Trustors' disregard for trustees deciding intuitively or reflectively: three experiments on time constraints

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Abstract

Human decisions in the social domain are modulated by the interaction between intuitive and reflective processes. Requiring individuals to decide quickly or slowly triggers these processes and is thus likely to elicit different social behaviors. Meanwhile, time pressure has been associated with inefficiency in market settings and market regulation often requires individuals to delay their decisions via cooling-off periods. Yet, recent research suggests that people who make reflective decisions are met with distrust. If this extends to *external* time constraints, then forcing individuals to delay their decisions may be counterproductive in scenarios where trust considerations are important. In three Trust Game experiments (total n = 1,872), including within- and between-subjects designs, we test whether individuals trust more someone who is forced to respond quickly (intuitively) or slowly (reflectively). We find that trustors do not adjust their behavior (or their beliefs) to the trustee's time conditions. This seems to be an appropriate response because time constraints do not affect trustees' behavior, at least when the game decisions are binary (trust vs. don't trust; reciprocate vs. don't reciprocate) and therefore mistakes cannot explain choices. Thus, delayed decisions per se do not seem to elicit distrust.

Keywords: trust; trustworthiness; beliefs; reflection; dual process; intuition

INTRODUCTION

Humans often trust others, but not everyone and not all the time. The extent of trust is instead dependent on the individual and the situation encountered. However, are we able to predict *when* someone can be trusted? There is little doubt that this is a crucial question for understanding human social behavior (DeSteno et al. 2012, Bonnefon et al. 2013, Alguacil et al. 2016, Everett et al. 2016, Jordan et al. 2016, Capraro et al. 2017b). Not in vain, the outcomes of many decisions in the social domain depend on the behavior of others and we need to form expectations to adjust our behavior accordingly. For this reason, we often gather information not only about our interaction partners' identity or emotional state (DeSteno et al. 2012, Rule et al. 2013, Alguacil et al. 2016, Everett et al. 2016, Capraro et al. 2017b), but also about the process through which they make decisions (Critcher et al. 2013, Van de Calseyde et al. 2014, Hoffman et al. 2015, Capraro & Kuilder 2016, Jordan et al. 2016).

One bit of information that can be an important determinant of trust is the time others have for decision making. That is, are we more likely to trust those that have less time to respond or those that have sufficient time to reflect on their actions? It is well known that time pressure triggers intuitive, automatic decision making, whereas slow decisions are associated with a stronger influence of reflective, deliberative processes (Kahneman 2011, Rand et al. 2012, 2014, Capraro & Cococcioni 2015, Capraro et al. 2017a). There is now plenty of evidence indicating that social behavior is partly driven by the extent to which intuition or reflection dominates the decision process (Rand et al. 2012, 2014, Corgnet et al. 2015, Ponti & Rodríguez-Lara 2015, Capraro et al. 2017a, Castro Santa et al. 2018, Capraro 2019). Thus, in a strategic context, it is but natural that we take into consideration whether our interaction partners have sufficient time to reflect upon their choices or not.

Time pressure is indeed ubiquitous in real-life decisions. For example, time-constrained "exploding" offers are frequently used in physical and, especially, online consumer markets and are also common in the organization of many other markets (e.g., labor and matching markets, see Roth and Xing 1993). The resulting outcome, however, may be inefficient due to the parties' reduced opportunity to consider different alternatives (Roth & Xing 1994, Niederle & Roth 2009), which has important implications in both the public and private spheres (Camerer et al. 2003).

In response to this, regulations that impose "cooling-off" periods are often set in place with the expectation that delaying decisions will presumably lead to more efficient outcomes (Sher 1973, Cramton & Tracy 1994, Oechssler et al. 2015, Lee 2013). But forcing individuals to delay their decisions may lead to unintended consequences if the reflective (vs. intuitive) character of the decisions *per se* influences other parties' perceptions, hence triggering differential behaviors. One key consideration in markets and other types of social interactions is, in fact, trust. Recent behavioral evidence suggests that people who reflect upon their decisions are met with distrust (e.g., Critcher et al. 2013, Everett et al. 2016, Jordan et al. 2016). If this extends to reflective decisions per se, then forcing agents to delay their decisions may have a detrimental effect on trust and thus be ineffective or even counterproductive in terms of efficiency. However, whether individuals adjust their trust to their counterparts' time constraints remains understudied.

We shed light on this issue by studying a canonical example of strategic interaction where adjusting to others' behavior is key to reach optimal outcomes. We conduct a series of one-shot Trust Game (TG; Berg et al. 1995) experiments in which a "trustor" can send a certain amount of her endowment to a "trustee" and is informed about the time constraint under which the trustee is making her decision. The trustee, on the other hand, can reciprocate (or not) the trust placed in her either quickly, in one condition, or after a delay, in the other. The trustor's final payoff depends crucially on trustee's trustworthiness. If the trustee is trustworthy enough, then the trustor maximizes her payoff by sending the entire endowment. This is the socially efficient outcome. Yet, full trust is risky and leaves the trustor vulnerable to receiving nothing.

In our experiments, trustors were informed that trustees would have to make their decisions either within a time limit of 10 seconds (i.e., the *time pressure* condition) or after 10 seconds have elapsed (i.e., the *time delay* condition). According to the evidence we review in what follows, we predict that in our experiments:

> H1. Trustors will display *greater trust in the time pressure condition* than in the time delay condition.
>
> H2. The mechanism causing H1 is that trustors *expect trustees to be more trustworthy under time pressure* than under time delay.

While the effect of forcing fast vs. slow decision making in social interactions has been extensively studied (Rand et al. 2012, 2014, Capraro & Cococcioni 2015, Rand 2016, Bouwmeester et al. 2017, Capraro et al. 2017a), less research has been conducted to understand whether people correctly anticipate such an effect and adjust their behavior accordingly. This seems to be an important issue for all social decisions involving strategic uncertainty (besides our canonical TG implementation).

The available evidence suggests that people who make "calculated" decisions may be met with distrust by others. Specifically, those individuals who (on their own) deliberate upon their choices, either by looking carefully at the payoffs or by delaying their decisions, appear to be perceived as less prosocial (Capraro & Kuilder 2016; but see Evans & van de Calseyde 2017), and are trusted less (Jordan et al. 2016). This occurs even when calculated and uncalculated decisions are equally prosocial (Jordan et al. 2016). The moral character of people who make (moral) decisions quickly is also rated more positively than that of people who make them slowly, even if their final decisions are identical (Critcher et al. 2013). Moreover, people who express deontological moral judgments, which are thought to be less calculated than consequentialist/utilitarian judgments (Koenings et al., 2007, Greene 2014), are trusted more (Everett et al. 2016, Sacco et al. 2016, Capraro et al. 2017b). Interestingly, people seem to anticipate this effect and tend to reflect less upon their cooperative decisions when potential interaction partners are observing compared to when they are not (Jordan et al. 2016). This is consistent with uncalculated cooperation being used as a signal of trustworthiness, which may indeed serve a long-run self-interested (fitness-maximizing) goal (Hoffman et al. 2015).

The studies reviewed above, however, are based on endogenous decisions and therefore responses to the decision-making process itself cannot be separated from responses to the inferred moral character of the decision maker. That is, it is unclear whether people attach a greater positive value to (i.e., they trust more) less reflective decisions when the reflective vs. intuitive character of decisions is *externally imposed* rather than being the outcome of an endogenous process. If this is the case, then the effects of the decision maker's cognitive mode on others' behavior may not (only) be related to inferences about her underlying disposition but also to beliefs about the consequences of reflection itself. In other words, do individuals distrust those who reflect, or reflective decisions *per se*? Here we focus on the latter question. An affirmative answer would challenge previous claims that people who make reflective decisions are met with distrust because they are seen as less moral: at least part of the effect might be due to others' perception about the pure effect of reflection vs. intuition, regardless of the decision maker's inferred character.

Recent experiments suggest that "emotion" is perceived by partners to trigger more cooperative behavior than "reason" when emotion-based vs. reason-based decision making is externally induced, and indeed partners cooperate more in the former case (Levine et al. 2018). While emotion is often associated with intuition, reason with reflection (Kahneman 2011, Levine et al. 2018) and cooperation with trust (Kocher et al. 2015, Thöni et al. 2012), whether this result can be extended to the speed of decision making and to pure trust situations remains unknown.

Several previous results indeed suggest that intuitive (vs. reflective) decision making may trigger more trustworthy, prosocial behavior in one-shot interactions (Rand et al. 2012, 2014, Rand & Nowak 2013, Halali et al. 2014, Rand 2016; see Capraro 2019 for a review), and there exist evolutionary reasons why this should be the case (Bear & Rand 2016, Bear et al. 2017). These findings imply that the trustors' hypothesized adjustment in beliefs and behavior is optimal, in the sense that trustees will in fact be more trustworthy under time pressure compared to time delay. However, other studies indicate that the observed relationship could depend on a set of factors including the presence of mistakes, previous experience in similar experiments, the weights of different distributional motives, and the specific social environment individuals regularly face (Rand & Kraft-Todd 2014, Capararo & Cococcioni 2015, 2016, Corgnet et al. 2015, 2016, Recalde et al. 2015, Capraro et al. 2017a). In our experiments, we also study trustees' behavior to test the following:

> H3. Trustees will display *greater trustworthiness in the time pressure condition* than in the time delay condition. Hence, trustors' behavioral adjustment (H1 and H2) is on average optimal.

The only experiment, to our knowledge, that has evaluated how individuals react to external time constraints on the social behavior of others was conducted by Evans & van de Calseyde (2017). They used similar time constraints as ours in a Public Goods Game. They found that fast decisions are not expected to be more, nor less, cooperative than slow decisions when time constraints are externally imposed. However, that study did not compare decisions but only expectations. Moreover, expectations' elicitation was not incentivized, and beliefs were elicited for a "hypothetical" person, hence it is not possible to check whether they were in fact correct or biased.

In our TG experiments, we used three different designs. In Study 1 (n = 300, US university students), both players started with an endowment of \$10. Roles were randomly assigned. The trustor, moving first, could send any amount between \$0 and \$10 (in \$0.01 increments) which would then be tripled before reaching the trustee. Finally, the trustee had to decide which part of the received amount (i.e., 3 x *trusted amount*) she wanted to return to the trustor. Thus, in an "ideal" scenario in terms of social efficiency and equity of outcomes, the trustor would send the entire endowment and the trustee would return exactly half of the total amount resulting in a payoff of $20 for both players. However, in the case of being fully trusted, an untrustworthy trustee can take home $40 leaving the trustor with nothing. In our experiment, one half of the playing pairs were randomly assigned to the *time pressure* or *time delay* conditions (referring to the trustee's time constraints; that is, the trustor decided under no time constraints in all our studies).

In Study 2 (*n* = 795, US MTurk workers), we simplified the design to facilitate both the trustee's decision making and the elicitation of the trustor's expectations about the trustee's trustworthiness. This design also minimized the possibility that the trustees could think ex-ante upon their decision (see below). We used a binary TG in which the trustor could decide to send either her whole endowment ($0.40) or nothing to the trustee, who also starts with $0.40. The money sent was tripled. The trustee had to decide whether to send $0.80 back to the trustor and keep $0.80 or to keep all the $1.60 for herself in case of being trusted. Before learning the outcome, participants were asked to guess the average response of both players, that is, the percentage of trustors who chose to trust and the percentage of trustees who chose to be trustworthy. Belief accuracy was incentivized. One half of the playing pairs were randomly assigned to either the *time pressure* or *time delay* conditions.

In Study 3 (*n* = 777, US MTurk workers, different from those in Study 2), we implemented a within-subjects design (only for trustors). Using the same action and payoff structure as in Study 2, we asked the trustors to make two trust decisions, one for each time condition, in random order. This allows trustors to compare both conditions very easily and adjust their behavior accordingly. Beliefs were also elicited for the two conditions in random order.

The results are clear cut: across all the three studies, we fail to find any robust effect of trustees' time constraints on trustors' decisions or beliefs. Given that trustees' behavior, at least in the cleanest designs of Study 2 and 3 (which minimize the effect of mistakes and the possibility of deciding ex-ante), is not affected by external time constraints in our experiments, trustors' response seems accurate.

In the next three sections, we report on the methods used in each study and the results obtained for the effect of the trustees' time conditions on trustors' decisions, which constitutes our main research question (H1 and H2). In a separate section, we then report the results for the effect of the time conditions on trustees' decisions in the three studies (H3). The last section discusses all the results and concludes.

STUDY 1

A total of 300 students (63% females) from Chapman University in the US participated in our experiments.[1] These participants were recruited from a database of more than 2000 students. A subset of the whole database received invitations at random for participating in the current study. The local IRB approved this research. All participants provided informed consent prior to participating. No deception was used. Participants were paid the amount earned during the experiment (mean±SD = \$14.73±6.75) plus a \$7 show-up fee.

We conducted 20 sessions with a minimum of 6 and a maximum of 22 participants. Sessions lasted for approx. 30 min. Participants were randomly assigned to either a time pressure or a time delay session (n = 150 in each condition) and subsequently to either the trustor (labeled as "individual A") or the trustee ("individual B") role of the Trust Game (Berg et al. 1995). Thus, we collected data from 75 participants in each condition/role. Following Bouwmeester et al. (2017), this sample size was determined a priori to detect a medium size effect (Cohen's d = 0.50) with 85% power and alpha = 0.05, two-tailed: minimum n = 73 in each condition/role. Participants were unaware of the existence of another experimental condition. All procedures were computerized.

