Cooperative Initiative through Pre-Play Communication in One-Shot Games

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Appendix

A. (For Online Publication) Instructions

This is an experiment in the economics of decision-making. If you follow these simple instructions carefully and make good decisions, you could earn a considerable amount of money. The currency we will use throughout the instructions and the experiment is the Berkeley Buck. We will denote it as "$" and the exchange rate is $ 12 per US$ dollar. Please be aware that we do not expect any particular behavior from you or any other participant.

This session will be divided in 4 blocks, each comprising a series of situations in which you will have to make decisions. In what follows we will describe these blocks in chronological order as they will appear in your computer screen.

In block 1, you will face 4 situations. In each situation you will have to allocate a total of 10 tokens between yourself and another participant. The tokens may have different values in each situation. The other participant will be selected randomly at the end of the experiment. Also, neither you nor the other participant will receive information about each other's identity and about your decision in each situation. The computer will randomly select 1 of the 4 situations (with equal chance) to compute your payout based on your decisions. Symmetrically, at the end of the experiment you will be randomly matched to the decision made by another participant. Thus, you will have two ways of earning money from these situations. The first is from your allocation decision, and the second is from the allocation decision of another randomly matched participant.

Block 2 consists of one situation. You will have to send a message to another participant. This message will be available to the other randomly assigned participant at the end of the experiment. After he/she reads the message in his/her screen, he/she will make a choice. Your payout from this situation depends on the choice of this other participant.

Block 3 consists of one situation. You will have to allocate a sum of money between yourself and another participant. The other participant will be assigned randomly at the end of the experiment. In this situation your allocation may be reversed by the computer with some probability specified in the corresponding screen. Neither you nor the other participant will be told about each other's identity and about your decision. Thus, you will have two ways of earning money from this situation. The first is from your allocation decision (depending on whether is reversed or not), and the second is from the allocation decision of the other randomly matched participant.

In block 4 you will face 12 situations. Each situation will contain two types of scenarios: a non-interactive and an interactive scenario. In the non-interactive scenario, your decisions will be matched at the end of the experiment. In the interactive scenario your decisions will be matched immediately with a different participant in each round.

In the non-interactive scenario you will choose between playing two alternatives, A or B. The following screen shot shows an example:

[ADD SCREENSHOT OSPD HERE]

Each of these scenarios will feature different combinations of possible payoffs. In every scenario, you will be the Row player so your payoffs are the ones on the left of each cell. Both you and the other participant will have two possible choices. You can choose A or you can choose B. In this example:

- If you both choose A you will both get a payoff of $5.
- If you both choose B you will both get a payoff of $9.
- If you choose A, but the other participant chooses B, you will get a payoff of $15, but the other player will receive $4.
- Likewise, if you choose B, but the other participant chooses A, then you receive $4 and the other participant receives $15.

When choosing your move, you will not know the decision of the other participant. The other participant will not know your decision. For each scenario, your decision will be matched with the decision of another randomly selected participant at the end of the experiment.

After you decide between A and B, you will have to make a prediction about other participants' decisions. You will have to forecast how many of the other 23 participants in the experiment will choose either A or B in each scenario. You will be rewarded for the accuracy of your predictions. The formula to compute your reward is:

Maximum{0 , 8 – 1 * (Distance Between Your Prediction and Actual Decisions Other Participants)}

To explain the formula, we will focus on the prediction about A (because the prediction about B is 23 minus the Prediction about A). If your prediction coincides with the actual value you will get $8. An amount of $1 will be deducted for each unit above or below the actual number of participants who chose A (or equivalently B). Thus, if your prediction is more than 7 units away from the actual number of participants choosing A, you will receive $0. This calculation will be performed for each of the 12 scenarios.

From these 12 choices and predictions of each scenario, the computer will randomly select 6 to calculate the payouts. We emphasize that all the decisions described so far will be matched at the end of the experiment, so your actions will not affect the actions of other participants.

