

PAY ATTENTION OR BE PAID FOR ATTENTION? IMPACT OF INCENTIVES ON ALLOCATION OF ATTENTION

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Willingness to pay attention for others: Do social preferences predict attentional contribution?

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Abstract

We investigate the relation between elicited social preferences and attentional contribution in a pro-social environment. For this purpose, we propose a new experiment where subjects invest real attention to reduce uncertainty in a two-alternative forced-choice task. We compare three different incentivized environments where subject's accuracy do not impact on her or other subjects' payoffs (T0), impact her payoff only (Self-Interested treatment T1) and impact other subjects' payoff only (Pro-social treatment T2). Our results show that both incentives (T1 and T2) increase the amount of allocated attention, besides the efficiency of the allocation process and regardless of subjects' intrinsic motivation. We elicited subjects' social preferences and find that they cannot explain attentional contribution in pro-social environment (T2). This latter result, in contradiction with economic theory, provides new insight about social-preferences and attention allocation.

Keywords: Allocation of attention; Social Preferences; Incentives; Public Good Game.

JEL Code: A13, C9, H41, D8, 2346 *Word Count:* 3569

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1 Introduction

An individual can choose to deposit waste in dustbin A (which means it cannot be recycled) or dustbin B (where it will be recycled). Disposing of the waste in the dustbin A increases the waste treatment cost whereas recycling the waste in dustbin B is of value to the community. How can we model and predict which dustbin will be chosen by the individual? The most intuitive framework to investigate these issues is the Public Good Game (henceforth PGG) ([Samuelson, 1954](#)). In the PGG players choose a level of contribution that benefits all the players. Since the contribution is costly for the individual, the Nash equilibrium predicts that a rational self-interested player will not contribute based on an optimal cost-benefit trade-off. However, the total welfare is maximized if the whole community contributes (Pareto optimum). This tension between the Nash equilibrium and the Pareto optimum describes a social dilemma. Experimental results show that individuals do not behave as own payoff maximizers ([Frey and Meier, 2004](#); [Chaudhuri, 2011](#)). To explain their larger contributions, economists have introduced the notion of “social preferences” ([Rabin, 1993](#); [Charness and Rabin, 2002](#); [Fehr and Fischbacher, 2002](#); [Bénabou and Tirole, 2006](#); [Fischbacher and Gächter, 2010](#); [Villeval, 2012](#)). Social preferences are represented by individual’s utility as a function of the outcome of the other players. As a result, individuals with “pro-social” preferences are willing to reduce their own monetary reward to increase the payoff of strangers. Expressing such preferences shifts the contributions toward the Pareto optimum. In the example above, the contribution to the PGG is the amount of attention paid to reach decision. Paying attention is associated to cognitive effort, or an opportunity cost. As a benefit, it increases the probability of making a distinction between the two dustbins, and thus decreasing the waste treatment costs. Theoretically, the level of attention paid should be the result of an optimal trade-off according to the individual’s social preferences and attentional process. If the cost and benefit structures of the contribution are given, the optimal decision will be straightforward and will reveal the individual’s social preferences. This applies to most PGG experiments where contributions are an “induced effort”: subjects explicitly choose a level of monetary contribution common knowledge about the cost and benefit functions.¹ However, obviously this does not

¹ Several studies investigate PGG in the context of a real effort task. [Lezzi et al. \(2015\)](#) show the differences in behaviors between three real effort tasks and one induced effort. [Brüggen and Strobel \(2007\)](#) and [Dutcher et al. \(2015\)](#) explain that these differences are due to the unknowable effort cost function.

apply to an attentional contribution.