Upon arrival to the laboratory, subjects were randomly assigned to cubicles (which impeded visual contact between them) and were randomly matched with another anonymous participant of the other role in the game. Subsequently, the instructions for their specific role were displayed on the computer screen. Participants in both roles started the game with \$10. Before learning the rules of the game, subjects familiarized themselves with the image and the pointer of the decision slider (without any values on it). This was done to reduce potential mistakes, especially by trustees in the time pressure condition. However, this familiarization might allow trustees to make ex-ante (loose) inferences about the decision they would have to make, thus potentially biasing the effect of time constraints. Trustors were then asked which part of their \$10 they wanted to send to the trustee and were informed that the trustee would receive three times the amount transferred. Trustees were subsequently asked to decide what proportion of the amount received to return to

[1] Some of the results from this study were circulated in a previous working paper (Cabrales et al. 2017).

the trustor. In the time pressure [delay] condition, participants in both roles were informed that *trustees* had to make their decision before [after] a 10-second timer expired.

All these instructions were common knowledge. In both conditions, trustees saw the timer on the screen counting down from 10 to 0. An identical slider bar was used by all participants to decide how much money to transfer to the other party and how much to keep by clicking on the desired point of the slider (in $0.01 increments). For trustors, the maximum amount to transfer was $10, whereas for trustees the amount to share was three times the amount received. All trustees respected the time constraints; otherwise, they would not be allowed to make their decision (which implies that both players would earn only the $10 endowment). Average (±SD) response time among trustees was 7.79 sec (±2.37) in the time pressure condition and 32.70 sec (±14.10) in the time delay condition.

After playing the TG, all participants completed a questionnaire in which we assessed their (i) risk preferences using a multiple-price-list lottery task (Holt & Laury 2002), (ii) distributional social preferences using a series of mini-dictator games (Bartling et al. 2009, Corgnet et al. 2015), (iii) time preferences using a multiple-price-list intertemporal choice task (adapted from Espín et al. 2019), and (iv) cognitive styles using an extended version of the Cognitive Reflection Test (Frederick 2005, Toplak et al. 2014). Participants were paid an extra fixed amount of $3 for responding to the questionnaire and were unaware of its existence prior to playing the TG.

Full experimental instructions, including those of all the tasks included in the questionnaire which are used in this study, can be found in Appendix B1 in the supplementary materials.

Results of Study 1 (trustors)

Figure 1 displays the Kernel density estimation for the distribution of amount trusted separately for the two conditions (n = 75 in each condition). Although the effect is in the predicted direction (H1), there are no significant differences in average trust (OLS regression with robust standard errors [from now on standard errors are always robust]: coeff of *time delay* = -0.378, p = 0.42, n = 150). Mean (±SEM) amount sent: time pressure = 4.92±0.35, time delay = 4.54±0.31, which stands for a Cohen's d of 0.13. The regression analysis can be found in supplementary Table S1, model 1a (Appendix A). However, as can be seen from Figure 1, the amount sent by trustors in the time delay condition is concentrated between $2 and $5, whereas in the time pressure condition the distribution is flatter. Indeed, the likelihood of sending an amount between $2 and $5 is significantly higher under time delay compared to the time pressure condition (probit regression with robust standard errors: mfx of *time delay* = 0.200, *p* = 0.009, *n* = 150). The regression analysis can be found in supplementary Table S1, model 2a. Thus, we have established,

Result 1 (Study 1): Average trust does not differ between the time delay and the time pressure condition (i.e., no support for H1). Trust levels are more concentrated in low-to-medium values in the time delay condition as compared to the time pressure condition.

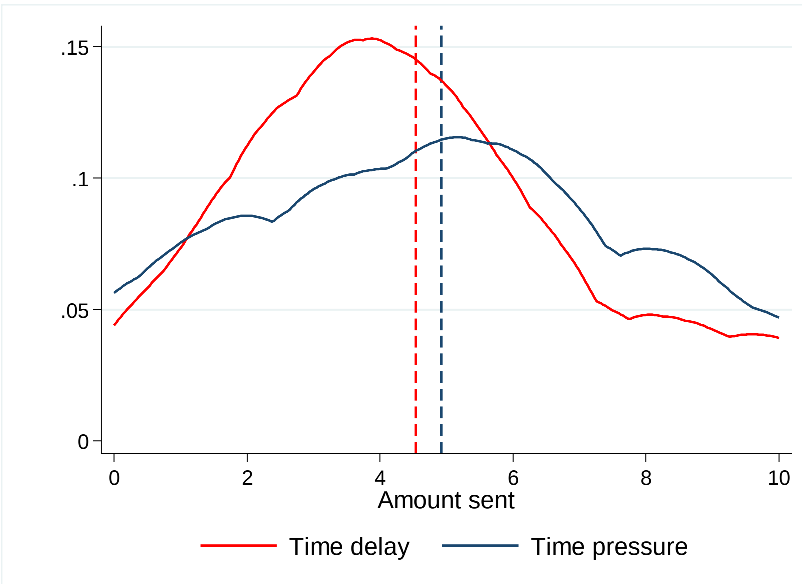

Figure 1. Kernel density estimation for amount trusted in the time delay (solid red line) and time pressure (solid blue line) conditions. Dashed vertical lines depict means (time delay: red line, time pressure: blue line). Study 1.

As we show in the supplementary Table S1 (models 1b and 2b), all these results are robust to controlling for the decision maker's gender (Frederick 2005, Bosch-Domènech et al. 2014, Cueva et al. 2016), CRT score (Corgnet et al. 2015, 2016, Capraro et al. 2017a), distributional social preferences (Kanagaretnam et al. 2009, Corgnet et al. 2015, Espín et al. 2016, Capraro et al. 2017a), time preferences (Espín et al. 2012, 2015, 2019), and risk preferences (Kanagaretnam et al. 2009, Houser et al. 2010), that could work as potential confounding factors.

Discussion of Study 1

The results of Study 1 do not provide clear support to our initial hypothesis (H1) which states that the time delay condition should trigger more distrust than the time pressure condition. Interestingly, Evans & van de Calseyde (2017) found that individuals expected fast decisions to be more extreme (i.e., either full defection or full cooperation) than slow decisions in a Public Goods Game, although not significantly so when response times were externally imposed. Similar expectations of extremity might have attenuated the (hypothesized) detrimental effect of time delay vs. pressure on expected trustworthiness – and on trust as a result – and might help explain why extremely low trust levels (below $2) are not more likely to arise in the time delay condition. Yet, we did not elicit trustors' expectations in this study.

STUDY 2

In Study 2, apart from studying a more heterogeneous sample, we address some of the limitations of Study 1. On the one hand, Study 2 provides us with a larger number of observations, thus alleviating concerns about lack of statistical power. On the other hand, we implement a binary Trust Game (i.e., trust vs. don't trust; reciprocate vs. don't reciprocate) rather than a continuous one. This design feature allows us to alleviate several concerns. First, since there are only two possible actions, it eliminates the potential effect of expectations of extremity (Evans & van de Calseyde 2017) which might have reduced the hypothesized effect. Second, another mechanism that can reduce the hypothesized effect is trustors' expectation that under time pressure trustees can make more errors (e.g., Kahneman 2011, Recalde et al. 2015) and, for example, return a small amount by mistake after being trusted a large amount. Of course, lower trusted amounts leave less room for trustees' mistakes, so this might artificially reduce trust levels in the time pressure condition when the decision space is continuous. Third, due to the simplicity of the binary game, trustees do not need to familiarize with the decision screen; thus, they cannot think of their decision in advance.

Finally, in the continuous TG it is difficult to assess trustors' beliefs about trustees' trustworthiness. We indeed did not elicit trustor's expectations in Study 1. Note that trustors in Study 1 had 1,001 possible actions (i.e., trusted amounts could range between $0 and $10 in $0.01 increments). Elicitation of beliefs in this case needs to reduce the decision space for practical reasons (e.g., to intervals of trusted amounts, or to the trustor's actual trust level), which may induce decision-making biases and information losses. In addition, a low (proportional) back-transfer does not have the same connotations when it comes from a low trusted amount, which might be a signal of negative reciprocity, as when it comes from a high trusted amount, which is a clear signal of untrustworthiness. This fact complicates designs in which other players need to consider trustees' decisions to make their choices (e.g., Crockett et al. 2014). The binary structure of the TG in Study 2 will allow us to elicit trustors' beliefs in a straightforward and reliable manner.

Compared to Study 1, thus, Study 2 allows us to get a clearer picture of the behavior of both trustors and trustees in each condition, to study trustors' beliefs, and to alleviate concerns about lack of power and sample heterogeneity.

A total of 795 US-settled individuals (after excluding duplicate IPs, as standard; 53% females) recruited from Amazon Mechanical Turk (MTurk; Paolacci et al. 2010, Rand 2012) participated in the experiment. The IRB of Middlesex University approved this research. The participation fee was $1 for a 10-15 min experiment. In addition, participants could earn extra money depending on their decisions and/or those of others during the experiment. The average (±SD) bonus was $0.69±0.50.

After entering a valid MTurk ID in our Qualtrics survey, the participants were randomly assigned to the role of trustor (labeled as "player A") or trustee ("player B"), on the one hand, and to the time pressure (n = 197 trustors, n = 200 trustees) or time delay condition (n = 200 trustors, n = 198 trustees), on the other. For comparability with the continuous TG of Study 1, this sample size allows us to detect a small-to-medium effect size (Cohen's d = 0.30) with 85% power and alpha = 0.05, two-tailed. Translated into the binary case, this sample size allows us to detect relatively small proportion differences (between 0.05 and 0.15 approx., depending on the specific proportions) with 85% power and alpha = 0.05, two-tailed. Trustors and trustees within each condition were randomly matched to calculate their payments. The decisions of three (randomly selected) trustees in the time pressure condition and two trustors in the time delay condition were used to calculate payments for unmatched participants.

The Trust Game was implemented as follows. The trustor had to choose between "option R" (not to trust) and "option L" (trust). Option R allocated $0.40 to the trustor and $0.40 to the trustee. If the trustor chose option L, the trustee had to choose between options Y (not to reciprocate) and X (reciprocate). Option Y allocated $1.60 to the trustee and $0 to the trustor, whereas option X allocated $0.80 to both players. Note that this design resembles a TG in which the trustor can send a $0.40 endowment to the trustee, and the money trusted is then tripled before reaching the trustee (i.e., the trustee receives $1.20), who has to choose whether to keep all the $1.60 (i.e., $1.20 + the $0.40 endowment) or send $0.80 in back to the trustor. On the other hand, trustees decided under the so-called strategy method (Selten 1967; applied to the binary TG, for example, in Espín et al.

2016), in which they had to decide whether to reciprocate or not (i.e., to choose option X or Y) ex-ante, without knowing if the randomly matched trustor will trust (option L) or not (option R); in the latter case, obviously, the trustee's decision would have no consequences.

The time conditions were the same as in Study 1. Trustees had to choose between options X and Y either before or after a 10-second timer elapsed, which refer to the time pressure and time delay conditions, respectively. Before reaching the decision screen, the trustees knew the payoffs in case the trustor chose option R (i.e., \$0.40 each), and that if the trustor chose option L they had to choose between options X and Y, but they did not know anything about the consequences of options X and Y, so that they could not think of their decision in advance. Importantly, trustees did not need to familiarize with the task to avoid mistakes because their decision was extremely simple, in contrast to Study 1. Neither the trustor nor the trustee knew about the existence of another time condition. Average (±SD) response time among trustees was 5.75 sec (±4.69) in the time pressure condition and 11.51 sec (±12.79) in the time delay condition. Non-compliance with the time constraint assigned, as in Study 1, implied that the interaction would not take place and both players earn \$0.40 (as if the trustor chose not to trust). This was known in advance by the participants. Still, 6% of the trustees in the time pressure condition and 39% in the time delay condition failed to comply. The latter figure may be influenced by the fact that, to check compliance, we used the last time the participant clicked on the option chosen (X or Y) rather than the time when they clicked on the button to send their decision; the instructions explicitly mentioned this. Using the "send" click, non-compliance is still high but is reduced to 30%.[2]

After they made their decisions (without feedback), all participants were asked to guess the percentage of player A choosing option L and the percentage of player B choosing option X (both only for their own time condition), in this order. Guesses were implemented in 5% increments from 0% to 100% and were considered correct if the actual percentage belonged to the interval "guess±5%". Participants received \$0.10 for each correct guess. Participants were correct only 13% of the times and the earnings were \$0.026 (SD 0.046) out of a maximum of \$0.20.

Finally, the participants had to complete the same risk and distributional social preferences tasks as in Study 1, as well as the 7-item CRT (to avoid that the participants could find the CRT answers

[2] Since our participants are MTurk workers, the likely explanation for low compliance in the time delay condition is that they want to finish early. This is a job after all and some of them may not be seeing the reason for waiting (i.e., earning some extra money) sufficiently encouraging. To avoid that non-compliance biases our results, we analyze the behavior of both compliant and non-compliant individuals, as standard (Bouwmeester et al. 2017).

online, we implemented the adapted version from Capraro et al. 2017a, which slightly modifies the wording and answers of the original Frederick 2005 and Toplak et al. 2014 tasks in order to be applied in online settings), but in this case the tasks were incentivized in a probabilistic manner. We chose to incentivize the CRT with \$0.30 for each correct answer in order to ensure considerate responding, which is especially important in online experiments. In addition, they were asked to complete a loss aversion task (Gächter et al. 2007, Mrkva et al. 2020) which allows us to control for risk preferences more robustly, in particular, in the domain of losses. One out of every 10 participants were randomly selected to receive the real payment associated with one randomly selected task among the four (probabilistic payments have been proven to provide valid data in economic experiments; Charness et al. 2016, Clot et al. 2018). Given the difficulty of implementing delayed payments in MTurk experiments and that previous literature finds no difference between hypothetical and real choices in time preferences tasks (Johnson & Bickel 2002, Bickel et al. 2009, Brañas-Garza et al. 2020), the elicitation of the participants' time preferences was implemented using hypothetical rewards. Full instructions can be found in Appendix B2.

Results of Study 2 (trustors)

The left panel in Figure 2 displays the proportion (±SE) of trustors choosing to trust in each condition (n = 197 for time pressure; n = 200 for time delay). There are no significant differences in trust between the two conditions (probit regression with robust standard errors: mfx of *time delay* = 0.012, p = 0.80, n = 397), in contrast to H1. Observed proportions (±SE): time pressure = 0.503±0.036, time delay = 0.515±0.035. The regression analysis can be found in supplementary Table S2, model 1a. Thus, we have established,

Result 2 (Study 2): The proportion of trustors who choose to trust does not differ between the time delay and the time pressure condition (i.e., no support for H1).