In the interactive scenarios, you will be randomly matched with a new participant in each of the 12 scenarios. We call each of these scenarios an Interaction. In each Interaction you will be matched with a different participant, so you will interact with one participant only once. Also, this participant will never be matched with any of the participants you will be matched with.

Each Interaction consists of two screens. In the first screen you will see the payoffs of the game and you may use the chat box on the left to communicate with the participant you are matched with in that Interaction. This screen will be shown for 30 seconds:

[ADD SCREENSHOT OF CHAT HERE]

In the second screen, you will have the opportunity to select your action. There will be no chat and you will have 30 seconds to make your decision. This is an example of a screen shot:

[ADD SCREENSHOT OF SIMULTANEOUS GAME HERE]

After each Interaction you will observe your and the other participants' choice (A or B) as well as your and other participant's payoffs. Your payoff in each Interaction will be based on your decision and the decision of the matched participant you interacted with. Your final payout will be calculated by the computer using 6 randomly selected Interactions (with equal chance) out of the 12. Recall that each situation in this block 4, comprising one non-interactive and one interactive scenario, will be repeated 12 times.

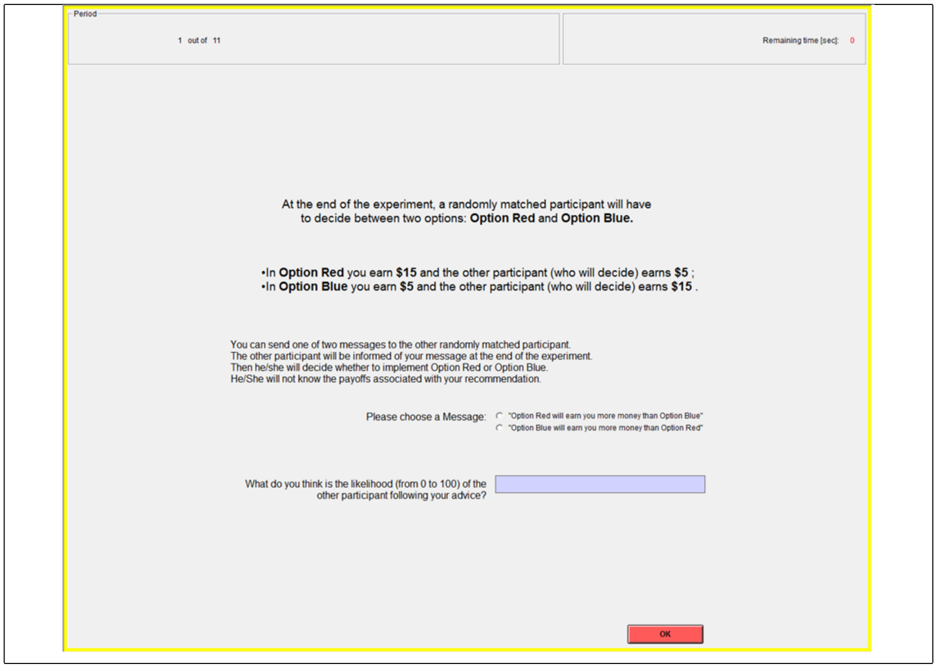
Finally, at the end of the experiment, you will read the message a randomly matched participant sent you, and you will have to make a choice. You will also be given questionnaires that can yield some additional payoffs. After all questionnaires are completed, the computer will match the decisions of all the situations except for the Interactions (which were already matched in each of the 12 scenarios), and final payments will be made to each of you.

Each screen you see throughout the experiment has all the instructions necessary for the decision on that screen. Recall, during the session, all payoffs are expressed in terms of Berkeley Bucks. However, at the end of the session, all of your Berkeley Bucks will be converted at 12 Berkeley Bucks to 1 US$. Thus, in US dollars, your final payment will be between $5 and $30, depending on how you do.

Recall that at no time your true identity nor your final payout will be revealed to the other participants in this experiment.

Thank you very much and good luck!