The study of attention as an economic concept has gained importance since the late 1990s (Festré and Garrouste, 2015a). To express their preferences, individuals need to pay attention to investigate alternatives’ possible outcomes. Paying attention reduces the uncertainty of the choice (Sims, 2003). However, since the available amount of attention is limited, an attention allocation problem appears: The individual may not consider all the available alternatives, and may not examine all the considered alternatives’ characteristics (Manzini and Mariotti, 2014; Masatlioglu et al., 2012; Li et al., 2016; Caplin et al., 2011). An optimal allocation of attention suggests an infinite regress problem since each possible allocation of attention could be viewed as an alternative, and as requiring some attentional resources to evaluate its associated outcomes (Lipman, 1991). Thus, the interaction with social preferences is not straightforward: if the individual chooses the dustbin A , how can we distinguish between an expression of her preferences against “recycling” (as if guided by destructive goals), and an unconscious insufficient level of attention? To what extent is the expression of social preferences affected by the particular cost and benefit structure of the attentional contribution? This is an important issue when we consider that many pro-social behaviors require a contribution in the form of attention rather than a salient or a monetary effort with a known cost function. The best way to investigate the peculiar cost and benefit structure of an attentional contribution is in an experiment where subjects invest real attention, in a setting similar to the dustbin example described above. In our experiment, subjects pay attention in order to reduce uncertainty in a two-alternatives forced-choice task, by choosing where to sort an item according to its composition. Our design offers the advantage that it allows us to measure both sides of an attention allocation process: the amount of *attentional resources* allocated in the decision measured by the Response Time (RT), and the amount of information properly processed measured by the Error Rate (ER). We provide three treatments representing different incentive schemes. A baseline with no monetary incentives (T0), a treatment where the subject’s accuracy increases her own payoff (T1), and a treatment where subject’s accuracy increases others’ payoffs (T2). A social preferences measure (social value orientation, SVO) is introduced prior to the task. According to economic theory, incentives should increase the attention allocation. In particular, in the pro-social treatment (T2), the pro-social individuals who revealed high social preferences should pay more attention than individualistic subjects. Experimental results show that monetary incentives increase the amount and the efficiency of the attention

paid by the subjects without interaction. These results prove that subjects’ attention respond to incentives in our task. Furthermore, contrary to standard PGG results (Balliet et al., 2009), we show that monetary elicited social preferences do not explain the subject’s attention contribution.

The paper is organized as follows. The experimental design and the protocol are described in [section 2](#); [section 3](#) presents the results that are discussed in [section 4](#).

2 Experimental design

The experiment described in [subsection 2.1](#) is similar to the introductory example (throwing waste into the correct or over the wrong dustbin). Subjects have an endowment of attentional resources represented by an amount of 45 minutes that they can devote to performance of the task or an alternative free activity. Paying attention to the task decreases the inherent uncertainty in the choice but comes with an opportunity cost since the alternative activity may be more enjoyable. We do not control the subjects’ attentional process by specifying any cost or benefit structure of attentional provision. However, we are able to measure the quantity of attention invested in the task with RT and the resulting outcome of the attentional process with ER. The attentional process can be considered a production process in which the individual invests *attentional resources* – as an input – to achieve an *effective* level of attention – as an output. The attentional resources quantify the cognitive resources invested by the individual, while the output quantifies the amount of information the individual is able to consider as a result of the process (Prinzmetal et al., 2005; Borie et al., 2017). By varying among treatments the incentives (see [subsection 2.2](#)), we can investigate the effect on the allocation of attention. Then, by measuring social preferences, intrinsic motivation, and risk aversion (see [subsection 2.3](#)), we can estimate their interaction with incentives. The protocol is described in [subsection 2.4](#).

2.1 The main task

Before beginning the task, subjects are matched randomly in anonymous groups of three. Players have a time endowment of 45 minutes to complete a hundred trials-task. They can allocate this time according to what they want, with no going back and knowing that once they complete the hundred trials, they are free to surf the internet until time is up. In each trial, players have to must place a *waste* (called

“Item” in the instructions) in a white or a black *dustbin* (“Box” in the instruction). The items are composed of 49 balls. Each ball has half probability to be black or white. Players know that the color of the majority of the item balls is indicative of the color of the correct box: thus, an item with a majority of white (black) balls should be put into the white (black) box. Trials follow on each other with no waiting time. Once a subject has classified an item, the next one appears but remains masked on the screen until the subject clicks on it.² When the item and the two boxes are revealed, the subject selects one box by clicking on it (see [Figure 1](#)).

[[Figure 1](#) ABOUT HERE]

Subjects invest time and attention to partially or fully reduce the uncertainty (e.g. based on their intuition, by counting x times all the balls, by counting a subset of the balls, etc.). The time spent on the task has an opportunity cost for participants: once they complete the hundred trials, (and after answering a motivation questionnaire, see [subsection 2.3](#)) they are free to surf the internet³. Each correct answer (properly recycled Item) earns the subject X ECU and earns each of the other two group members Y ECU. Different values of X and Y are implemented depending on the treatment, as described in the following section.

2.2 The treatments

We propose three treatments with different monetary incentives for accuracy: absence of incentive - the baseline (T0); a self-interest incentive (T1), and a pro-social incentive (T2). [Table 1](#) reports the characteristics of each one expressed in ECUs. Instructions are identical across treatments, only the values of X and Y differ.⁴

[[Table 1](#) ABOUT HERE]

² The masking between Items limits the dependence among the trials in two ways: 1) it prevents retinal persistence; 2) it forces subjects to relocate the mouse at the center of the screen which reduces subjects’ bias towards selecting the same box in consecutive trials. The average time taken to click on a new item (*Timeb*) controls for heterogeneity in subjects’ natural speed in the experiment.