The right panel in Figure 2 displays the mean (±SEM) trustworthiness expected by trustors in each time condition, expressed as the (expected) proportion of trustworthy trustees. There are no significant differences in expected trustworthiness between the two conditions (OLS regression with robust standard errors: coeff of *time delay* = -0.020, p = 0.42, n = 397), in contrast to H2. Average expected trustworthiness (±SEM): time pressure = 0.520±0.018, time delay = 0.500±0.017. This difference yields a Cohen's d of 0.08. The regression analysis can be found in supplementary Table S2, model 4a. As can be seen in supplementary Table S2, models 2a and 3a, expected trustworthiness predicts trust both in the time pressure (mfx of *expected trustworthiness* = 0.474, p = 0.001) and in the time delay condition (mfx of *expected trustworthiness* = 0.450, p = 0.003). In supplementary Table S2, models 1b-4b, we show that these results are robust to controlling for all the variables considered in this study. Thus, we have established,

Result 3 (Study 2): Average expected trustworthiness does not differ between the time delay and the time pressure condition (i.e., no support for H2).

Result 4 (Study 2): In both conditions, expected trustworthiness predicts trust.

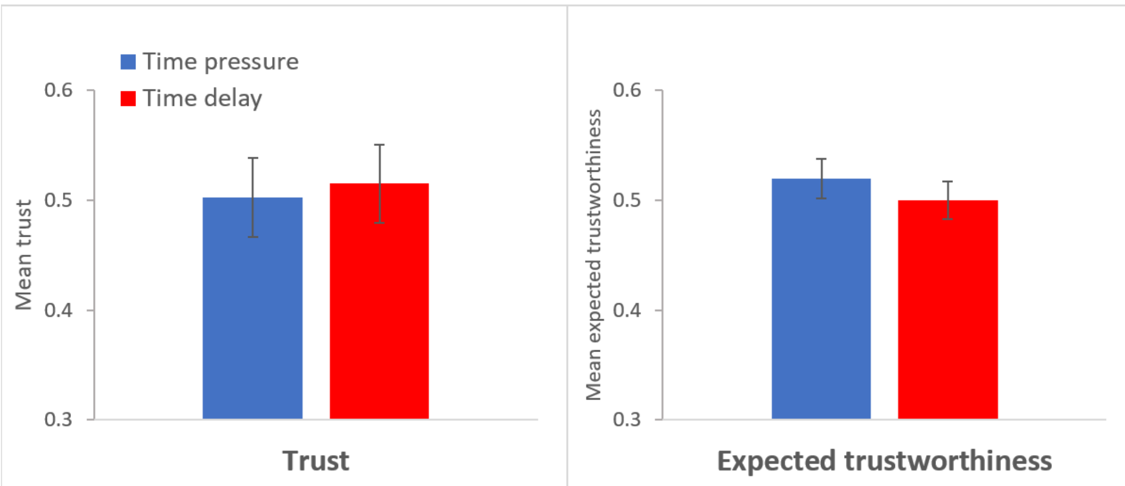

Figure 2. Left panel: Proportion of trustors choosing to trust in the time pressure (blue bar) and time delay condition (red bar). Right panel: Mean trustworthiness expected by trustors in the time pressure (blue bar) and time delay condition (red bar). Error bars represent robust SE. Study 2.

Discussion of Study 2

Using a larger sample and a simpler design as compared to Study 1, in Study 2 we again failed to find any effect of the trustees' time condition on trustors' trust decisions. In addition, we also find no difference between conditions in expected trustworthiness. These results are thus against our hypotheses H1 and H2. As hypothesized, however, trustors' trust increases with expected trustworthiness. The latter suggests that the data are reliable.

Still, the between-subjects designs employed in Studies 1 and 2 might have obscured the potential effect of trustees' time condition on trust. It might be that trustors need to be aware of the existence of both time conditions to be able to adjust their behavior and beliefs. At least, this seems to favor the emergence of differences between conditions. In Study 3, we implement a within-subjects design to address this question. This design will also allow us to obtain results with greater statistical power.

STUDY 3

Study 3 aims to alleviate concerns related to the argument that trustors might need to compare both conditions to adjust their behavior and beliefs. Thus, we implement a within- rather than between-subjects design, which also provides for a more powered analysis. This design brings a scenario which seems to be very favorable for any difference between conditions to emerge and, therefore, to find support for our initial hypotheses.

A total of 777 US-settled MTurk workers (after excluding duplicate IPs; 46.5% females) participated in the experiment. The IRB of Middlesex University approved this research. Participants from Study 2 were excluded. The participation fee was $1 for a 10-15 min experiment. In addition, participants could earn extra money depending on their decisions and/or those of others during the experiment. The average (±SD) bonus was $0.72±0.49.

After entering a valid MTurk ID in our Qualtrics-based survey, the participants were randomly assigned to the role of trustor (*n* = 376) or trustee (*n* = 401). Those in the role of trustor ("player A") would be asked later on to make one decision for each time condition (see below): they were randomly assigned to choosing first either for the time pressure case (*n* = 183) or for the time delay case (*n* = 193). This sample size allows us to detect a small effect (Cohen's *d* = 0.17) with 85% power and alpha = 0.05, two-tailed, for a within-subjects design (assuming a correlation of 0.4 between the two measures). Translated into proportions, this sample size allows us to find small proportion differences (between 0.04 and 0.08 approx., depending on the exact proportions) with 85% power and alpha = 0.05, two-tailed. Similarly, trustees ("player B") were randomly assigned to the time pressure (*n* = 199) or time delay condition (*n* = 202).

The Trust Game was implemented as in Study 2, except for the trustor's conditions which were conducted using a within-subjects design in Study 3. The players were matched ex-post and trustors did not know which time condition the randomly matched trustee was assigned to. Trustors were informed ex-ante that one half of the trustees (randomly selected) will have to respond under each time condition. To avoid deception, we asked trustors to make one decision for each time condition in random order. The decisions of five (randomly selected) trustees were used to calculate payments for unmatched trustors.

The time conditions were as in Studies 1 and 2. Trustees had to choose between options Y and X either before or after a 10-second timer elapsed, leading to the time pressure and time delay conditions, respectively. Before reaching the decision screen, the trustees did not know the payoffs associated to options Y and X, so that they could not think of their decision in advance. In contrast to the trustors, the trustees did not learn about the existence of another time condition before making their decision. Average (±SD) response time among trustees was 6.42 sec (±4.94) in the time pressure condition and 12.30 sec (±17.78) in the time delay condition. Non-compliance with the time constraint assigned, as in Study 2, implies that the interaction would not take place and both players would earn $0.40 (as if the trustor chose not to trust). This was known in advance by the participants. Like in Study 2 we observed high non-compliance, with 11% and 41% (30% if the "send" click is considered) of the trustees failing to comply in the time pressure and time delay condition, respectively.

After making their decisions, all participants were asked to guess the percentage of players A choosing option L for each time condition (at this time, the trustee learned about the existence of another time condition) and the percentage of player B choosing option X for each time condition, both in random order. Thus, they had to make four guesses. As in Study 2, guesses were implemented in 5% increments from 0% to 100% and participants received $0.10 for each correct guess (i.e., the actual percentage belonged to the interval "guess±5%"). Participants were correct only 16% of the times and the earnings were $0.062 (SD 0.078) out of a maximum of $0.40. Finally, the participants had to complete the same post-experimental questionnaire as in Study 2, with identical tasks and protocols, to obtain our battery of control variables. Full instructions can be found in Appendix B3.

Results of Study 3 (trustors)

Left panel in Figure 3 displays the proportion (±SE of the difference) of trust choices in each condition. There are no significant differences in trust between the two conditions (one-sample proportion test: proportion difference = 0.024, p = 0.51, n = 376). Observed proportions: time pressure = 0.481, time delay = 0.505; SE of the difference = 0.036). Given that this is a within-subjects design, we cannot consider regression analysis to add controls. Thus, we have established,

Result 5 (Study 3): The proportion of trust decisions does not differ between the time delay and the time pressure condition (i.e., no support for H1).

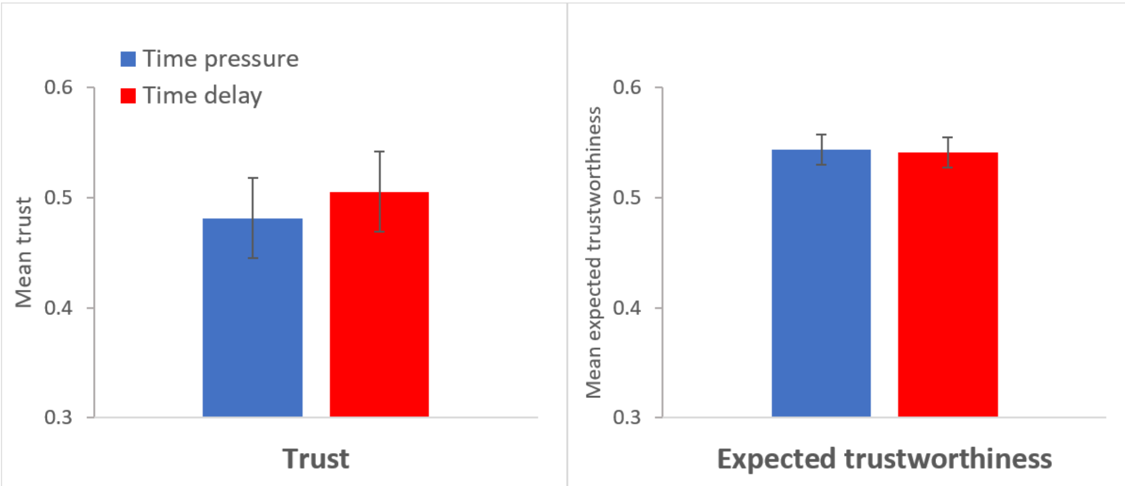

Figure 3. Left panel: Proportion of trustors choosing to trust in the time pressure (blue bar) and time delay condition (red bar). Right panel: Mean trustworthiness expected by trustors in the time pressure (blue bar) and time delay condition (red bar). Error bars represent SE of the difference (within-subjects). Study 3.

Right panel in Figure 3 displays the mean (±SE of the difference) trustworthiness expected by trustors in each time condition, expressed as the (expected) proportion of trustworthy trustees. There are no significant differences in expected trustworthiness between the two conditions (one-sample t-test: average difference = 0.002, p = 0.86, n = 376). Observed averages: time pressure = 0.543, time delay = 0.541 (SE of the difference = 0.134). Again, since this is a within-subjects design, we do not conduct regression analysis.

As can be seen in supplementary Table S3, however, expected trustworthiness does not significantly predict trust either in the time pressure (mfx of time pressure's *expected trustworthiness* = 0.107, p = 0.31, model 1a) or in the time delay condition (mfx of time delay's *expected trustworthiness* = 0.147, p = 0.18, model 2a). Although the sign of both relationships is positive, this is an unexpected result. In this case, we can test for control variables in the regressions and, in fact, the relationships are slightly stronger when controls are included, but still non-significant for either the time pressure (mfx of time pressure's *expected trustworthiness* = 0.149, p = 0.17, model 1b) or the time delay condition (mfx of time delay's *expected trustworthiness* = 0.167, p = 0.14, model 2b). To further explore this result, we conduct several checks (available upon request). First, we observe that the expected trustworthiness in one condition predicts trust in the same condition slightly better than in the other condition, but always not significantly so, as mentioned. Second, we combine the trustors' two decisions and set dummy variables for choosing to trust in both decisions (mean proportion = 0.335) and choosing to trust in none of them (mean proportion = 0.348); we also set a variable for the mean expected trustworthiness combining the two conditions (mean = 0.542). From all the possible relationships, the only one that yields $p < 0.05$ is the (negative) relationship between "trust in none" and mean expected trustworthiness when controls are included (without controls: mfx of mean *expected trustworthiness* = -0.236, $p = 0.070$; with controls: mfx of mean *expected trustworthiness* = -0.269, $p = 0.038$). Third, we average the two trust decisions (mean = 0.493) and conduct OLS regressions. From all the possible relationships, only that between mean trust and mean expected trustworthiness when controls are included yields marginal significance (without controls: coeff of *mean expected trustworthiness* = 0.166, $p = 0.15$; with controls: coeff of *mean expected trustworthiness* = 0.202, $p = 0.073$). Thus, we have established,

Result 6 (Study 3): Average expected trustworthiness does not differ between the time delay and the time pressure condition (i.e., no support for H2).

Result 7 (Study 3): Expected trustworthiness does not significantly predict trust in either condition separately.

Discussion of Study 3

In Study 3, we again fail to find support for either H1 or H2. In a highly powered within-subjects design, which would presumably be very favorable for any difference to emerge, thus we still find that trustors do not adjust their behavior or beliefs to the trustee's time conditions. Interestingly, although the expected trustworthiness in one condition predicts trust in the same condition slightly better than in the other condition, this relationship is not significant in either case even when controls are included. To find significant or marginally significant results we need to combine the trust decisions as well as the expected trustworthiness in the two conditions. This suggests that the trustee's time conditions are nearly irrelevant for the trustors and that observing such conditions can be confusing for them since, even combining both conditions, more expected trustworthiness is only weakly related to trust. In other words, the trustee's time conditions seem to be more confusing for trustors than meaningful.

ANALYSIS OF TRUSTEES' BEHAVIOR

After having tested our main hypotheses about trustors' behavior (H1) and beliefs (H2), in this section, we explore our secondary hypothesis H3. According to H3, trustees should be more trustworthy under time pressure than under time delay. As before, we test this hypothesis in the three studies separately.