B. (For Online Publication) Screen shot Lying aversion elicitation



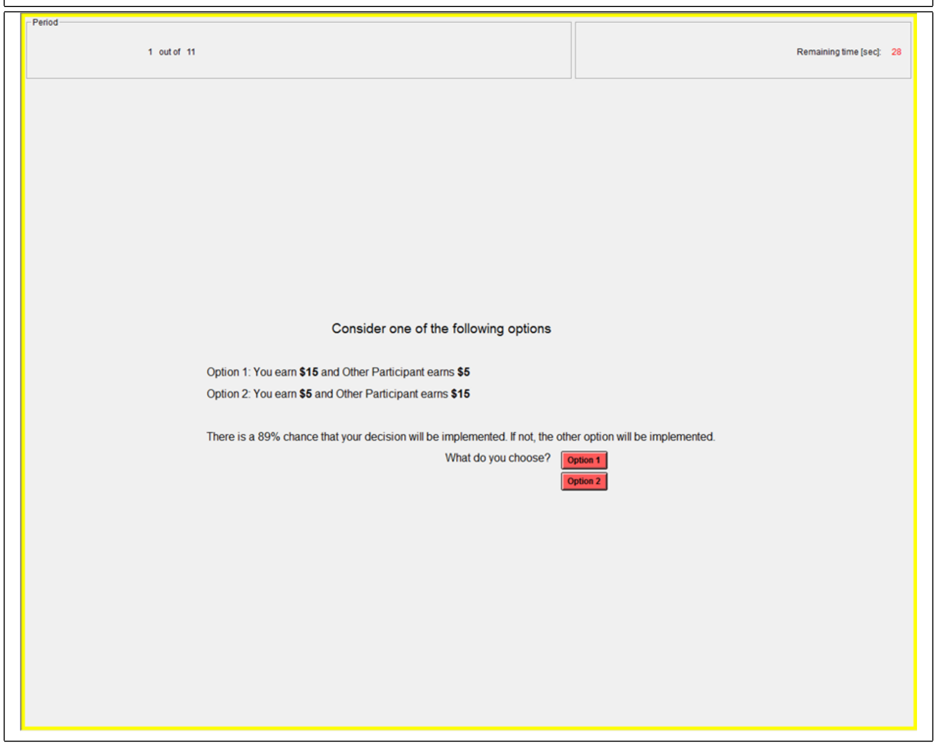


Figure 1: Screen shots lying-aversion elicitation.

C. (For Online Publication) Treatment screen shots

Figure 2: Screen shots, treatments.

D. Equilibrium with pre-play communication and purely monetary payoffs, SH and PD treatments

Proposition 1.

- *In the SH game with pre-play communication:*
  - *The probability of mutual cooperation (C, C) is p and of mutual defection (D, D) is $1-p$, with $p \in [0,1]$. Outcomes (D, C) and (C, D) occur with 0 probability.*
  - *Every time player $i = 1, 2$ is prescribed to play C she plays C and when player i is prescribed to play D she plays D.*
- *In the PD game with pre-play communication:*
  - *The probability of mutual defection (D, D) is 1. Outcomes (C, C), (D, C) and (C, D) occur with 0 probability.*
  - *Player $i = 1, 2$ plays defection D regardless of what she is prescribed to do.*

Proposition 1 describes the outcomes that can be attained in equilibrium with pre-play communication in the games we study.

In order to prove Proposition 1, we first introduce one useful construct and state and prove two lemmas. In technical terms, the subset of correlated equilibria corresponding to the convex combinations of pure strategy Nash equilibrium in the one shot game is the correlated equilibria in which the underlying distribution is "diagonal." A diagonal distribution means that knowledge of the corresponding action by one player perfectly determines the outcome of the game. We will use this concept, so we define it formally.

Definition 1 (Barany 1992).

In a two player game, let S_1 and S_2 the action space in a normal form game. A distribution π is said to be diagonal if for each $a_1 \in A_1$ not strictly dominated, there is only one $a_2 \in A_2$ with $\pi(a_1, a_2) > 0$; and for each $a_2 \in A_2$ not strictly dominated, there is only one $a_1 \in A_1$ with $\pi(a_1, a_2) > 0$.