³ This is not the first experiment to use time rather than money as a reward: [Noussair and Stoop \(2015\)](#) propose a dictator, an ultimatum, and a trustgame experiment where subjects earn the right to leave the laboratory earlier. Also, [Corgnet et al. \(2015\)](#) propose an alternative free activity that the agent can perform instead of spending time on the task allocated by the principal.

⁴ Subjects know that the values of X and Y are the same for all the players in their group

The baseline treatment, with no monetary incentives ($T0$: $X = 0$ and $Y = 0$) allows us to know how subjects allocate their attention between our task and the free-time, with no involvement of a monetary aspect. Thus, it reveals the pure effect of the intrinsic motivation to complete the task. Subjects who prefer surfing the internet rather than participating in the task should complete the task as quickly as possible, and process the minimum amount of information. Thus, for these individuals the ER may be close to the pure hazard (50%). In the case of the self-interest monetary incentive ($T1$: $X = 6$ and $Y = 0$), we obtain the direct impact of the monetary incentive on the allocation of attention: compared to $T0$, we obtain how much attention subjects are willing to pay to increase their expected payoff. Monetary incentives should increase both the amount of attention subjects pay to the task and the effective level of their attention. The pro-social incentive has a PGG-like payment structure since a correct decision from a player benefits the other two members of the group ($T2$: $X = 0$ and $Y = 3$), and differs only by the nature of the contribution (in the form of attention rather than money or some other effort). Therefore, social preferences should predict behavior in such environments. The incentives in this case ($T2$) are similar to $T0$ for pure-selfish players, and similar to $T1$ for players indifferent between their own and their group's outcome. The way we measure social preference and other controls is described below.

2.3 Controls

2.3.1 Social preferences (SVO)

As discussed above, the difference in observed behaviors between $T2$ and other treatments should be explained by social preferences. The more pro-social the individual, the more similar will be her behaviors in $T1$ and $T2$. The more individualistic the individual, the more similar will be her behaviors in $T0$ and $T2$. We investigate the trade-off between self and collective interest using Social Values Orientation measure, based on [Messick and McClintock \(1968\)](#) and [McClintock \(1972\)](#) using [Murphy et al. \(2011\)](#).⁵ It generates a *svo_angle* which represents the marginal rate of substitution between own and anonymous stranger's earnings.⁶ This measure provides

⁵ We used 15 successive choices among several distributions of outcome, for a player with another anonymous player chosen randomly by the computer

⁶ E.g. individuals with *svo_angle* < 0 are willing to reduce own earnings to reduce the earnings of others; individuals with *svo_angle* $= 0$ are not willing to reduce own earnings for others, and individuals with *svo_angle* $= 45$ are willing to reduce their own earnings by 1 in order to increase others' earnings by 1.

four *svo_profiles* according to the closest extreme behavior: “*altruistic*” (maximizing others’ outcome); “*prosocial*” (maximizing the shared outcome); “*individualistic*” (maximizing own outcome); and “*competitor*” (maximizing the difference between own and others’ outcome).⁷

2.3.2 Intrinsic Motivation (IMI)

The attention subjects pay in T0 should reveal their level of intrinsic motivation to complete the task. Intrinsically motivated individuals engage in a task only for the pleasure and satisfaction of doing or competing it. However, intrinsic motivation and incentives may interact and generate crowding out effects on voluntary contributions⁸ (Bénabou and Tirole, 2006; Ariely et al., 2009; Gneezy et al., 2011; Frey and Oberholzer-Gee, 1997; Frey and Jegen, 2001). To be able to distinguish between direct and indirect (through motivation) effects of incentives on the attention allocation, we measure the subjects’ intrinsic motivation with Deci and Ryan’s (2003) Intrinsic Motivation Inventory (IMI). IMI is based on Deci et al.’s (1982) Self Determination Theory of, is a measure of intrinsic motivation and self-regulation that is popular in Cognitive Psychology and in Industrial and Organizational Psychology (Ryan et al., 1983). It is based on a self-reporting questionnaire about the feelings the player experienced during the task.⁹

2.3.3 Risk aversion (HL)

In our task, as subjects allocate attention to reduce uncertainty, Risk-aversion may affect the willingness to pay attention. We employ the standard Holt and Laury (2002) (HL) risk-aversion elicitation method. Only one decision was randomly selected for the payment.

2.4 Protocol

The average duration of the experimental sessions was one hour. The sessions were conducted as follows: 1) Subjects enter the room and the experimenter reads the

⁷ In our study we divided the population into two groups: Pro-social and individualists. Only one of our participants fitted the competitive profile and he was grouped with the individualists.

