are free to familiarize with it, rolling it as many times as you want. In the next page you will be asked to roll this die 5 times and add the numbers.

(Here show the die)

Click "Next" to proceed.

The electronic die that you find in this page works the same way as the one in the previous page. We would like you to flip this coin five (5) times. We will pay you based on the sum of the numbers in the five rolls. In particular, we will multiply by 30 the sum you report and pay you the corresponding amount of cents. For example, the maximum sum can be 30, this would correspond to a payment of 9€.

Please roll the die five (5) times and keep track of the sum.

(Here show the die)

Which is the sum you obtained from the five rolls?

[number – 0 to 60]

Click "Next" to proceed.

Now we ask you to make a guess about the other participants who are playing this game and are reporting the sum obtained in five rolls (note that since the die gives a random number, they will have most likely obtained draws different from yours). In your opinion, which is the average number reported by the other participants?

Please use the bar below to denote your best guess. Your payoff for this part of the game depends on how good your guess is. You can earn at most 1€ if your guess is correct. You will lose 3 cents for every point increase in the distance between your guess and the true number. For example, if your guess was 10 points higher than the true value you would earn 70 cents. Similarly, if your guess was 5 points lower than the true value you would earn 85 cents.

[INSERT NUMBER]

Click "Next" to proceed.

(Task - The dice, count 6)

In this task you will be asked to report the results from rolls of an electronic die. In this page you can find a die as the one you will use in the next page. You are free to familiarize with it, rolling it as many times as you want. In the next page you will be asked to roll this die 10 times and add the numbers.

(Here show the die)

Click "Next" to proceed.

The electronic die that you find in this page works the same way as the one in the previous page. We would like you to flip this coin ten (10) times. We will pay you 1€ for every "6" you get.

Please roll the die ten (10) times and keep track of how many times it came up "6".

(Here show the die)

How many times did it come up "6"?

[number – 0 to 10]

Click "Next" to proceed.

Now we ask you to make a guess about the other participants who are playing this game and are reporting the number of "6" obtained in ten rolls (note that since the die gives a random number, they will have most likely obtained draws different from yours). In your opinion, which is the average number reported by the other participants (we will approximate the average to the closest integer number)?

Please use the bar below to denote your best guess. Your payoff for this part of the game depends on how good your guess is. You can earn at most 1€ if your guess is correct. You will lose 10 cent for every point increase in the distance between your guess and the true number. For example, if your guess was 2 points higher than the true value you would earn 80 cents. Similarly, if your guess was 4 points lower than the true value you would earn 60 cents.

[slider 0 to 10]

Click "Next" to proceed.

(Task – Report Game)

You will now play a simple game. You will be playing both as "Participant A" and "Participant B". In every period, we will randomly pair you with another player and your payoff will depend on both of your actions.

In every period, the computer will randomly assign a number to a couple of participants. The number will be an integer from 1 to 6 (1,2,3,4,5,6). Participant A is informed about the number assigned to the couple and sends a message about that number to Participant B. Participant B is *not* informed about the number and has to decide whether to follow the message sent by Participant A.

Payoffs are as follows:

- Participant A receives 8 points plus the doubled amount of the number sent in the message in points. That is, 10 points if Participant A sent the message that the assigned number is 1; 12 points if participant A sent the message that the assigned number is 2 and so on.
- If Participant B follows the message of Participant A, Participant B receives 10 points in case the message contains the actual number assigned to the pair. Otherwise, Participant B receives 0 points.
- If Participant B does not follow the message of Participant A, Participant B receives 3 points.

For every possible number assigned to the pair, Participant A has to formulate a message to Participant B about the assigned number. Moreover, before Participant B receives the message of Participant A, Participant B has to decide for all possible messages whether or not to follow the message.

At the end of the experiment, we will choose at random one number and assign you to play either as Participant A or as Participant B. Your compensation will be determined by your choice and by the choice of the other participant. You will earn 0.5€ per point.

Click "Next" to proceed.

First, we will ask you to choose your message when playing as Participant A.

Recall, for Participant A payoffs are as follows:

- Participant A receives 8 points plus the doubled amount of the number sent in the message in points. That is, 10 points if Participant A sent the message that the assigned number is 1; 12 points if participant A sent the message that the assigned number is 2 and so on.

If the assigned number is 1, then the message to Participant B will be:

The assigned number is [CHOOSE 1 to 6]

(Show these 6 choices in random order.)

Click "Next" to proceed.

Now you need to state your decisions when playing as Participant B.

Recall, for Participant B payoffs are as follows:

- If Participant B follows the message of Participant A, Participant B receives 10 points in case the message contains the actual number assigned to the pair. Otherwise, Participant B receives 0 points.
- If Participant B does not follow the message of Participant A, Participant B receives 3 points.

If Participant A sends the message	Then your decision is
"The assigned number is 1"	To follow / Not to follow
"The assigned number is 2"	To follow / Not to follow
"The assigned number is 3"	To follow / Not to follow
"The assigned number is 4"	To follow / Not to follow
"The assigned number is 5"	To follow / Not to follow
"The assigned number is 6"	To follow / Not to follow

(Task - Trust Game)

You have been randomly paired with another participant to play a game. The rules are as follows.

At the beginning of the game, both participants receive 5 tokens. Participant A decides first.

In **Stage 1,** Participant A can transfer 0 to 5 tokens to Participant B's account. Each token that Participant A transfers to Participant B is tripled, so that Participant B receives three times the amount of tokens transferred by Participant A.