Results of Study 1 (trustees)

In Figure 4, we present the amount returned (±90% CI) in the two conditions as a function of the amount received in Study 1. We estimate this effect using fractional polynomial analysis which allows us to capture complex non-linear relationships. It can be observed that for amounts received above \$15 (i.e., amount trusted = \$5), trustees in the time delay condition seem to return higher amounts than in the time pressure condition. While the positive relationship between amount returned and amount received apparently displays some concavity in the time pressure condition, using OLS estimation we cannot reject that the relationship is linear (i.e., not concave; a regression with *amount received* and *amount received squared* as explanatory variables yields p>0.19 for *amount received squared* in both conditions). Thus, we run OLS regressions in which amount received is assumed to have a linear effect on amount returned.

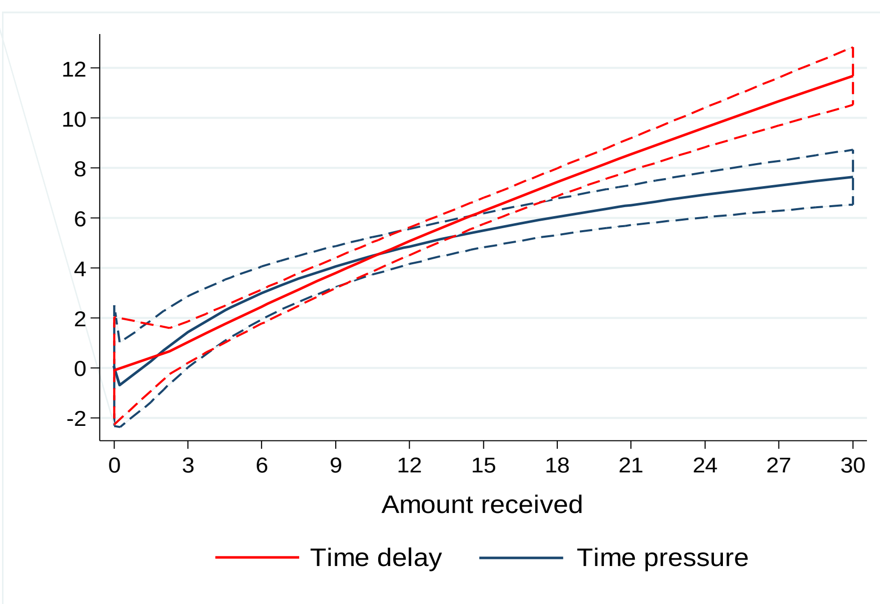

Figure 4. Fractional polynomial estimation of amount returned as a function of amount received in the time delay (solid red line) and time pressure (solid blue line) conditions. Dashed lines depict 90% CI. Study 1.

First, we conduct a main effects analysis with the amount received and condition as explanatory variables: both yield significant estimates (coeff of *amount received* = 0.309, $p < 0.001$, $n = 150$; coeff of *time delay* = 1.081, $p = 0.026$). Second, we analyze the interaction between the two variables, which is also significant (coeff of *time delay* × *amount received* = 0.149, $p = 0.003$, $n = 150$). This tells us that in the time delay condition the amount returned increases significantly more with the amount received relative to the time pressure condition (coeff *of amount received*: in time pressure condition = 0.245, $p < 0.001$; in time delay condition = 0.394, $p < 0.001$; Wald tests on the interaction model coefficients), thus against H3. The regression analyses can be found in supplementary Table S4, model 1a and 2a, respectively. Adding controls does not change the results (models 1b and 2b).

According to the model estimates, trustees in the time delay condition return significantly more, but only in response to trusted amounts of $5 or more ($p > 0.07$ for all trusted amounts of $4 or less; Wald tests on the interaction coefficients). For trustees who were sent $5 (i.e., who received $15), the model reports that the amount returned is significantly higher in the time delay compared to the time pressure condition ($6.09 and $4.88, respectively; $p = 0.015$, Wald test). The largest difference is estimated for trustees who were trusted with the whole endowment (i.e., those receiving $30; $12.00 and $8.55, respectively; $p = 0.002$, Wald test). This is consistent with the observation from Figure 4. Thus, we have established,

Result 8 (Study 1): Trustees in the time delay condition are more trustworthy than in the time pressure condition (i.e., H3 is rejected).

Results of Study 2 (trustees)

The left panel in Figure 5 displays the proportion (±SE) of trustworthy trustees in each condition in Study 2 using an intent-to-treat approach (ITT; see, e.g., Bouwmeester et al. 2017), in which subjects who did not respect the time condition are included ($n = 200$ for time pressure; $n = 198$ for time delay). There are no significant differences in trustworthiness between the two conditions (mfx of *time delay* = 0.021, $p = 0.67$, $n = 398$), in contrast to H3. Observed proportions (±SE): time pressure = 0.575±0.035, time delay = 0.596±0.035. The regression analysis can be found in supplementary Table S5, model 1a. The right panel in Figure 5 displays the proportion (±SE) of trustworthy trustees in each condition in Study 2 using only subjects who were effectively treated (ET; e.g., Rand et al., 2012), that is, those who respected the time condition ($n = 189$ for time pressure; $n = 121$ for time delay). There are no significant differences in trustworthiness between the two conditions (mfx of *time delay* = 0.049, $p = 0.39$, $n = 310$), in contrast to H3. Observed proportions (±SE): time pressure = 0.587±0.036, time delay = 0.636±0.044. The regression analysis can be found in supplementary Table S5, model 2a. In supplementary Table S5, models 1b and 2b, we show that these results are robust to controlling for all the variables considered in this study. Thus, we have established,

Result 9 (Study 2): The proportion of trustworthy trustees does not differ between the time delay and the time pressure condition (i.e., there is no support for H3).

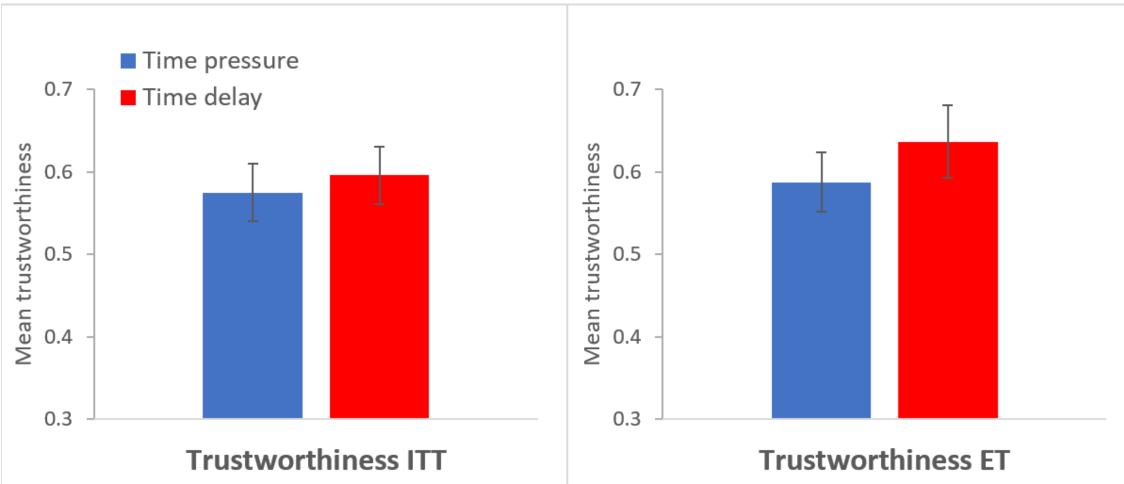

Figure 5. Left panel: Mean proportion of trustworthy trustees in the time pressure (blue bar) and time delay condition (red bar) using an intent-to-treat approach. Right panel: Mean proportion of trustworthy trustees in the time pressure (blue bar) and time delay condition (red bar) using only effectively treated subjects. Error bars represent robust SE. Study 2.

Results of Study 3 (trustees)

The left panel in Figure 6 displays the proportion (±SE) of trustworthy trustees in each condition in Study 3 using an intent-to-treat approach (ITT; $n = 199$ for time pressure; $n = 202$ for time delay). There are no significant differences in trustworthiness between the two conditions (mfx of *time delay* = 0.006, $p = 0.90$, $n = 401$), in contrast to H3. Observed proportions (±SE): time pressure = 0.593±0.035, time delay = 0.599±0.035. The regression analysis can be found in supplementary Table S6, model 1a. The right panel in Figure 6 displays the proportion (±SE) of trustworthy trustees in each condition in Study 3 using only subjects who were effectively treated (ET; $n = 176$ for time pressure; $n = 119$ for time delay). There are no significant differences in trustworthiness between the two conditions (mfx of *time delay* = -0.028, $p = 0.63$, *n* = 295), in contrast to H3. Observed proportions (±SE): time pressure = 0.608±0.037, time delay = 0.580±0.045. The regression analysis can be found in supplementary Table S6, model 2a. In supplementary Table S6, models 1b and 2b, we show that these results are robust to controlling for all the variables considered in this study. Thus, we have established,

Result 10 (Study 3): The proportion of trustworthy trustees does not differ between the time delay and the time pressure condition (i.e., no support for H3).

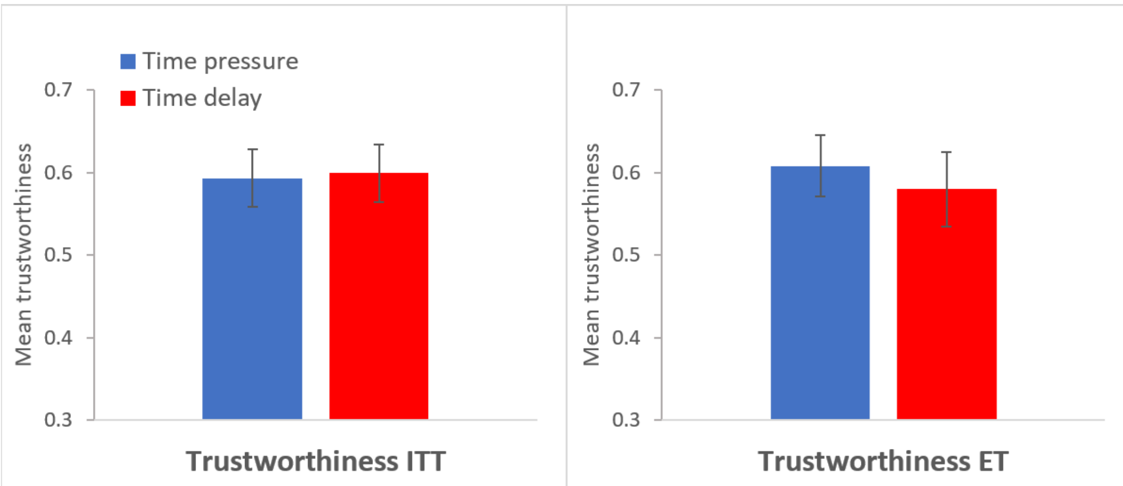

Figure 6. Left panel: Mean proportion of trustworthy trustees in the time pressure (blue bar) and time delay condition (red bar) using an intent-to-treat approach. Right panel: Mean proportion of trustworthy trustees in the time pressure (blue bar) and time delay condition (red bar) using only effectively treated subjects. Error bars represent robust SE. Study 3.

GENERAL DISCUSSION

Regarding our main hypotheses H1 and H2, according to which trustors should trust more and expect more trustworthiness by trustees who are forced to respond quickly vs. slowly, the results are straightforward: across different designs, including both between- and within-subjects analyses as well as both continuous and binary decision spaces, we find that trustors do not adjust their behavior or beliefs (about trustworthiness) to the trustee's time conditions. Note that some of our analyses were well powered to detect rather small effects and presumably very favorable to the emergence of any existing difference. Thus, H1 and H2 are largely unsupported by the data.

The results regarding our secondary hypothesis H3, stating that trustees should be more trustworthy in the time pressure than in the time delay condition are more mixed. Yet, in the only case in which we find a difference, it is in the opposite direction to H3 (Study 1). Note that the finding that forced delay triggers more trustworthiness than time pressure among our trustees in Study 1 might be due to several factors (Rand & Kraft-Todd 2014, Capraro & Cococcioni 2015, 2016, Corgnet et al. 2015, Capraro et al. 2017a), including a lower presence of mistakes (Kahneman 2011, Recalde et al. 2015). In fact, although we allowed subjects to familiarize themselves with the decision slider prior to making their choices and we do not find evidence of greater randomness in trustees' responses in the time pressure condition (variance-comparison test, $f(74, 74) = 1.02$, $p = 0.92$), an error-based explanation cannot be completely ruled out. When we set designs that minimize the effect of errors (Study 2 and Study 3), we find no effect at all. Thus, our results provide evidence against the so-called "social heuristics hypothesis" (Rand et al. 2012, 2014) and are in line with recent inconclusive or failed replications (Bouwmeester et al. 2017).

The existence of exogenous time constraints is ubiquitous in many real-life decisions and, therefore, our results have important implications for both the public and the private spheres (Niederle & Roth 2009, Camerer et al. 2003). For example, "cooling-off" periods are often proposed in situations such as negotiations (Cramton & Tracy 1994, Oechssler et al. 2008), divorce decisions (e.g., in Korea, see Lee 2013) and consumer purchases (Sher 1973) where trust is a key consideration. Furthermore, stock markets across the world have built in circuit breakers in case of unusually large price movements with the aim of downplaying panic selling and other "irrational" patterns (although it remains unclear whether the benefits of such regulatory practices overcome their costs; Lauterbach & Ben-Zion 1993, Goldstein & Kavajecz 2004, Parisi & Smith 2005). Exploding-offer markets in which there is no time to consider different alternatives are typically inefficient and, thus, the recommendation also tends to be to increase the amount of time to make decisions (Roth & Xing 1994). Our results suggest that, in contrast to our initial hypothesis, forcing agents to delay their decisions does not reduce others' trust. This means that cooling-off and similar regulations seem to be safe from potential inefficiencies associated to lack of trust. In sum, our findings indicate that reflective (vs. intuitive) decisions are met with distrust (Hoffman et al. 2015, Jordan et al. 2016, Everett et al. 2016) only when the decisions' character allow to make inferences about the decision maker's personality, which is not the case when time constraints are externally imposed.