⁸ See Festré and Garrouste (2015b) for a review of crowding out in economics and psychology

⁹ It includes 31 Lickert-like items split across 5 dimensions: enjoyment/interest, perceived competence, effort, pressure/tension, relatedness to the group. We administrated the complete IMI questionnaire to the participants, but we refer mainly to the interest/enjoyment subscale in the data analysis since this is the only subscale that assesses intrinsic motivation.

general instructions out loud in French; 2) SVO preferences test; 3) Risk-aversion test; 4) subjects are informed about which treatment they are assigned to for the main task; 5) they play two practice rounds, with a trial example and questions related to the payoff structure, and provision of a help window to allow them to correct mistakes; 6) the 45 minute countdown begins and subjects start the 100 trials; 7) after completing the 100 trials, subjects complete the IMI questionnaire with a submission time of a minimum of 3 minutes ,to avoid random answers; 8) subjects spend the remaining time surfing the internet; 9) subjects are informed about the results of each step; 10) individuals are paid before completing a final questionnaire.

During the whole experiment, written instructions were available, and reminders were provided on computer screens. We measured social and risk preferences before the main task so that the experiment would finish with the “free-time” since we had no control over this last step. In order not to interfere with the task, the results of each step were given only at the end of the experiment. We tried to avoid interference from the social and risk preferences measurement by giving players’ treatment information (X and Y value) only after these measures had been completed. Subjects were provided with headphones during the experiment to avoid communication among them, and to allow them to watch videos or listen to music during the free time. The instructions concluded by providing a non-exhaustive list of websites (including social networks, news, games, blogs, music, videos). Subjects had access to calculators if they wanted to compute the expected payoff during HL test.

The experiment included a total of 114 subjects¹⁰ and 7 sessions (15 or 18 subjects per session) and was held in the “Laboratoire d’Économie Expérimentale de Nice” (LEEN) in “Université Cote d’Azur” in April and May 2016. The subjects were aged between 17 and 55 years (mean 22.53, SD 5.99). All were recruited using ORSEE (Greiner, 2015), and the experiment was implemented in zTree v3.5.1 (Fischbacher, 2007). Participants were mainly undergraduate students from multiple disciplines (economics, management, science, literature). All participants received a show-up fee of 5 euros. The experimental currency units were converted into cash at the rate 100 ECUs = 1 euro, and the average payment was 13.3 euros.

¹⁰ We excluded one participant from the analysis. She did not understand the instructions, took twice as long as the other participants at the training levels, and showed a significantly higher ER than if she were playing randomly.

3 Results

Since subjects were ignorant of the actions of the other subjects until the end of the experiment, their decisions can be treated as independent observations. We analyze the data at both the subject level ($n_s = 113$, aggregating for each subject the 100 trials), and the trial level ($n_t = 11300$, clustered by subject). Our two dependent variables are the subjects' RT and ER.

3.1 Subject level

Table 2 summarizes participants' aggregated variables. We observe an average RT of 9.8 seconds and an ER of 8%.

[**Table 2** ABOUT HERE]

H1: Do monetary incentives increase attention ?

Figure 2 shows subjects' RT (left) and ER (right) for each treatment. We find a significant difference for both RT (F-test : $p\text{-value} = 0.0007$) and ER (F-test : $p\text{-value} = 0.0089$). The average RT value is larger for T1 (11.98)(one-sided t-test: $p\text{-value} = 0.0000$) than T2 (9.72), which is larger (one-sided t-test: $p\text{-value} = 0.0448$) than T0 (7.94). Moreover, we observe a higher ER for T0 (12.25 %) compared to T2 (7.28%)(one-sided t-test: $p\text{-value} = 0.0419$) which in turn, is higher than for T1 (4.64%)(one-sided t-test: $p\text{-value} = 0.0663$). We can conclude that monetary incentives increase the attention allocated to the task and also its effectiveness.

[**Figure 2** ABOUT HERE]

H2: Do monetary incentives affect intrinsic motivation ?

Figure 3 shows participants' self reported level of interest according to the treatment. In our task, we found no evidence of incentives affecting intrinsic motivation (Fisher test : $p\text{-value} = 0.774$). This allows us to interpret the potential effect of incentives on attention as a direct effect, with no mediation of intrinsic motivation.

[**Figure 3** ABOUT HERE]

H3: Do social preferences explain contribution in our pro-social environment?

Surprisingly, SVO elicited social preferences do not to explain the difference in attentional contribution in T2. **Figure 4** shows the RT and the ER in T2 for prosocial ($n=17$) and individualist ($n=22$) subjects. The behavior of the two groups is not significantly different (RT : $ttest, p - value = 0.76$; ER : $ttest, p - value = 0.60$).