A diagonal distribution can also be interpreted as a distribution in which the signals each player receives in a correlated equilibrium are perfectly correlated: conditional on being prescribed by the mediator to play a_i, individual i knows with certainty what individual j is prescribed to do, $i, j = 1, 2$.

In order to apply Barany's result, we need to characterize the subset of correlated equilibria with diagonal distributions for each of our simple games. We will focus on direct mechanisms, in the sense that the set of states correspond to the outcomes of the game (C for Cooperation, D for defection): $S = \{C, D\} \times \{C, D\}$, and the equilibrium partition associated to each individual $i = 1, 2$ is $P_i = \{\{(C, C), (C, D)\}, \{(D, C), (D, D)\}\}$. We first characterize the equilibrium for our SH game.

Lemma 1.

In the SH game without pre-play communication, the correlated equilibria with diagonal distribution is characterized as follows:

1. A probability space (S, π), such that $\pi(C, C) = p$, $\pi(D, D) = 1-p$, and $\pi(C, D) = \pi(D, C) = 0$, for $p \in [0, 1]$.

2. An information partition for each player $i = 1, 2$ $P_i = \{\{(C, C), (C, D)\}, \{(D, C), (D, D)\}\}$.

3. Equilibrium actions for each player $i = 1, 2$: $\sigma_i(C, C) = \sigma_i(C, D) = C$ and $\sigma_i(D, C) = \sigma_i(D, D) = D$.

Proof. Fix $p \in [0, 1]$. This is a correlated equilibrium because when player 1 observes signal $\{(C, C), (C, D)\}$, the conditional probability player 2 plays C is equal to 1 and the conditional probability player 2 plays D is 0 (the distribution is diagonal, so the signals are perfectly correlated). Player 1's best response is to play C. When player 1 observes signal $\{(D, C), (D, D)\}$, then the conditional probability of player 2 playing C is 0 and the conditional probability of player 2 playing D is 1. Player 1's best response in this case is D. If $p = 0$, then player 1 will be informed only on $\{(D, C), (D, D)\}$, so his best response is D and if $p = 1$ player 1 will only receive the signal corresponding to $\{(C, C), (C, D)\}$, so his best response is C. Similarly for player 2.

The distribution π is diagonal by construction. The only thing we need to check is whether there is another diagonal distribution $\pi' \neq \pi$ for all $p \in [0, 1]$ that is also part of a correlated equilibrium. Let us assume there is one. For $\pi' \neq \pi$ for all $p \in [0, 1]$ to be diagonal, there must be $q \in [0, 1]$ such that $\pi'(C, D) = q$, $\pi'(D, C) = (1 - q)$, and $\pi'(C, C) = \pi'(D, D) = 0$ (that is, only the outcomes on the anti-diagonal occur with positive probability). If that is the case, then the best response of player 1 to the signal $\{(C, C), (C, D)\}$ is D, because the probability that player 2 plays C conditional on the signal prescribing player 1 to play C is equal to 0. This holds for any $q \in (0, 1)$. If $q = 0$, then player 1's best response to signal $\{(D, C), (D, D)\}$ is C instead of D and if $q = 1$, player

1's best response to signal $\{(C,C),(C,D)\}$ is D instead of C. This contradicts the fact π' is part of a correlated equilibrium.□

The next Lemma characterizes the correlated equilibrium with diagonal distribution for our PD game. In this case, only mutual defection obtains.

Lemma 2.

In the PD game without pre-play communication, the correlated equilibria with diagonal distribution is characterized as follows:

1. A probability space (S,π), such that $\pi(D,D)=1$, and $\pi(C,C)=\pi(C,D)=\pi(D,C)=0$, for $p\in[0,1]$.

2. An information partition for each player $i=1,2$ $P_i=\{\{(C,C),(C,D)\},\{(D,C),(D,D)\}\}$.

3. Equilibrium actions for each player $i=1,2$ $\sigma_i(C,C)=\sigma_i(C,D)=D$ and $\sigma_i(D,C)=\sigma_i(D,D)=D$.

Proof. This outcome coincides with the Nash equilibrium outcome and any Nash equilibrium is a correlated equilibrium. The distribution π is diagonal by construction. This is the unique correlated equilibrium (with respect to a direct mechanism), therefore is the unique correlated equilibrium (with respect to a direct mechanism) with diagonal distribution.□

Proposition 1.