Competing interests

We have no competing interests.

Authors' contributions

The authors' names appear in alphabetical order. All of them contributed equally to all parts of this research.

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Supplementary materials

for

Trustors' disregard for trustees deciding intuitively or reflectively: three experiments on time constraints

Antonio Cabrales, Antonio M. Espín, Praveen Kujal, & Stephen Rassenti

Appendix A. Supplementary Tables

Table S1. Determinants of trustors' trust (Study 1)

	Model 1a	Model 1b	Model 2a	Model 2b
dep var:	amount trusted		amount trusted 2-5	
tdelay	-0.378	-0.428	0.565***	0.589***
	(0.472)	(0.453)	(0.217)	(0.223)
			0.200	0.206
male		0.185		0.274
		(0.494)		(0.235)
				0.099
CRT score		0.301**		-0.079
		(0.119)		(0.056)
				-0.028
envy		-0.390*		0.177
		(0.225)		(0.120)
				0.063
compassion		0.271		0.025
		(0.225)		(0.111)
				0.009
impatience		0.017		-0.017
		(0.045)		(0.023)
				-0.006
risk aversion		-0.080		0.027
		(0.092)		(0.057)
				0.010
Constant	4.919***	4.813***	-0.750***	-1.063*
	(0.356)	(1.074)	(0.161)	(0.562)

F/Chi^2	0.641	3.070***	6.751***	13.962*
ll	-371.122	-363.372	-91.318	-87.861
R^2/pseudo-R^2	0.004	0.102	0.036	0.073
N	150	150	150	150

Notes: OLS (model 1: amount sent) and probit (model 2: amount sent between 2 and 5) estimates. Robust standard errors in parentheses. Marginal effects are reported below standard errors for probit models. Main explanatory variable: *tdelay* takes the value of 1 for the time delay condition, 0 for the time pressure condition. Controls: *male* takes the value of 1 if male, 0 otherwise; *CRT score* refers to the number of correct answers in the CRT (from 0 to 7); *envy* refers to the number of envious choices in the distributional preferences task (from 0 to 3); *compassion* refers to the number of compassionate choices in the distributional preferences task (from 0 to 3); *impatience* refers to the number of impatient choices in the time preferences task (from 0 to 20); *risk aversion* refers to the number of risk averse choices in the risk preferences task (from 0 to 10).
* p<0.1, ** p<0.05, *** p<0.01

Table S2. Determinants of trustors' trust and beliefs (Study 2)

	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b
dep var:	trust (both conditions)		trust (time pressure)		trust (time delay)		exp trustworthiness	
tdelay	0.031	0.056					-0.020	-0.029
	(0.126)	(0.129)					(0.025)	(0.024)
	0.012	0.022						
exp trustworthiness			1.187***	1.451***	1.128***	1.176***		
			(0.364)	(0.388)	(0.377)	(0.414)		
			0.474	0.579	0.450	0.469		
male		-0.144		-0.378*		0.104		0.021
		(0.135)		(0.195)		(0.205)		(0.026)
		-0.057		-0.150		0.041		
age		0.000		-0.006		0.009		-0.000
		(0.006)		(0.008)		(0.009)		(0.001)
		0.000		-0.002		0.003		
CRT score		0.041		0.089*		0.044		-0.014**
		(0.032)		(0.048)		(0.046)		(0.006)
		0.016		0.035		0.018		
envy		-0.121*		-0.173		-0.059		0.004
		(0.072)		(0.108)		(0.108)		(0.013)
		-0.048		-0.069		-0.023		

compassion		0.179**		0.101		0.172		0.044***
		(0.072)		(0.101)		(0.110)		(0.013)
		0.071		0.040		0.069		
impatience		-0.006		0.019		-0.031**		-0.001
		(0.011)		(0.016)		(0.016)		(0.002)
		-0.002		0.007		-0.013		
risk aversion		-0.087***		-0.067		-0.141***		0.004
		(0.028)		(0.042)		(0.043)		(0.005)
		-0.035		-0.027		-0.056		
loss aversion		-0.003		0.020		0.011		0.002
		(0.043)		(0.064)		(0.064)		(0.008)
		-0.001		0.008		0.004		
Constant	0.006	0.403	-0.613***	-0.424	-0.526**	-0.071	0.520***	0.431***
	(0.089)	(0.393)	(0.207)	(0.582)	(0.206)	(0.603)	(0.018)	(0.076)
F/Chi^2	0.062	22.229***	10.614***	22.177***	8.940***	29.413***	0.650	1.979**
ll	-275.087	-263.040	-131.394	-123.954	-134.070	-122.520	-3.181	5.788
R^2/pseudo-R^2	0.000	0.044	0.038	0.092	0.032	0.116	0.002	0.046
N	397	397	197	197	200	200	397	397

Notes: Probit (models 1-3: trust) and OLS (model 4: beliefs, expected trustworthiness) estimates. Robust standard errors in parentheses. Marginal effects are reported below standard errors for probit regressions. Main explanatory variables: *tdelay* (see notes on Table S1); *exp trustworthiness* refers to the expected proportion of trustworthy trustees in the corresponding condition. Controls: *loss aversion* refers to the number of loss averse choices in the loss aversion task (from 0 to 6). See notes on Table S1 for the remaining controls. * p<0.1, ** p<0.05, *** p<0.01

Table S3. Determinants of trustors' trust (Study 3)

	Model 1a	Model 1b	Model 2a	Model 2b
dep var:	trust (time pressure)		trust (time delay)	
exp trustworthiness	0.268	0.373	0.369	0.418
	(0.265)	(0.270)	(0.277)	(0.281)
	0.107	0.149	0.147	0.167
male		-0.049		-0.270**
		(0.136)		(0.136)
		-0.019		-0.107
age		0.010*		-0.002
		(0.006)		(0.005)
		0.004		-0.001
CRT score		0.037		0.022

		(0.033)		(0.032)
		0.015		0.009
envy		-0.074		-0.012
		(0.070)		(0.070)
		-0.030		-0.005
compassion		0.113		0.126*
		(0.071)		(0.072)
		0.045		0.050
impatience		0.016		-0.007
		(0.012)		(0.012)
		0.006		-0.003
risk aversion		-0.071**		-0.056*
		(0.033)		(0.033)
		-0.028		-0.022
loss aversion		0.038		0.046
		(0.048)		(0.049)
		0.015		0.018
Constant	-0.193	-0.726*	-0.186	-0.069
	(0.158)	(0.424)	(0.163)	(0.406)
Chi^2	1.026	14.393	1.767	13.086
ll	-259.853	-252.720	-259.723	-253.672
pseudo-R^2	0.002	0.029	0.003	0.027
N	376	376	376	376

Notes: Probit estimates (trust). Robust standard errors in parentheses. Marginal effects are reported below standard errors. Main explanatory variable: *exp trustworthiness* refers to the expected proportion of trustworthy trustees in the corresponding condition. Controls: see notes on Tables S1 and S2. * p<0.1, ** p<0.05, *** p<0.01

Table S4. Determinants of trustees' trustworthiness (Study 1)

	Model 1a	Model 1b	Model 2a	Model 2b
dep var:		amount returned		
tdelay	1.081**	0.961**	-1.029	-0.785
	(0.485)	(0.476)	(0.630)	(0.647)
amount received	0.309***	0.309***	0.245***	0.255***
	(0.027)	(0.028)	(0.038)	(0.040)
tdelay X a received			0.149***	0.126**

			(0.051)	(0.055)
male		-0.206		-0.129
		(0.543)		(0.542)
envy		-0.051		-0.084
		(0.270)		(0.266)
compassion		0.784***		0.692***
		(0.249)		(0.248)
risk aversion		-0.172		-0.170
		(0.118)		(0.118)
impatience		-0.013		-0.028
		(0.056)		(0.056)
Constant	0.251	0.410	1.205**	1.457
	(0.412)	(1.024)	(0.484)	(1.167)
F	73.924***	21.106***	59.134***	21.050***
ll	-376.286	-370.676	-372.747	-368.123
R^2	0.450	0.490	0.476	0.507
N	150	150	150	150
Wald Tests				
a received + tdelay X a received			0.394***	0.381***
			(0.034)	(0.036)
*tdelay + tdelay X a received*3*			-0.580	-0.406
			(0.524)	(0.527)
*tdelay + tdelay X a received*6*			-0.132	-0.027
			(0.446)	(0.438)
*tdelay + tdelay X a received*9*			0.317	0.352
			(0.411)	(0.401)
*tdelay + tdelay X a received*12*			0.765*	0.731*
			(0.432)	(0.429)
*tdelay + tdelay X a received*15*			1.214**	1.110**
			(0.500)	(0.512)
*tdelay + tdelay X a received*18*			1.662***	1.489**
			(0.601)	(0.629)
*tdelay + tdelay X a received*21*			2.111***	1.867**
			(0.719)	(0.764)
*tdelay + tdelay X a received*24*			2.559***	2.246**
			(0.849)	(0.909)
*tdelay + tdelay X a received*27*			3.008***	2.625**
			(0.986)	(1.060)

*tdelay + tdelay X a received*30*	3.456***	3.004**
	(1.126)	(1.215)

Notes: OLS estimates (amount returned). Robust standard errors in parentheses. Wald Tests on the interaction coefficients: *a received + tdelay X a received* refers to the effect of *amount received* in the time delay condition (for the time pressure condition, the effect is given by the coefficient of *amount received*); *tdelay + tdelay X a received*Z* refers to the effect of time delay for an amount received of $Z. Controls: see notes on Table S1. * p<0.1, ** p<0.05, *** p<0.01

Table S5. Determinants of trustees' trustworthiness (Study 2)

	Model 1a	Model 1b	Model 2a	Model 2b
dep var:	trustworthiness (ITT)		trustworthiness (ET)	
tdelay	0.054	-0.120	0.128	-0.013
	(0.127)	(0.145)	(0.149)	(0.168)
	0.021	-0.046	0.049	-0.005
male		-0.032		0.047
		(0.148)		(0.169)
		-0.013		0.018
age		0.002		0.001
		(0.007)		(0.007)
		0.001		0.000
CRT score		0.030		0.008
		(0.035)		(0.039)
		0.011		0.003
envy		0.088		0.123
		(0.078)		(0.089)
		0.034		0.046
compassion		0.765***		0.783***
		(0.075)		(0.086)
		0.295		0.296
impatience		0.002		-0.010
		(0.012)		(0.013)
		0.001		-0.004
risk aversion		0.045		0.032
		(0.034)		(0.039)
		0.017		0.012
loss aversion		-0.046		-0.040

		(0.049)		(0.055)
		-0.018		-0.015
Constant	0.189**	-1.750***	0.221**	-1.574***
	(0.089)	(0.439)	(0.092)	(0.504)
Chi^2	0.180	113.861***	0.743	90.284***
ll	-269.945	-203.544	-207.422	-156.128
pseudo-R^2	0.000	0.246	0.002	0.249
N	398	398	310	310

Notes: Probit estimates (trustworthiness). Robust standard errors in parentheses. Marginal effects are reported below standard errors. See notes on Tables S1 and S2. * p<0.1, ** p<0.05, *** p<0.01

Table S6. Determinants of trustees' trustworthiness (Study 3)

	Model 1a	Model 1b	Model 2a	Model 2b
dep var:	trustworthiness (ITT)		trustworthiness (ET)	
tdelay	0.016	0.068	-0.073	-0.037
	(0.127)	(0.139)	(0.150)	(0.168)
	0.006	0.026	-0.028	-0.014
male		-0.181		-0.158
		(0.141)		(0.167)
		-0.069		-0.060
age		0.009		0.010
		(0.007)		(0.008)
		0.003		0.004
CRT score		0.027		0.013
		(0.034)		(0.040)
		0.010		0.005
envy		0.163**		0.256***
		(0.076)		(0.091)
		0.062		0.098
compassion		0.639***		0.705***
		(0.077)		(0.092)
		0.244		0.268
impatience		-0.017		-0.014
		(0.012)		(0.014)
		-0.007		-0.005
risk aversion		0.060*		0.044

		(0.032)		(0.041)
		0.023		0.017
loss aversion		-0.018		-0.009
		(0.048)		(0.056)
		-0.007		-0.003
Constant	0.235***	-1.787***	0.274***	-2.064***
	(0.090)	(0.401)	(0.096)	(0.488)
Chi2	0.015	98.169***	0.232	78.776***
ll	-270.506	-214.636	-198.820	-152.171
pseudo-R2	0.000	0.207	0.001	0.235
N	401	401	295	295

Notes: Probit estimates (trustworthiness). Robust standard errors in parentheses. Marginal effects are reported below standard errors. See notes on Tables S1 and S2. * p<0.1, ** p<0.05, *** p<0.01

Appendix B. Experimental instructions

Appendix B1. Instructions for Study 1

[screenshots explanations and treatment manipulations in brackets]

Trustors

Screen 1

Welcome

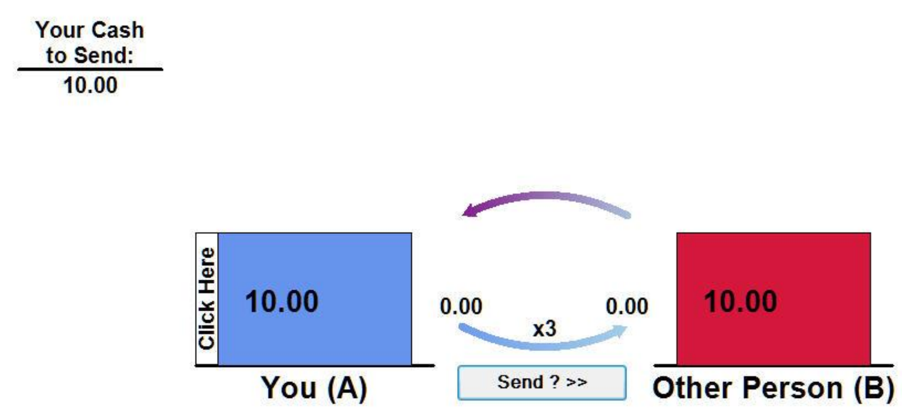
You have been selected at random as an individual A and will be paired with an individual B (also selected at random).