[**Figure 4** ABOUT HERE]

3.2 Trial level

We regress the *RT* using an ordinary least squares (OLS) model, and we regress the *ER* using a logistic regression.¹¹ Both regressions are clustered by subject. We controlled for trial complexity – measured by the absolute difference between the numbers of black and white balls – and learning. Regression are reported in **Table 3**.

[**Table 3** ABOUT HERE]

H1-b: Support for the impact of incentives on RT and ER

Table 3 supports **subsection 3.1** results. We found that even when controlling for RT, ER is lower for the incentivized treatments compared to the baseline. This result suggests that the attention allocation process is more efficient when it is incentivized.

H4: Is attention allocation constant across trials ?

In each treatment, the attention spent on the task decreased across trials and then increased for the last third of the task (**Figure 5**). Attention spent on the task is a quadratic function of the number of the trials.¹²

[**Figure 5** ABOUT HERE]

H5: Do intrinsically motivated subjects invest more attention ?

We found that more interested participants do not invest more time in the task and complete it more quickly. We interpret this as meaning that the task is more interesting if accuracy is traded for speed; counting each of the balls results in slower more boring repetitive task. Regardless of treatments, we found no effect of

¹¹ [Matejka and McKay \(2014\)](#) shows how limited attention induces the choice probability to follow a logit formula

¹² $p - value = 0.024$ for the first and $p - value = 0.046$ for the second order coefficient. See **Table 3**, The trial marginal effect becomes positive for the 61st trial

motivation on the effectiveness of attention. **H3-b: No support for the impact of social preferences in T2:**

In [Table 4](#) we restrict the regression on T2 to test whether social preferences have an impact on the amount or efficiency of attention during the task. As in [Figure 3.1](#), we found no evidence of an effect of monetary elicited social preferences on the amount of attention invested in the task. In contrast, after controlling for RT, we found that in this environment, more interested players were more efficient and made fewer errors.

[[Table 4](#) ABOUT HERE]

4 Discussion

In everyday experience, numerous pro-social behaviors imply investment in attention rather than salient effort provision with known cost and benefits structures. In this paper, we examine how standard PGG experimental results obtained with induced effort, could be applied to attentional social dilemma. To the best of our knowledge, there are no other studies dedicated to understand whether paying attention is equivalent to monetary contribution in a PGG.

To address this question, we proposed a new experiment in which participants allocate a real attentional endowment of 45 minutes between reducing the uncertainty in a two-alternative forced-choices task, and enjoying an alternative activity (surfing the internet). Our design could be adapted to investigate a broader range of questions involving attention. It provides the following advantages. Our task reproduces the cost and the benefit structure of an attentional process, and enables measurement of the amount of attentional resources allocated (through RT) and the outcome of such investment (through ER) for each decision. These two measures reveal the input and the output of the individual attentional process rather than impose a particular *ad hoc* structure. From a practical perspective, the design is easily understandable by subjects, and allows the researcher to gather numerous decisions for each participant, based on an average RT of less than 10 seconds, increasing statistical power. In this framework, players were asked to complete one of three conditions which vary only by incentive manipulation: a baseline without incentives (T0), a self-interest incentive (T1), and pro-social incentives as in a PGG-like environment (T2). As predicted, monetary incentives increase both allocated and effective attention, and subjects react more to self-interest incentives than to

pro-social incentives. Furthermore, the absence of interference with intrinsic motivation avoids any crowding out effect and allows the researcher to interpret the responses to incentives as direct effects. These results show the appropriateness of our design to investigate the expression of social preference in T2. According to the theory, pro-social players should pay more attention than individualists in such an environment.

However, in our study subjects qualified as pro-socials based on the SVO test, although being the most willing to reduce their monetary earnings in order to increase others' payoffs, they are not more willing to pay attention in order to benefit others. This is an interesting result. It provides evidence that revealed social preferences depend on the nature of their elicitation, with no monotonous relation between attention and monetary elicitation. Individuals may reveal pro-social preferences in terms of monetary or effort provision but not in term of attention. This might be explained by the peculiar nature of attention compared to other resources: until individuals pay enough attention, they ignore how their decisions impact on others' welfare. Indeed, [Grossman and van der Weele \(2016\)](#); [Dana et al. \(2007\)](#) show that pro-social individuals who choose a fair option in a complete information game, may prefer willfully to remain ignorant in order to justify their selfish behavior. Thus, since remaining inattentive prevents the expression of social preferences, we cannot exclude that agents may strategically remain ignorant if they prefer that their acts are perceived - by others and/or self - as inattentive rather than selfish. This highlights the need for more research to investigate the role of attention in social dilemma, and requires a deeper understanding of both the role of and interaction between social preferences and the attentional process.