- *In the SH game with pre-play communication:*
  - *The probability of mutual cooperation (C,C) is p and of mutual defection (D,D) is $1-p$, with $p\in[0,1]$. Outcomes (D,C) and (C,D) occur with 0 probability.*
  - *Every time player $i=1,2$ is prescribed to play C she plays C and when player i is prescribed to play D she plays D.*
- *In the PD game with pre-play communication:*
  - *The probability of mutual defection (D,D) is 1. Outcomes (C,C), (D,C) and (C,D) occur with 0 probability.*
  - *Player $i=1,2$ plays defection D regardless of what she is prescribed to do.*

Proof. According to Barany (1992, Theorem 3 and Theorem 6), Lemma 1 implies the result for the SH game with pre-play communication and Lemma 2 the result for the PD game with pre-play communication.□

Notice that pre-play communication in our SH game may yield to any convex combination of the equilibrium outcomes in the one shot game, in particular mutual cooperation. Lemma 2, however, implies that in our PD game pre-play communication cannot yield mutual cooperation.

F. (For Online Publication) Screen shots Risk Aversion test

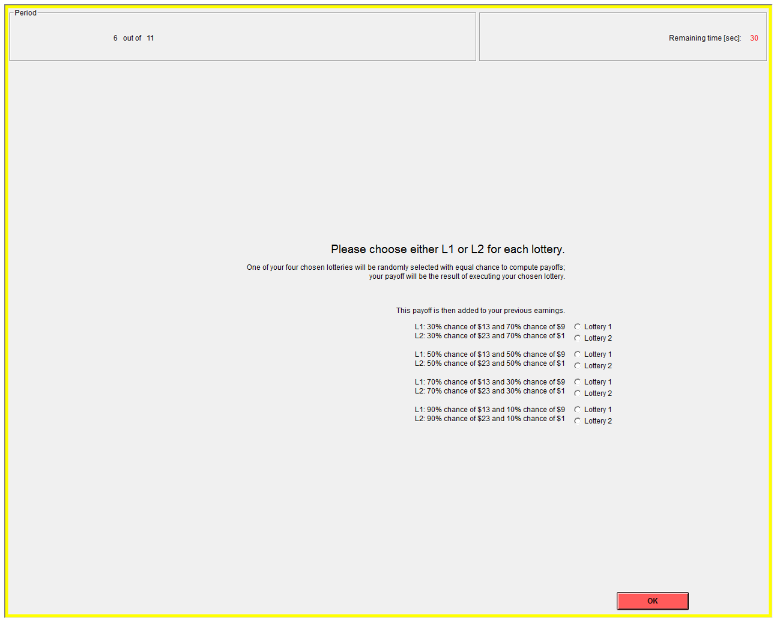


Figure 3: Screen shot, risk-aversion test.

Further results

Initiative-taking is not the only message sent during the communication stage. Non-initiators also send messages, often in the form of agreements. In what follows I explore whether agreement further induces cooperation. I also explore how characteristics such as the Big5 personality traits or gender relate to initiative and cooperation.

Characteristics

I use questionnaires to measure intelligence (Cognitive Reflection Test, CRT, Frederick 2005), risk aversion (Holt and Laury 2002), the Big 5 personality traits (John, Naumann and Soto 2008), Internal Locus of Control test (Rotter 1966) and basic demographics (gender, major and ethnicity). Of these tests, only Risk Aversion is incentivized. The goal of these questionnaires is to check that traditional leadership traits relate to initative taking in these games.