You (individual A) have received a $10 endowment which will be used for decision making in the experiment. Individual B has received a $10 endowment as well. Individual B will keep their initial endowment regardless of the decision either you or they make.

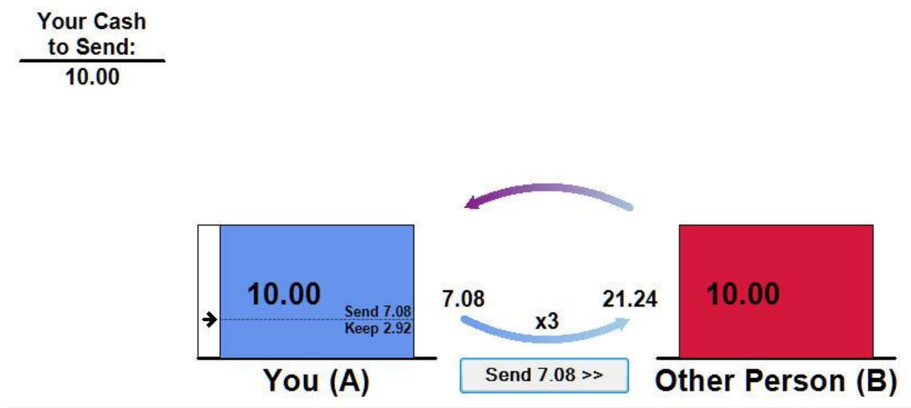
You (individual A) will make your decision first.

Individual B will make their decision after you.

Please familiarize yourself with the slider bar by clicking in the area that says "Click Here". It will be used in the decision making stage.



[After clicking on "Click Here". Example of practice decision]



In the experiment today you will interact with the other individual only once. You will not know the identity of the other individual. Similarly, the other individual will not know any details about you. Please do not talk to anyone during the experiment.

Screen 2

The Decision Task

You can transfer any proportion (between $0-$10) of your endowment to individual B.

Individual B will receive 3 times the amount that you transfer (1 becomes 3, 2 becomes 6, and so on.)

Individual B has to decide what proportion of the amount received to return back to you.

Your Profit =

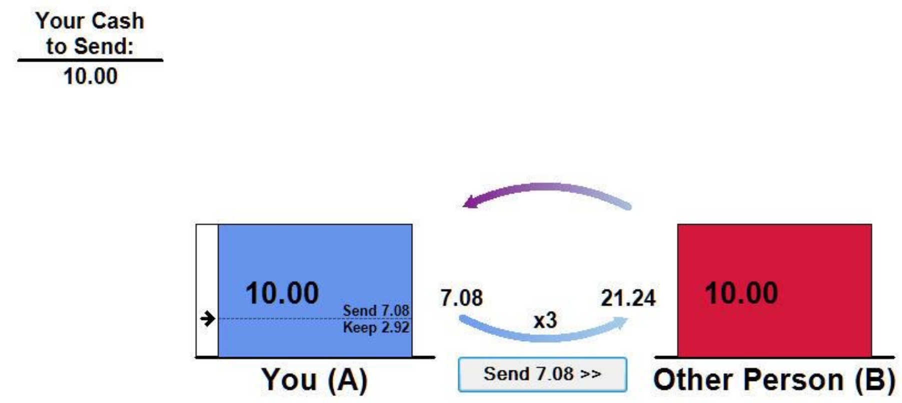
Endowment - (Amount you sent to individual B) + (Amount individual B returns to you)

You will be paid in cash at the end of the experiment.

Individual B can only make their decision **<u>after [before]</u>** 10 seconds has elapsed. That is, after being informed of the amount received, they can only make their final decision **<u>after [before]</u>** 10 seconds has elapsed.

If you have any questions, please raise your hand and a monitor will come by to answer them. If you are finished with the instructions, please click the Start button. The instructions will remain on your screen until everyone has clicked the Start button. We need *everyone* to click the Start button before we can begin.

[After clicking on "Start". Example of actual decision]



Trustees

Screen 1

Welcome

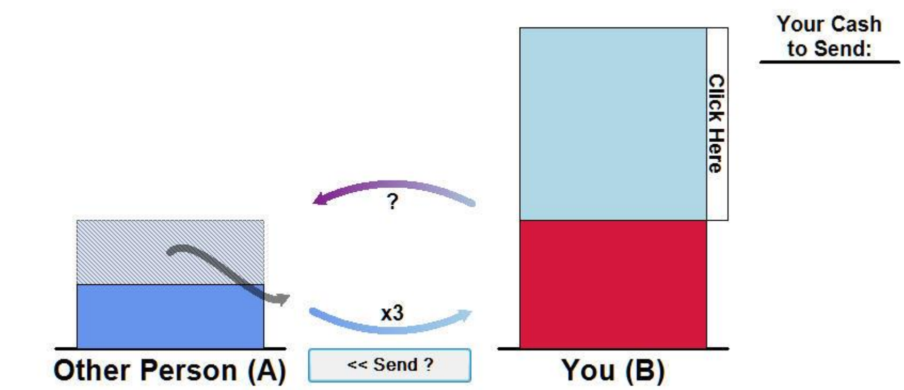
You have been selected at random as an individual B and will be paired with an individual A (also selected at random).

Individual A has received a $10 endowment which will be used for decision making in the experiment. You (individual B) have received a $10 endowment as well. You will keep your initial endowment regardless of the decision either you or individual A makes.

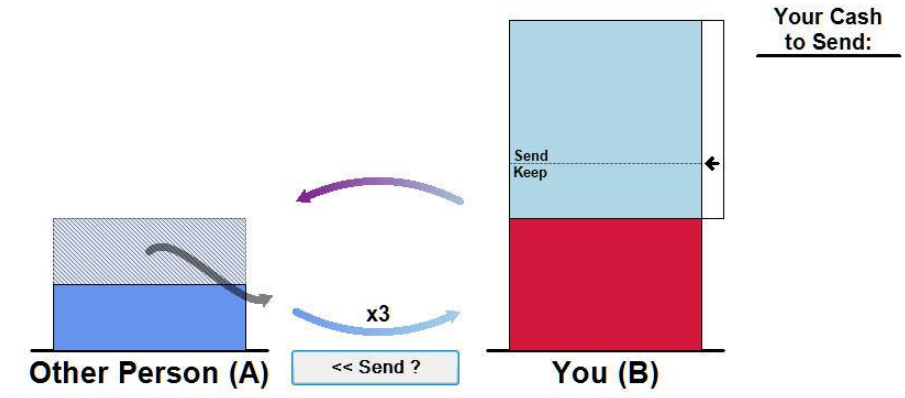
Individual A will make their decision first.

You (individual B) will make your decision after individual A.

Please familiarize yourself with the slider bar by clicking in the area that says "Click Here". It will be used in the decision making stage.



[After clicking on “Click Here”. Example of practice decision]



In the experiment today you will interact with the other individual only once. You will not know the identity of the other individual. Similarly, the other individual will not know any details about you. Please do not talk to anyone during the experiment.

Screen 2

The Decision Task

You (individual B) will receive a certain amount of money. This amount is 3 times the amount that individual A sent you.

Individual A can send you any proportion of their $10 endowment and knows that the amount sent is multiplied by 3.

You have to decide how much (between $0 and "the amount received") of this multiplied amount to return to individual A. You can only make your decision **after [before]** a 10 second timer has elapsed.

Your Profit =

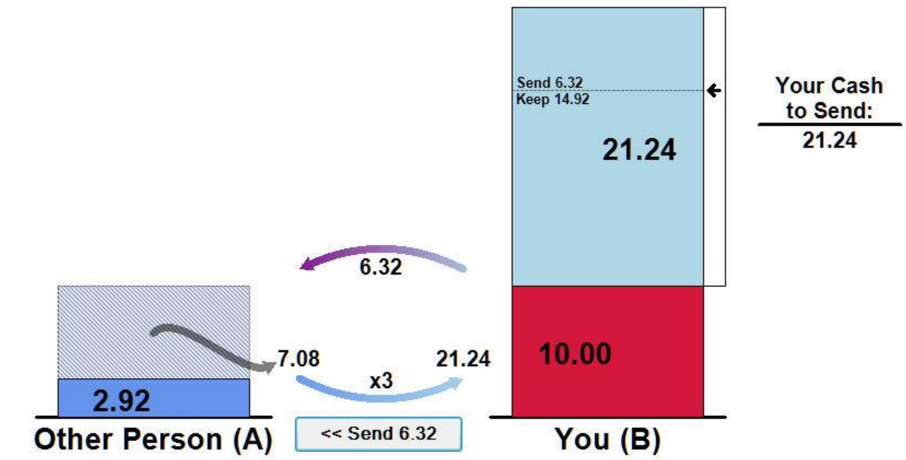
Endowment + (Multiplied amount individual A sent to you) - (Amount you returned to individual A).

You will be paid in cash at the end of the experiment.

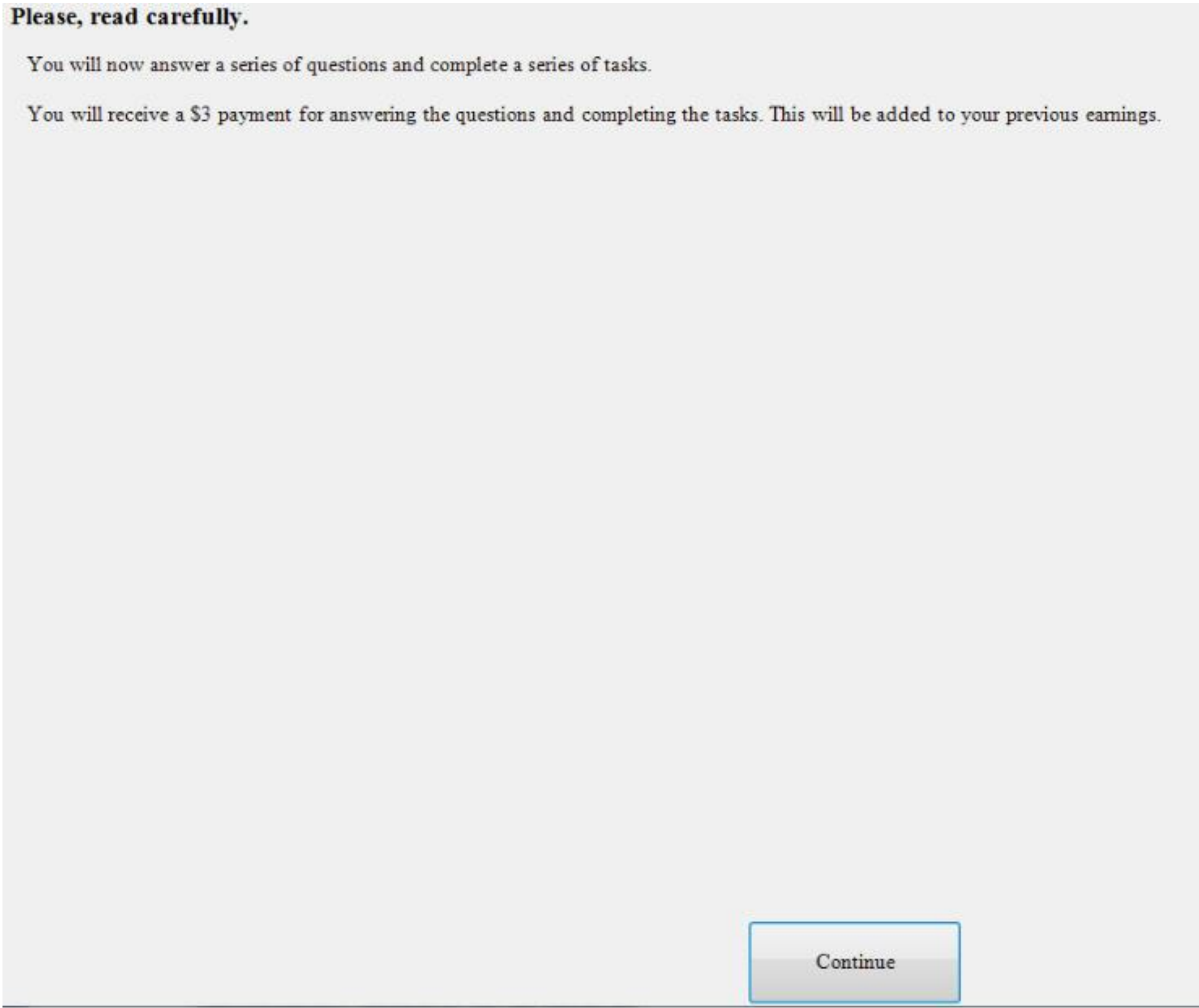
Please make your decision **after [before]** the 10 second timer has finished.

If you have any questions, please raise your hand and a monitor will come by to answer them. If you are finished with the instructions, please click the Start button. The instructions will remain on your screen until everyone has clicked the Start button. We need *everyone* to click the Start button before we can begin.