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A Figures and tables

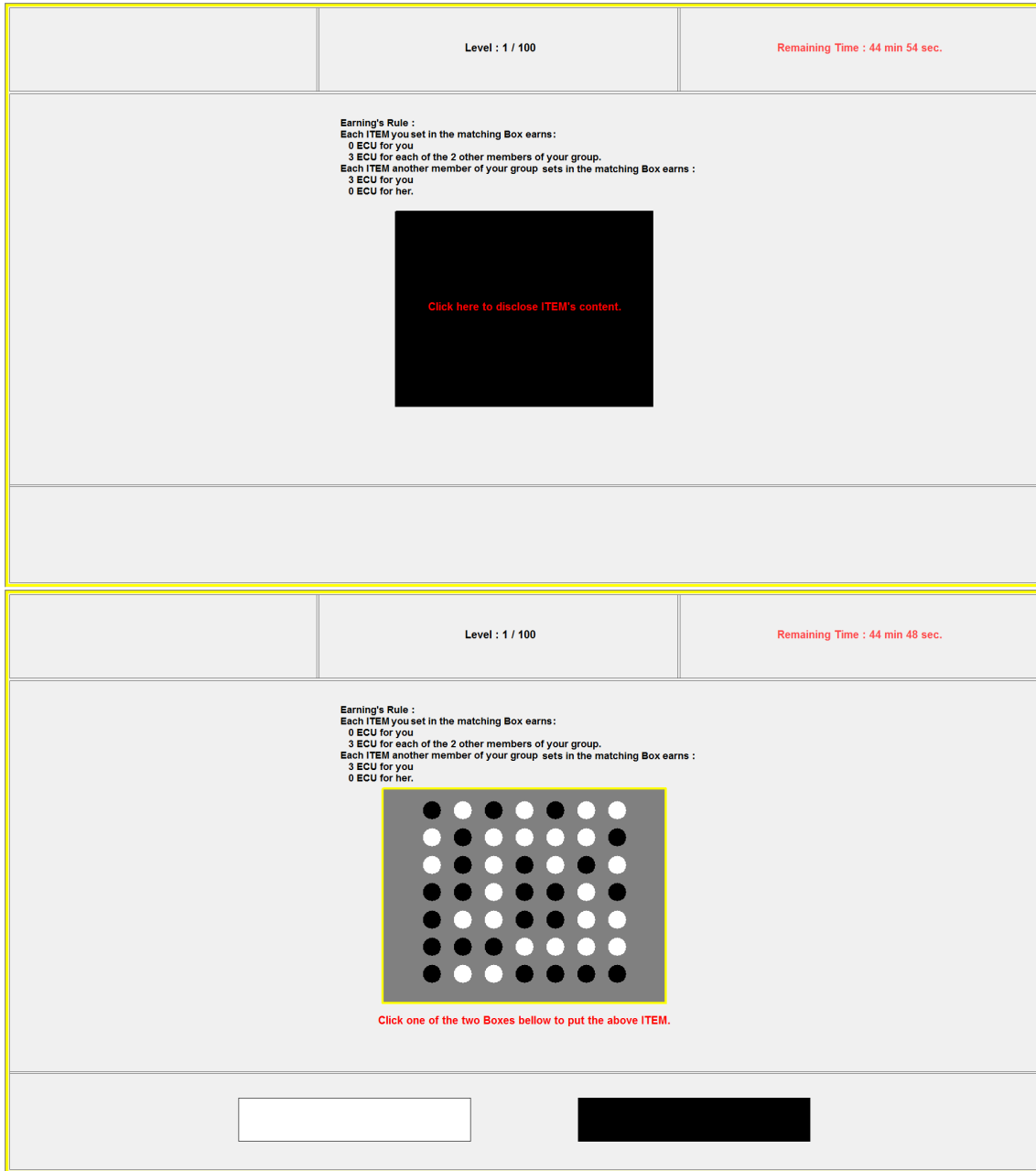


Figure 1: Screenshot of masked then unmasked Item

Treatment	X for me	Y for each of other players
Baseline No incentives (T0)	0	0
Monetary Self-interested Incentives (T1)	6	0
Monetary Pro-social Incentives (T2)	0	3 (x2)