	Chat SH N	Chat SH mean	Chat PD N	Chat PD mean	t-test p	NoChat SH N	NoChat SH mean	NoChat PD N	NoChat PD mean	t-test p
CHARACTERISTICS										
Lying Aversion $\in\{0,1\}$	72	0.39	72	0.31	0.30	48	0.42	48	0.40	0.84
Selfish	72	0.17	72	0.24	0.30	48	0.19	48	0.27	0.34
InternalLocusofControl	72	6.61	72	6.56	0.89	48	6.69	48	6.75	0.90
Extraversion	72	3.15	72	3.14	0.93	48	3.11	48	3.20	0.58
Agreeableness	72	3.66	72	3.60	0.55	48	3.68	48	3.55	0.33
Conscientiousness	72	3.42	72	3.51	0.37	48	3.44	48	3.59	0.20
Neuroticism	72	2.90	72	2.90	0.98	48	2.92	48	2.85	0.63
Openness	72	3.55	72	3.48	0.50	48	3.57	48	3.58	0.96
ScoreCRT	72	1.42	72	1.42	1.00	48	1.79	48	1.38	0.07
RiskAversion	65	3.29	69	3.39	0.59	45	2.87	45	3.13	0.21
female	70	0.71	69	0.67	0.55	46	0.48	45	0.56	0.47
Asian	72	0.68	72	0.63	0.49	48	0.60	48	0.63	0.84
White	72	0.18	72	0.22	0.54	48	0.27	48	0.21	0.48
OtherEthnicity	72	0.14	72	0.15	0.81	48	0.13	48	0.17	0.57
OPTIMISM AND BEHAVIOR										
Optimism (others cooperate)	864	0.44	864	0.41	0.01	576	0.34	576	0.32	0.19
Initiate	864	0.57	864	0.42	0.00	-	-	-	-	-
Cooperate	864	0.82	864	0.38	0.00	576	0.23	576	0.10	0.00

Table 1: Summary statistics.

Initiative, agreement and cooperation

In both treatments, those who take the initiative cooperate more often than those who do not, and in the PD, they cooperate even more when they place a non-monetary value on cooperation and honesty. So we have seen initiative carries intention, but what about agreement? Those individuals who are willing to cooperate but reluctant to initiate, may end up cooperating because of someone else's initiative. Thus initiators' leadership gives non-initiators the opportunity to express their disposition to cooperate. In this sense, agreement—just as initiative-taking—may reveal an intention to cooperate by non leaders.

Among non-initiators who face a leading partner, 79% (245 out of 309) agrees in the SH and 72% does so in the PD (212 out of 295). Although small in magnitude, this difference in frequencies is statistically significant at the conventional levels (chi-squared p-value = 0.03). Non-initiators who agree follow through 85% of the time, and those who do not agree do so 42% of the time in the SH (chi-squared p-value < 0.01). We observe the same pattern in the PD: Those who agree cooperate 53% versus 21% (chi-squared p-value < 0.01). Given the importance of agreement, is there any difference in cooperation rates between initiators and non-initiators who agree (or "followers")?

Focusing only on groups with one initiator and an agreeing non-initiator (hereafter "follower"), initiators cooperate significantly more often only in the SH (94% versus 85%, Z test p-value < 0.01). In the PD, those proportions drop to 55% and 53% respectively (Z test p-value = 0.63). This evidence suggests that once the group reaches an agreement, the differences in terms of propensity to cooperate disappear. So why do followers refrain from initiating? Are there any differences in terms of attributes between initiators and followers? I find followers are no more optimistic, altruistic, or lying-averse than initiators in both treatments. In terms of altruism, 45% of initiators in these groups are altruists and 46% of followers (chi-square p-value = 0.84) in the SH. The corresponding proportions are 39% and 44% in the PD (chi-squared p-value = 0.3). In addition, I find no differences in terms of lying aversion. In terms of optimism, I also find no significant differences between leaders and followers. Leaders' optimism is 0.44,