After this stage:

- Participant A has 5 tokens minus the amount transferred to Participant B.
- Participant B has 5 tokens plus three times the amount transferred by Participant A.

In **Stage 2**, Participant B has the opportunity to transfer tokens to Participant A. Participant B can transfer to Participant A any number of tokens available in the account.

We will now ask you what you would do, both if you were to play as Participant A and as Participant B. At the end of the experiment we will randomly assign you one of the two roles. Your payoff from this section will be given by the amount of tokens obtained after Stage 2. You will earn 0.7€ for each token received.

Click "Next" to proceed.

First, we will ask you to choose how many tokens to transfer to Participant B when playing as Participant A.

[slider 0 to 5]

Click "Next" to proceed.

Now you need to state your decisions when playing as Participant B.

If Participant A transfers you	Then your decision is to transfer
0 tokens	[slider 0 to 5] tokens
1 token	[slider 0 to 7] *tokens*
2 tokens	[slider 0 to 9] tokens
3 tokens	[slider 0 to 11] tokens
4 tokens	[slider 0 to 13] tokens
5 tokens	[slider 0 to 15] tokens

Click "Next" to proceed.

Now we ask you to make a guess about the other participants who are playing this game, except you and the person you were playing with.

In your opinion, which is the average transfer made in the first stage by Participant A?

Please use the bar below to denote your best guess. Your payoff for this part of the game depends on how good your guess is. You can earn at most 1€ if your guess is correct and a minimum of 0€. You will lose 1 cent for every Euro cent increase in the distance between your guess and the true number.

[Insert number]

Click "Next" to proceed.

(Task - Ultimatum Game)

You have been randomly paired with another participant to play a game. The rules are as follows.

At the beginning of the game, Participant A and Participant B receive 10€ and they need to decide how to split this sum among them.

In **Stage 1,** Participant A has to make a proposal about how to divide the 10€ between the two.

In **Stage 2**, Participant B can accept Participant A's proposal or reject it. If Participant B accepts the proposal, the money is divided accordingly. If instead Participant B rejects the proposal, both Participants receive nothing.

We will now ask you what you would do, both if you were to play as Participant A and as Participant B. At the end of the experiment we will randomly assign you one of the two roles. Your payoff from this section will be given by your decision in this stage and the other participant's decision.

Click "Next" to proceed.

First, we will ask your choice when playing as Participant A in Stage 1.

Participant A	Participant B
[Slider 0 to 10]	[Slider 0 to 10]

(The sum has to be 10.)

Click "Next" to proceed.

Now consider playing as Participant B. For every possible proposal made by Participant A, choose whether you would accept or not.

Participant A	Participant B	
10	0	[Select whether accept or reject]
9	1	[Select whether accept or reject]
8	2	[Select whether accept or reject]
7	3	[Select whether accept or reject]
6	4	[Select whether accept or reject]
5	5	[Select whether accept or reject]
4	6	[Select whether accept or reject]
3	7	[Select whether accept or reject]
2	8	[Select whether accept or reject]
1	9	[Select whether accept or reject]
0	10	[Select whether accept or reject]

Click "Next" to proceed.

Now we ask you to make a guess about the other participants who are playing this game, except you and the person you were playing with.

In your opinion, which is the average proposal made in the first stage by Participant A?

Please use the bar below to denote your best guess. Your payoff for this part of the game depends on how good your guess is. You can earn at most 1€ if your guess is correct. You will lose 1 cent for every Euro cent increase in the distance between your guess and the true number. (We will focus on the average that Participant A decided to keep to herself/himself to calculate this distance).

[Average for Participant A] [Average for participant B]

Click "Next" to proceed.

In your opinion, which is the percentage of participants who, when playing as Participant B in Stage 2, decided to refuse the following split?

Participant A: 9€
Participant B: 1€

Please use the bar below to denote your best guess. Your payoff for this part of the game depends on how good your guess is. You can earn at most 1€ if your guess is correct. You will lose 1 cent for every point increase in the distance between your guess and the true number.

[insert number]

Click "Next" to proceed.

(Task - Beauty Contest)

You have been randomly paired with another participant to play a game. Each player picks a number between 0 and 100. Between the two of you, the participant who picks a number closest to two thirds of the average of the corresponding two numbers (yours and the other participant) will win 10€ (if you tie with the other person, you will get 5€).

Please pick a number between 0 and 100. You may choose 0 or 100 if you wish:
[insert number]

Click "Next" to proceed.

(Final Questions)

- What do you think was the purpose of this experiment?
- Were they somehow conditioned in their behavior by knowing that the experimenter had a goal?
- Did you have fun during the experiment?
- Do you have any bug to report? (for example, the page didn't load correctly)

(For those using the app)

- Where are you? (example: in the campus, home, public transportation, other – specify)
- Would you have been able to come to the BELSS Lab today?

Click "Next" to proceed.

Thank you!

Thank you for completing the survey. We cannot determine your total earning yet, as we must wait for other people to complete the survey.

You will receive an email in the next 24 hours telling you how much you earned during the experiment. In the next few days, you will receive an Amazon Gift Card with the corresponding amount. We will send the Amazon gift card to the email address you used to subscribe to the experiment, please send us a message in case you want to use a different address (write to tiziano.rotesi@unibocconi.it to receive more information).