Table 1: Treatments

Treatment	Observation	Mean	Standard deviation	Min	Max
ER	113	8.16	11.03	0	51
RT	113	9.83	8.62	.39	98.671
Interest	113	28.50	10.45	7	49
risk_aversion	113	6.44	1.94	0	10
svo_angle	113	19.62	15.97	-16.26	46.65
Prosocial	113	.49	.50	0	1
Male	113	.372	.485	0	1
Age	113	22.53	5.97	17	55

Table 2: Descriptive statistics of the sample

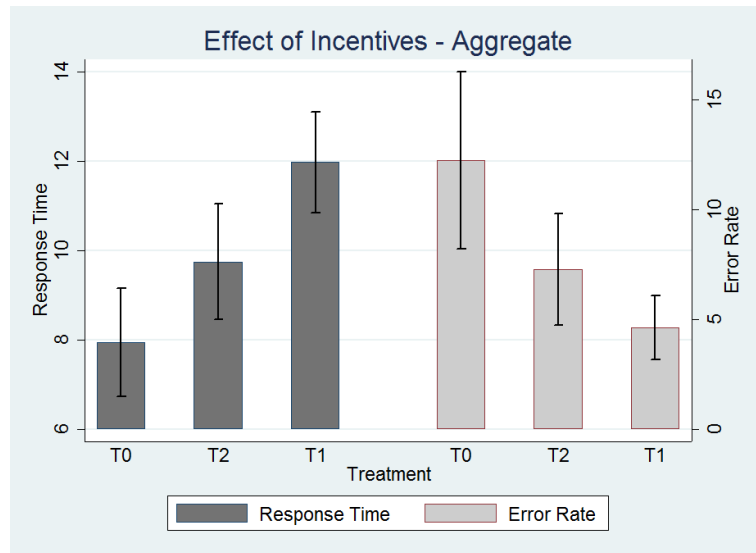


Figure 2: Incentives impact on Response Time (RT) and Error Rate (ER)