[After clicking on “Start”. Example of actual decision]



Questionnaire screenshots (identical for all participants)



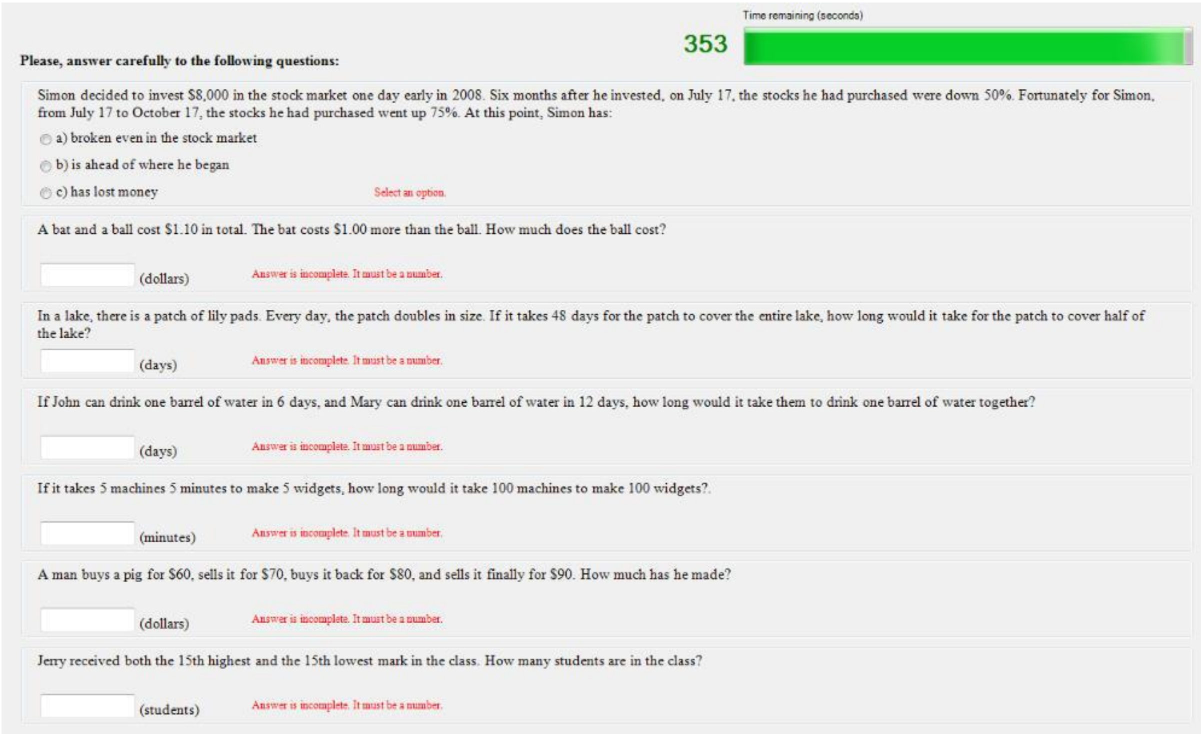
Please, read carefully.

You will now answer a series of questions and complete a series of tasks.

You will receive a $3 payment for answering the questions and completing the tasks. This will be added to your previous earnings.

Continue

Cognitive Reflection Test



Time remaining (seconds)

353

Please, answer carefully to the following questions:

Simon decided to invest $8,000 in the stock market one day early in 2008. Six months after he invested, on July 17, the stocks he had purchased were down 50%. Fortunately for Simon, from July 17 to October 17, the stocks he had purchased went up 75%. At this point, Simon has:

- a) broken even in the stock market
- b) is ahead of where he began
- c) has lost money

Select an option.

A bat and a ball cost $1.10 in total. The bat costs $1.00 more than the ball. How much does the ball cost?

(dollars) Answer is incomplete. It must be a number.

In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?

(days) Answer is incomplete. It must be a number.

If John can drink one barrel of water in 6 days, and Mary can drink one barrel of water in 12 days, how long would it take them to drink one barrel of water together?

(days) Answer is incomplete. It must be a number.

If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?.

(minutes) Answer is incomplete. It must be a number.

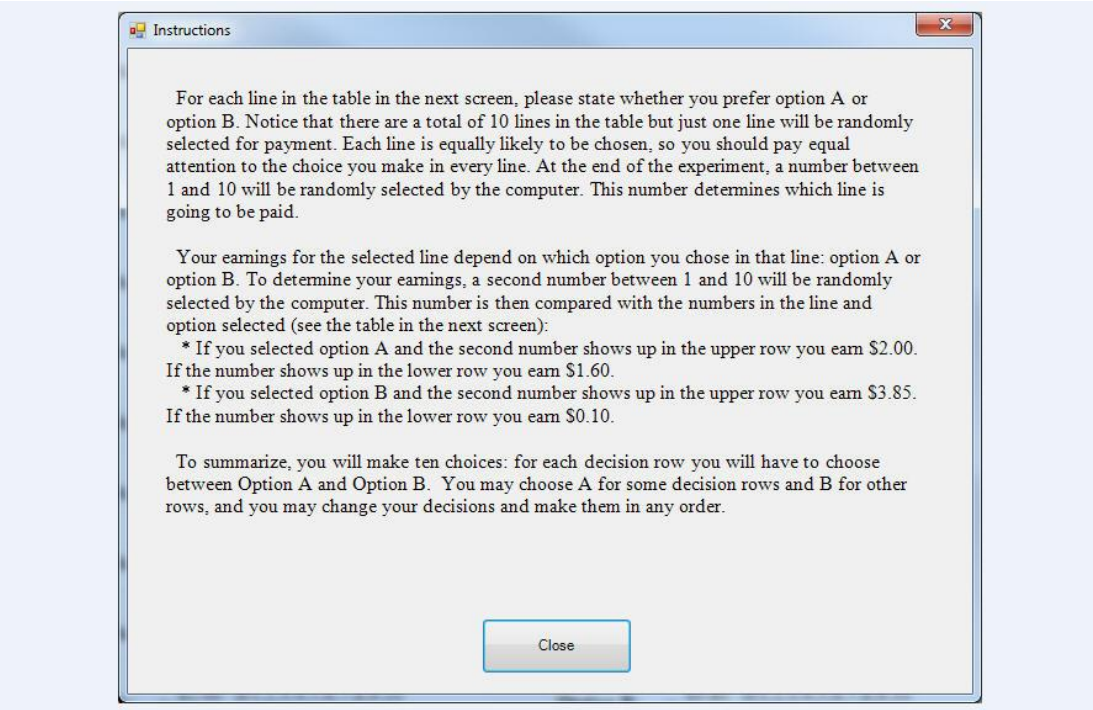
A man buys a pig for $60, sells it for $70, buys it back for $80, and sells it finally for $90. How much has he made?

(dollars) Answer is incomplete. It must be a number.

Jerry received both the 15th highest and the 15th lowest mark in the class. How many students are in the class?

(students) Answer is incomplete. It must be a number.

Risk preferences task



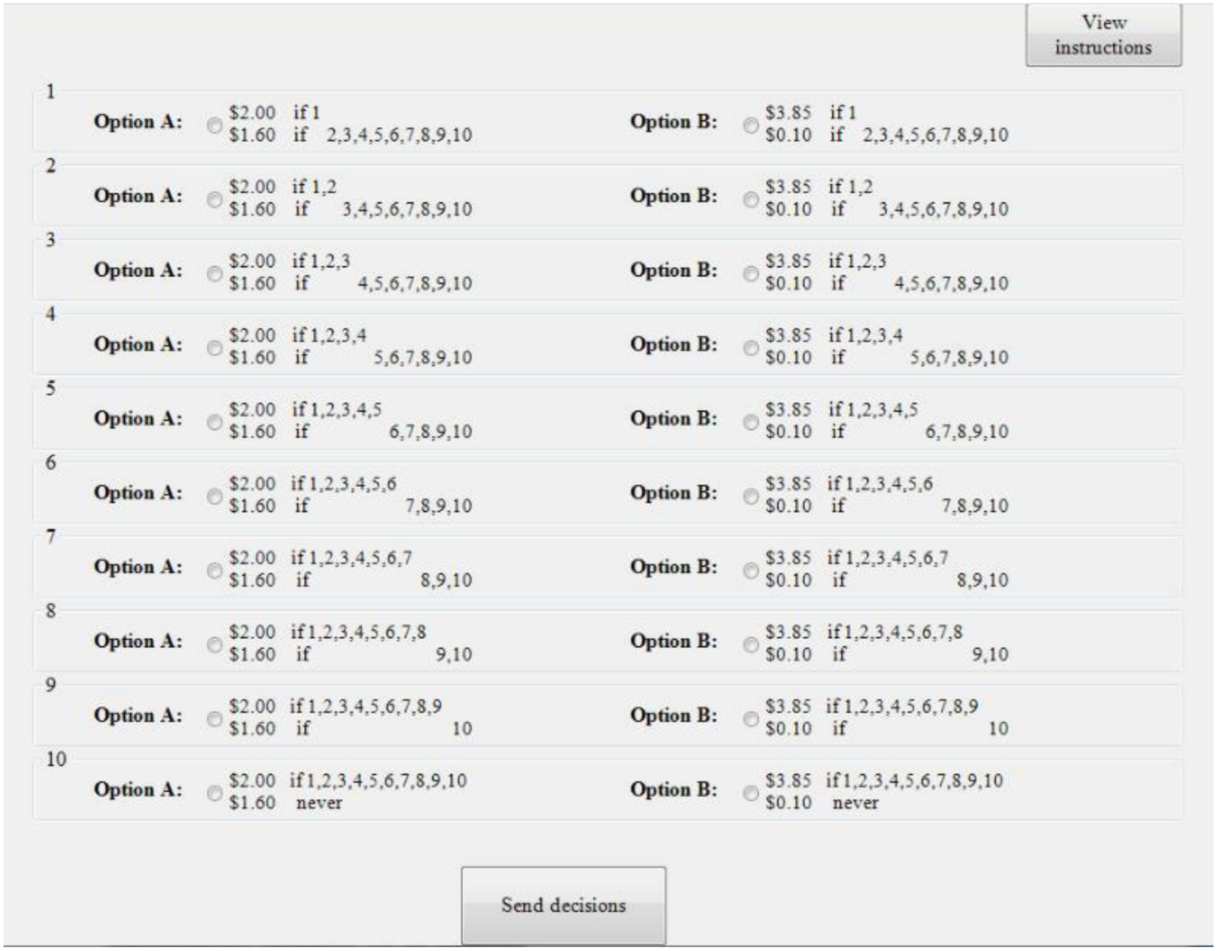
Instructions

For each line in the table in the next screen, please state whether you prefer option A or option B. Notice that there are a total of 10 lines in the table but just one line will be randomly selected for payment. Each line is equally likely to be chosen, so you should pay equal attention to the choice you make in every line. At the end of the experiment, a number between 1 and 10 will be randomly selected by the computer. This number determines which line is going to be paid.

Your earnings for the selected line depend on which option you chose in that line: option A or option B. To determine your earnings, a second number between 1 and 10 will be randomly selected by the computer. This number is then compared with the numbers in the line and option selected (see the table in the next screen):
 * If you selected option A and the second number shows up in the upper row you earn $2.00. If the number shows up in the lower row you earn $1.60.
 * If you selected option B and the second number shows up in the upper row you earn $3.85. If the number shows up in the lower row you earn $0.10.

To summarize, you will make ten choices: for each decision row you will have to choose between Option A and Option B. You may choose A for some decision rows and B for other rows, and you may change your decisions and make them in any order.

Close



View instructions

1	Option A:	$2.00 if 1 $1.60 if 2,3,4,5,6,7,8,9,10	Option B:	$3.85 if 1 $0.10 if 2,3,4,5,6,7,8,9,10
2	Option A:	$2.00 if 1,2 $1.60 if 3,4,5,6,7,8,9,10	Option B:	$3.85 if 1,2 $0.10 if 3,4,5,6,7,8,9,10
3	Option A:	$2.00 if 1,2,3 $1.60 if 4,5,6,7,8,9,10	Option B:	$3.85 if 1,2,3 $0.10 if 4,5,6,7,8,9,10
4	Option A:	$2.00 if 1,2,3,4 $1.60 if 5,6,7,8,9,10	Option B:	$3.85 if 1,2,3,4 $0.10 if 5,6,7,8,9,10
5	Option A:	$2.00 if 1,2,3,4,5 $1.60 if 6,7,8,9,10	Option B:	$3.85 if 1,2,3,4,5 $0.10 if 6,7,8,9,10
6	Option A:	$2.00 if 1,2,3,4,5,6 $1.60 if 7,8,9,10	Option B:	$3.85 if 1,2,3,4,5,6 $0.10 if 7,8,9,10
7	Option A:	$2.00 if 1,2,3,4,5,6,7 $1.60 if 8,9,10	Option B:	$3.85 if 1,2,3,4,5,6,7 $0.10 if 8,9,10
8	Option A:	$2.00 if 1,2,3,4,5,6,7,8 $1.60 if 9,10	Option B:	$3.85 if 1,2,3,4,5,6,7,8 $0.10 if 9,10
9	Option A:	$2.00 if 1,2,3,4,5,6,7,8,9 $1.60 if 10	Option B:	$3.85 if 1,2,3,4,5,6,7,8,9 $0.10 if 10
10	Option A:	$2.00 if 1,2,3,4,5,6,7,8,9,10 $1.60 never	Option B:	$3.85 if 1,2,3,4,5,6,7,8,9,10 $0.10 never

Send decisions

Time preferences task (block 1; block 2 is identical but delays are one month vs. three months)

Instructions

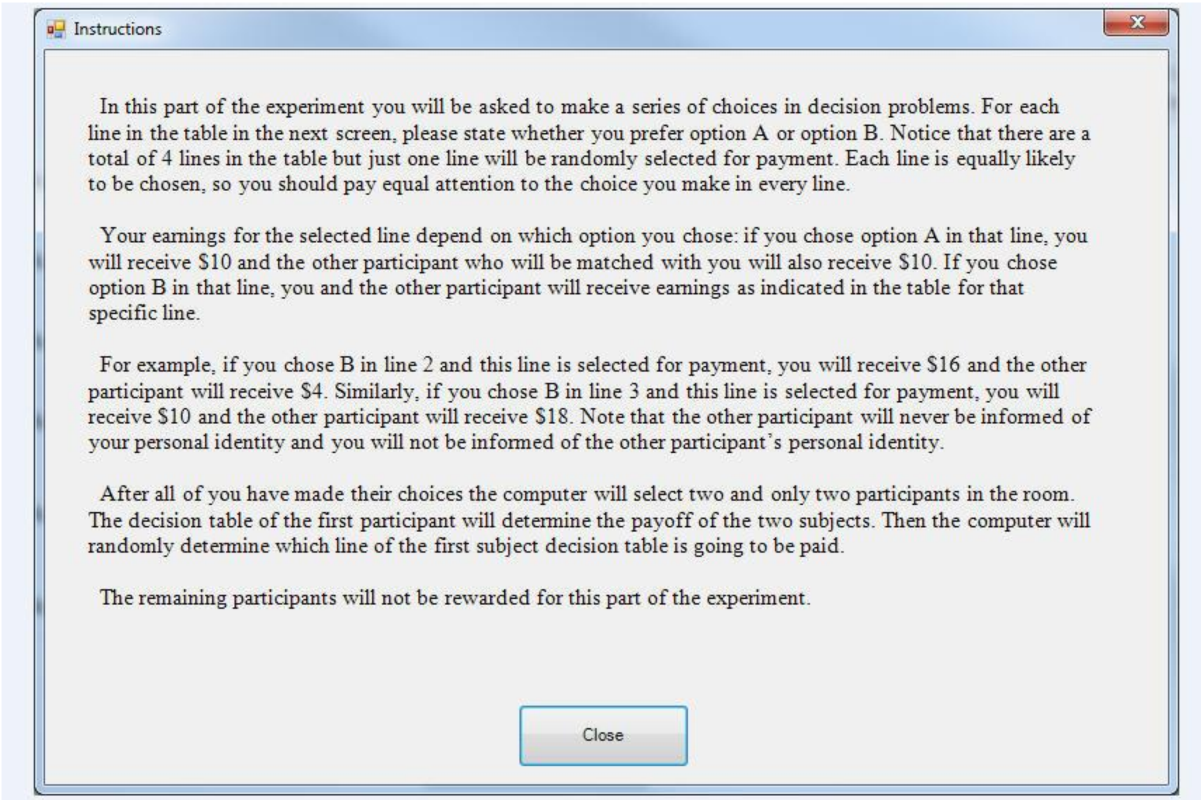
In this task, we ask you to think of an hypothetical situation (you will not be paid the corresponding amount) in which you have to choose between payments in different moments of time.