	Non Initiator N	Non Initiator mean	Initiator N	Initiator mean	diff.	se	t test p-value
Extraversion	371	3.15	493	3.16	-0.01	0.06	0.82
Agreeableness	371	3.67	493	3.65	0.02	0.04	0.70
Conscientiousness	371	3.43	493	3.40	0.03	0.04	0.46
Neuroticism	371	2.89	493	2.92	-0.03	0.05	0.52
Openness	371	3.62	493	3.50	0.12***	0.04	0.00
RiskAversion	325	3.32	455	3.27	0.04	0.07	0.54
ScoreCRT	371	1.39	493	1.43	-0.04	0.08	0.59
InternalLocusofControl	371	6.88	493	6.41	0.48**	0.16	0.00
female	353	0.67	487	0.75	-0.08*	0.03	0.01
Asian	371	0.61	493	0.73	-0.13***	0.03	0.00
White	371	0.24	493	0.14	0.10***	0.03	0.00
OtherEthnicity	371	0.15	493	0.13	0.02	0.02	0.37
*p<0.05,**p<0.01,***p<0.001							

Table 2: Characteristics by whether individual took the initiative, SH treatment.

	Non Initiator N	Non Initiator mean	Initiator N	Initiator mean	diff.	se	t test p-value
Extraversion	503	3.12	361	3.18	-0.06	0.05	0.29
Agreeableness	503	3.58	361	3.63	-0.06	0.04	0.17
Conscientiousness	503	3.49	361	3.54	-0.05	0.05	0.26
Neuroticism	503	2.92	361	2.87	0.05	0.05	0.29
Openness	503	3.42	361	3.56	-0.14***	0.05	0.00
RiskAversion	480	3.46	348	3.30	0.16*	0.08	0.04
ScoreCRT	503	1.44	361	1.39	0.05	0.08	0.54
InternalLocusofControl	503	6.50	361	6.64	-0.14	0.17	0.41
female	476	0.72	352	0.60	0.12***	0.03	0.00
Asian	503	0.66	361	0.58	0.08*	0.03	0.02
White	503	0.20	361	0.25	-0.06	0.03	0.05
OtherEthnicity	503	0.14	361	0.17	-0.02	0.02	0.35
*p<0.05,**p<0.01,***p<0.001							

Table 3: Characteristics by whether individual took the initiative, PD treatment.

and followers' 0.46 in the SH (two sided t-test p-value = 0.3). In the PD leaders' optimism is 0.45, and followers' 0.46 (two sided t-test p-value = 0.9).

Initiative and characteristics

In addition to optimism, altruism, and lying-aversion, this experiment elicits personality traits, and demographics from participants. Table 2 shows the differences in the mean for all these characteristics of initiators and non-initiators for the SH treatment and Table 3 for the PD treatment.

In the SH, initiators are less often white with a low score on the internal locus of control measure. Also in the SH, those who take the initiative are frequently female of Asian ethnicity, with low scores on the openness measure.

In the PD, the pattern is exactly the opposite—initiators are more open, but less likely to be Asian female. Moreover, those who take the initiative tend to be less risk averse. It is worth noting that the Big5 personality traits (Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness) tend to favor initiators only in the PD treatment, although these characteristics are not significant at conventional levels. This counters the findings in the meta-study by Judge et al. (2002) in which leaders tended to be more extroverted.

E. Instructions to code dialogs

These instructions describe the procedure to code leaders and followers from the dataset "DataRobustnessLeaders.dta." The dataset contains 10 variables and 1728 observations. The first 6 variables contain the information on identifiers and on participants' dialogs. The last 4 variables must be filled in by the Research Assistant with leadership and timing indicators. The procedure to do so is described below.

Description of the first 6 variables

The first 6 variables are described as follows:

***Session:** Represents the identifier of the session. It takes values from 1 to 6 and each of them represents one experimental Session

***Period:** Each experimental session consists of 12 periods. The Period variable takes values from 5 to 16. Each Period represents the matching of 24 subjects in groups of 2.

***Group:** Each period contains 12 groups. The Group variable takes values from 1 to 12. Each Group represents the group's identifier on that particular Period and Session.