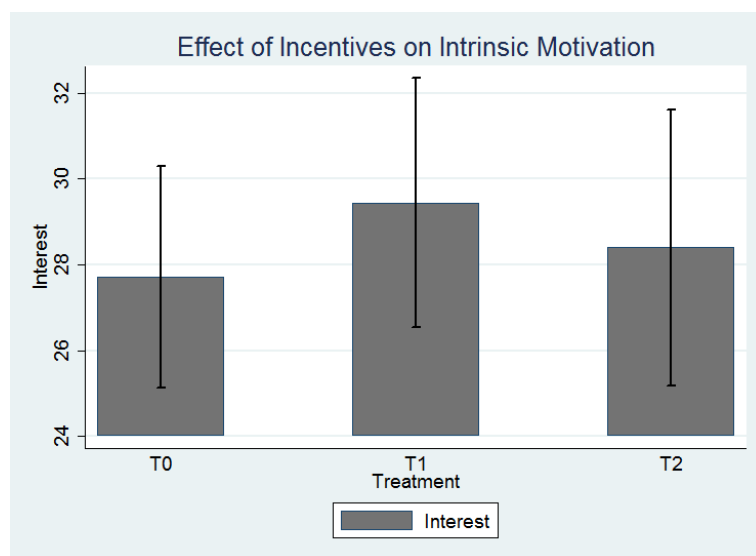


Figure 3: Incentives impact on Intrinsic Motivation

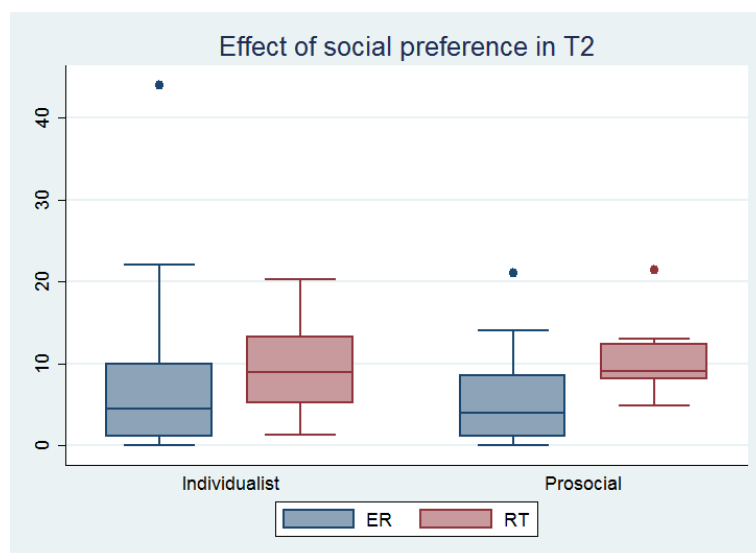


Figure 4: Impact of Social Preferences in T2

VARIABLES	(Model 1)		(Model 2)		(Model 3)	
	RT	ER	RT	ER	RT	ER
RT		-0.0808*** (0.0156)		-0.121*** (0.0136)		-0.123*** (0.0137)
T1	4.038*** (0.971)	-0.792*** (0.240)	4.019*** (0.971)	-0.654*** (0.230)	4.168*** (0.998)	-0.671*** (0.258)
T2	1.807* (1.042)	-0.462* (0.269)	1.776* (1.041)	-0.414 (0.255)	2.280** (1.094)	-0.504* (0.259)
trial			-0.190*** (0.0223)	-0.00602 (0.00455)	-0.190*** (0.0223)	-0.00551 (0.00449)
(trial) ²			0.00135*** (0.000181)	4.21e-05 (4.17e-05)	0.00135*** (0.000181)	3.84e-05 (4.18e-05)
complexity			-0.557*** (0.0342)	-0.248*** (0.0406)	-0.562*** (0.0340)	-0.249*** (0.0407)
svo_angle					0.0210 (0.0261)	-0.00601 (0.00592)
risk aversion					0.198 (0.204)	0.0532 (0.0581)
interest					-0.0621 (0.0383)	-0.00671 (0.0115)
age					-0.0516 (0.0785)	0.0138 (0.0186)
male					0.164 (0.816)	0.0898 (0.223)
timeb					3.466* (1.970)	
Constant	7.939*** (0.711)	-1.448*** (0.236)	16.08*** (1.067)	0.0966 (0.164)	14.28*** (2.425)	-0.257 (0.465)
Observations	11,300	11,300	11,300	11,300	11,300	11,300
R-squared	0.036		0.166		0.183	

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 3: Attention allocation

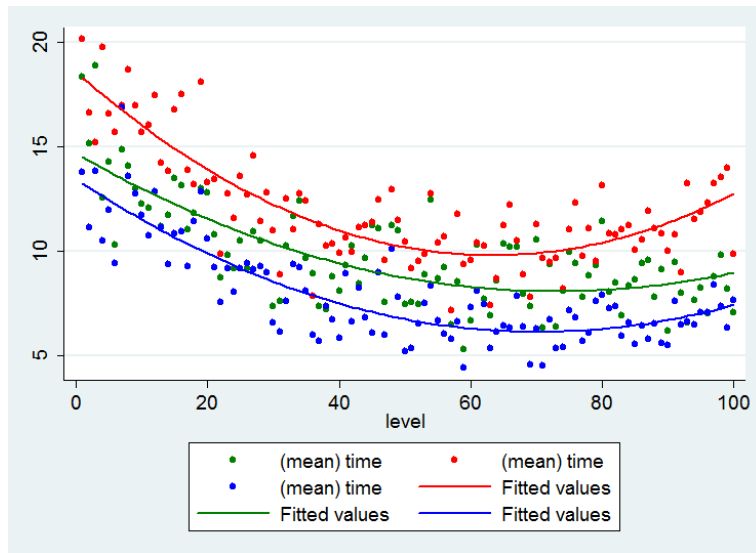


Figure 5: Average (RT) across trails and treatments

VARIABLES	(Model 1)		(Model 2)		(Model 3)	
	RT	ER	RT	ER	RT	ER
RT		-0.0713*** (0.0240)		-0.114*** (0.0200)		-0.112*** (0.0209)
svo_angle	0.0195 (0.0616)	-0.0202 (0.0139)	0.0224 (0.0615)	-0.0181 (0.0131)	0.00983 (0.0572)	-0.0119 (0.0122)
trial			-0.147*** (0.0304)	-0.00916 (0.00865)	-0.148*** (0.0304)	-0.00878 (0.00873)
(trial) ²			0.000947*** (0.000246)	8.45e-05 (7.82e-05)	0.000948*** (0.000246)	8.25e-05 (7.85e-05)
complexity			-0.573*** (0.0474)	-0.289*** (0.0740)	-0.569*** (0.0471)	-0.291*** (0.0738)
risk_aversion					-0.242 (0.310)	0.0791 (0.0739)
interest					-0.0561 (0.0604)	-0.0286** (0.0144)
age					-0.101 (0.135)	0.0129 (0.0189)
male					1.318 (1.579)	-0.251 (0.322)
timeb					7.222 (4.350)	
Constant	9.378*** (1.589)	-1.637*** (0.394)	16.72*** (1.920)	0.0858 (0.247)	16.77*** (3.453)	-0.0308 (0.743)
Observations	3,800	3,800	3,800	3,800	3,800	3,800
R-squared	0.001		0.127		0.158	

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4: Attention allocation in T2

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