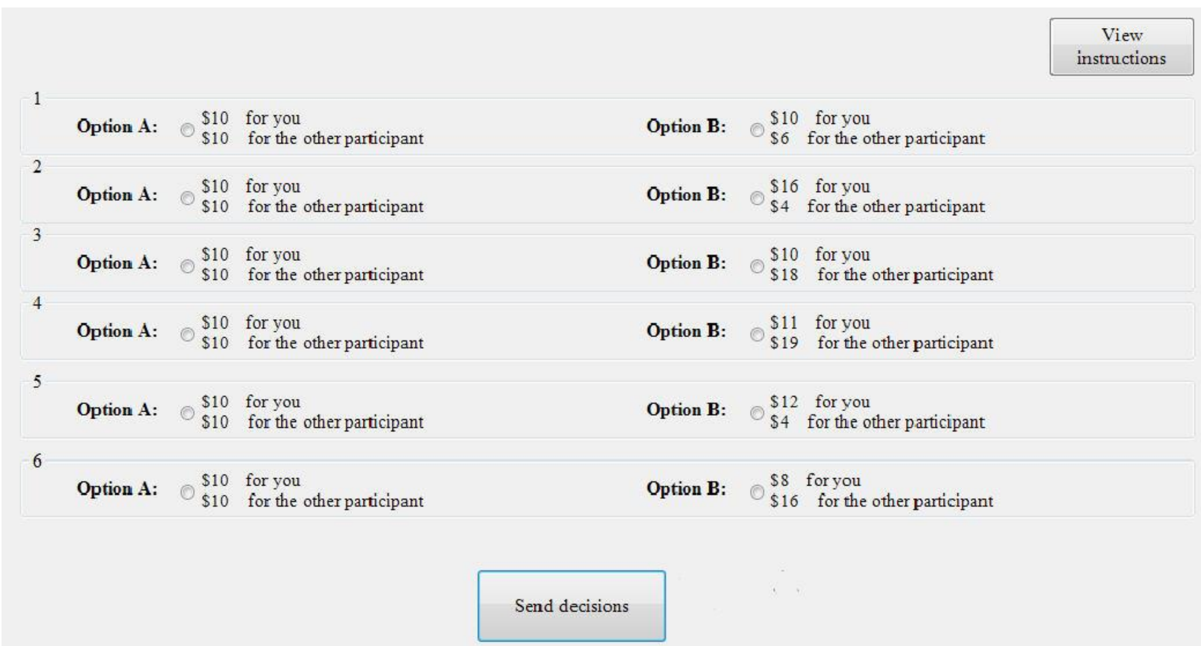
For each of the following pairs, you have to choose between one of two possible options.

Receive $30 today	Receive $30 in one month
Receive $30 today	Receive $32 in one month
Receive $30 today	Receive $34 in one month
Receive $30 today	Receive $36 in one month
Receive $30 today	Receive $38 in one month
Receive $30 today	Receive $40 in one month
Receive $30 today	Receive $42 in one month
Receive $30 today	Receive $44 in one month
Receive $30 today	Receive $46 in one month
Receive $30 today	Receive $48 in one month

Continue

Distributional social preferences task





Appendix B2. Instructions for Study 2

PLAYER A

In this task, there are two players, player A and player B. The computer has randomly assigned **you to be player A** and the *other player* you will be matched with will be player B.

You will have to choose between two options:

- If you choose option R then the task ends and you will earn 40¢ and the *other player* will earn 40¢.
- If you choose option L, then the *other player* will have to choose between two options:
    - If the *other player* chooses option Y, then you will earn 0¢ and the *other player* will earn 160¢.
    - If the *other player* chooses option X, then you will earn 80¢ and the *other player* will earn 80¢.

The individual assigned to be **PLAYER B** will have to choose between options Y and X **BEFORE/AFTER** a 10-second timer expires. In case player B does not comply with the time constraint, then both of you will earn 40¢.

In particular, player B will see the following:

{ [instructions for the other person, player B]

In this task, there are two players, player A and player B. The computer has randomly assigned **you to be player B** and the *other player* you will be matched with will be player A.

The other player (A) has to choose between two options:

- If the *other player* chooses option R then the task ends and you will earn 40¢ and the *other player* will earn 40¢.
- If the *other player* chooses option L, then you will have to choose between two options.

For the case that the player A who is matched with you chooses option L, in the next screen, please choose between option Y and option X **BEFORE/AFTER** the 10-second timer in your screen expires (the time that counts is when you click on the option chosen, not on the Continue button).

Note: If you fail to comply with the time constraint, both of you will earn 40¢.

[next screen]

Please choose BEFORE/AFTER the time expires:

- Option Y: you will earn 160¢ and the *other player* will earn 0¢.
- Option X: you will earn 80¢ and the *other player* will earn 80¢.

[10-second TIMER] }

Remember:

- If you choose option R then the task ends and you will earn 40¢ and the *other player* will earn 40¢.
- If you choose option L, then the *other player* will have to choose between two options:
  - If the *other player* chooses option Y, then you will earn 0¢ and the *other player* will earn 160¢.
  - If the *other player* chooses option X, then you will earn 80¢ and the *other player* will earn 80¢.

Now please make your decision:

- You are matched with a player B who has to choose **before/after** the 10-second timer expires:
  - you choose option R
  - you choose option L

<u>BELIEFS (common to both players)</u>

In this task, you will have to guess which percentage of participants choose each option in this experiment. If the difference between your guess and the true percentage is less than 5%, your guess will be considered “correct”. You will be asked for 2 guesses. You will earn 10c extra for each correct guess.

[next screen]

Remember:

Player A has to choose between two options:

- If player A chooses option R then the task ends and player A will earn 40¢ and player B will earn 40¢.
- If player A chooses option L, then player B will have to choose between two options:
  - If player B chooses option Y, then player A will earn 0¢ and player B will earn 160¢.
  - If player B chooses option X, then player A will earn 80¢ and player B will earn 80¢.

Considering that **player B's** have to choose **before/after** the 10-second timer expires

- Among all **PLAYER A's**, you have to guess the percentage of them who chose **OPTION L**.
  Your guess is:
  [slider from 0% to 100% in 5% intervals]
- Among all **PLAYER B's**, you have to guess the percentage of them who chose **OPTION X**.
  Your guess is:
  [slider from 0% to 100% in 5% intervals]

PLAYER B

In this task, there are two players, player A and player B. The computer has randomly assigned **you to be player B** and the *other player* you will be matched with will be player A.

The other player (A) has to choose between two options:

- If the *other player* chooses option R then the task ends and you will earn 40¢ and the *other player* will earn 40¢.
- If the *other player* chooses option L, then you will have to choose between two options.

For the case that the player A who is matched with you chooses option L, in the next screen, please choose between option Y and option X **BEFORE/AFTER** the 10-second timer in your screen expires (the time that counts is when you click on the option chosen, not on the Continue button).

Note: If you fail to comply with the time constraint, both of you will earn 40¢.

[next screen]

Please choose BEFORE/AFTER the time expires:

- Option Y: you will earn 160¢ and the *other player* will earn 0¢.
- Option X: you will earn 80¢ and the *other player* will earn 80¢.

[10-second TIMER]

Appendix B3. Instructions for Study 3

PLAYER A

In this task, there are two players, player A and player B. The computer has randomly assigned **you to be player A** and the *other player* you will be matched with will be player B.

You will have to choose between two options:

- If you choose option R then the task ends and you will earn 40¢ and the *other player* will earn 40¢.
- If you choose option L, then the *other player* will have to choose between two options:
    - If the *other player* chooses option Y, then you will earn 0¢ and the *other player* will earn 160¢.
    - If the *other player* chooses option X, then you will earn 80¢ and the *other player* will earn 80¢.

One half of all individuals assigned to be **player B** (selected randomly) will have to choose between options Y and X **before** a 10-second timer expires, while the other half of player Bs will have to choose between Y and X **after** a 10-second timer expires. In case player B does not comply with the time constraint assigned, then both of you will earn 40¢.

In particular, player B will see the following (they will see either "**BEFORE**" or "**AFTER**" below depending on the time constraint they are randomly assigned):

{ [instructions for the other person, player B]

In this task, there are two players, player A and player B. The computer has randomly assigned **you to be player B** and the *other player* you will be matched with will be player A.

The other player (A) has to choose between two options:

- If the *other player* chooses option R then the task ends and you will earn 40¢ and the *other player* will earn 40¢.
- If the *other player* chooses option L, then you will have to choose between two options.

For the case that the player A who is matched with you chooses option L, in the next screen, please choose between option Y and option X **BEFORE/AFTER** the 10-second timer in your screen expires (the time that counts is when you click on the option chosen, not on the Continue button).

Note: If you fail to comply with the time constraint, both of you will earn 40¢.

[next screen]

Please choose BEFORE/AFTER the time expires:

- Option Y: you will earn 160¢ and the *other player* will earn 0¢.
- Option X: you will earn 80¢ and the *other player* will earn 80¢.

[10-second TIMER] }

Since you will be randomly matched with one and only one player B, you will have to choose option R or L for the two possible cases (that is, for the two possible time constraints). Remember:

- If you choose option R then the task ends and you will earn 40¢ and the *other player* will earn 40¢.
- If you choose option L, then the *other player* will have to choose between two options:
  - If the *other player* chooses option Y, then you will earn 0¢ and the *other player* will earn 160¢.
  - If the *other player* chooses option X, then you will earn 80¢ and the *other player* will earn 80¢.

Now please make your decisions:

- If you are matched with a player B who has to choose **before** the 10-second timer expires:
  - you choose option R
  - you choose option L
- If you are matched with a player B who has to choose **after** the 10-second timer expires:
  - you choose option R
  - you choose option L

<u>BELIEFS (common to both players)</u>

In this task, you will have to guess which percentage of participants choose each option in this experiment. If the difference between your guess and the true percentage is less than 5%, your guess will be considered "correct". You will be asked for 4 guesses. You will earn 10c extra for each correct guess.

[next screen]

Remember:

Player A has to choose between two options:

- If player A chooses option R then the task ends and player A will earn 40¢ and player B will earn 40¢.
- If player A chooses option L, then player B will have to choose between two options:
    - If player B chooses option Y, then player A will earn 0¢ and player B will earn 160¢.
    - If player B chooses option X, then player A will earn 80¢ and player B will earn 80¢.

Among all **player A** individuals, who have to make a choice for two possible time constraints of player B, you have to guess the percentage of them who choose **option L.**

- If player B has to choose **before** the 10-second timer expires, you guess that the percentage of **player A who choose option L** is:
  [slider from 0% to 100% in 5% intervals]
- If player B has to choose **after** the 10-second timer expires, you guess that the percentage of **player A who choose option L** is:
  [slider from 0% to 100% in 5% intervals]

Among all **player B** individuals who choose under each time constraint, you have to guess the percentage of them who choose **option X.**

- If player B have to choose **before** the 10-second timer expires, you guess that the percentage of **player B who choose option X** is:
  [slider from 0% to 100% in 5% intervals]
- If player B have to choose **after** the 10-second timer expires, you guess that the percentage of **player B who choose option X** is:
  [slider from 0% to 100% in 5% intervals]

PLAYER B

In this task, there are two players, player A and player B. The computer has randomly assigned **you to be player B** and the *other player* you will be matched with will be player A.

The other player (A) has to choose between two options:

- If the *other player* chooses option R then the task ends and you will earn 40¢ and the *other player* will earn 40¢.
- If the *other player* chooses option L, then you will have to choose between two options.

For the case that the player A who is matched with you chooses option L, in the next screen, please choose between option Y and option X **BEFORE/AFTER** the 10-second timer in your screen expires (the time that counts is when you click on the option chosen, not on the Continue button).

Note: If you fail to comply with the time constraint, both of you will earn 40¢.

[next screen]

Please choose BEFORE/AFTER the time expires:

  - Option Y: you will earn 160¢ and the *other player* will earn 0¢.
  - Option X: you will earn 80¢ and the *other player* will earn 80¢.

[10-second TIMER]