***Subject:** 24 subjects participated in each experimental Session. The Subject variable takes values from 1 to 24. The variable Subject represents a subject in a particular Session. Notice that a Subject can be uniquely identified by the Session-Subject ordered pair.

***Timing:** String variable. It contains the timing of each message in the dialog between two group members. It shows the second (from 1 to 30) in which each Subject (identified by its identifier or id) in a Group sends a message. An example is

10:3. 24:4. 24:7. 24:13. 24:20. 10:23

This sequence reads as follows: Subject id "10" sent the first message after 3 seconds. Subject "24" sent the second message of the dialog one second later. Subject "24" sent another message 3 seconds after the previous message, again 6 seconds later (at the 13th second), and gain 7 seconds later (at the 20th second). Finally, subject "10" sent the last message of the dialog 3 seconds later, at second 23.

***Dialog:** String variable. It shows the dialog by two group members within the 30 seconds they are allow to do so. An example is:

10:b!. 24:B?. 24:why?. 24:explain. 24:how about A?. 10:cos then we both get 9..

This dialog corresponds to the example of Timing before. First, Subject "10" sends a message "b!" and then participant "24" sends a message "B?". (Notice both messages are 1 second apart, from the information in the Timing variable above.) After, Subject "24" says "why?." , "explain." and later "how about A?.". Finally, Subject "10" sends "cos then we both get 9.."

Coding of the last 4 variables

The last 4 variables will contain the coded information from the dialog (Dialog and Timing) filled in by the Research Assistant. The rules to code them are:

mInitiative: This variable has initially a missing value. It is intended to record whether a particular Subject, in a particular Group, Period and Session, took the initiative or not. This variable has to be coded by the Research Assistant according to the following rule:

* Any initiating message alluding to cooperation (action B in the experiment) sent before any other message alluding to any action (action A, defect, or action B, cooperate), has to be coded as 2 in this variable. Examples of such messages are: "both play B.", "let's go for B.", "pick b.", "choose B? most payoff." , "b!" , "choose B to maximize the payoff.", "B?", "hey let's cooperate." Initial pleasantries and introductory messages such as "hello" or "hey!" should be disregarded-only messages referring to actions should be coded.

* Any initiating message alluding to defection (action A in the experiment) has to be coded as 1 in this variable. Examples of such messages are: "i think we are going to do As.", "i trust no one so im choosing A.", "Going with A." Initial pleasantries and introductory messages such as "hello" or "hey!" should be disregarded-only messages referring to actions should be coded.

* If the dialog does not contain any message referring to a particular action (A or B, to defect or cooperate), this variable has to be coded as 0.
Note the two subjects in a group may take the initiative simultaneously. As a convention, messages occurring within 3 seconds of one another should be coded as mInitiative=1 or mInitiative=2 depending on whether subjects recommend defection (A) or cooperation (B), respectively.

mAgreement: This variable has initially a missing value. It is intended to record whether a particular Subject, in a particular Group, Period and Session, agreed to someone else who took the initiative. This variable has to be coded by the Research Assistant according to the following rule:

* Any message by the subject who did not take the initiative, and agrees with the other player who took the initiative suggesting cooperation (action B in the experiment), has to be coded as 2. Examples of such messages are: "ok"; "I agree"; "Sure".

* Any message by the subject who did not take the initiative, and agrees with the other player who took the initiative suggesting defection (action A in the experiment), has to be coded as 1. Examples of such messages are: "ok"; "I agree"; "Sure".

* If the dialog does not contain any message referring to agreement to a particular action (A or B), this variable has to be coded as 0.

TimeToInitiative: This variable has initially a missing value. It is intended to record the timing at which the first message coded in mInitiative occurred. The values in this variable have to be taken from the information in the variable Timing-which contains the time (in seconds) at which every message was sent. If no initiative was taken, this variable has to be coded as missing value "."

TimeToAgreement: This variable has initially a missing value. It is intended to record the timing at which the message coded in mAgreement occurred. The values in this variable have to be taken from the information in the variable Timing-which contains the time (in seconds) at which every message was sent. If no agreement was reached, this variable has to be coded as missing value "."