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Cooperation and ethical choices: an experimental approach

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Abstract

When confronted with choices involving the public good, individuals do not always choose the collective interest. If the ethical choice is a social issue, it is above all a social dilemma. Through an experiment in which we study the behavior of 114 subjects, we evaluate the degree of cooperation and explain the factors underlying ethical choices. The implementation of the prisoners' dilemma and public good games reveals correlation between the amount of the ethical premium and the degree of cooperation. We identify factors that increase this cooperation, such as the frequency of interactions with individuals. The more cooperative individuals are, the greater the ethical premium. Moreover, individuals naturally seek to cooperate. The more the game is repeated, the greater the degree of cooperation. Finally, the degree of contribution is lower when individuals anticipate the dilution of the responsibility. So, if we want to generalize ethical choices, we need to pay attention to individual interest in order to increase collective interest.

1. Introduction

The covid-19 crisis is no exception. Indeed, it has once again brought up to the fore the serious ethical questions encompassing sustainable economy matters, as well as the importance of cooperation in this field. This debate is mainly focused on the preservation of the common good, and the question of individual versus collective interest arises.

First, the challenge of responses to the covid-19 crisis (e.g., herd immunity) has shown that success can only be achieved through the ability to provide a global response, and thereby appeal to collective responsibility and cooperation. Most of the time, individual decisions lead to a modern version of the tragedy of the commons (Gross & De Dreu, 2019), and cooperation appears to be essential to meet collective challenges (Axelrod, 1984; Axelrod & Dion, 1988; Hardin, 1968).

If the dominant theories dismissed the question of ethics, behavioral economists have sought to nuance this rationality. Our judgment can be biased (Hansen, 2016; Mongin & Cozic, 2014; Thaler, 2018; Thaler & Sunstein, 2009) by emotions or moral values. The decision-maker does not always act in a maximizing way. Recent studies have shown that individuals are complex (Gregory-Smith et al., 2013) and can choose to behave ethically (Andersch et al., 2019; Govind et al., 2019; Kluver et al., 2014; Shaw et al., 2016). Kluver et al. (2014) define behavioral ethics as individual behavior that is subject to or judged according to generally accepted moral norms of behavior, while Shaw et al. (2016) refer to ethics as a manifestation of caring, responsibility and felt obligation. We will use both these definitions and then refer to ethical behavior as a responsible, benevolent attitude that is subject to, accepted, and judged according to moral standards.

In the UK, Co-op's unique Ethical Consumption Report that tracked total ethical spending each year over the past two decades shows that ethical consumption of personal products (including sustainable clothing) increased from £909k to £1898k, or +109% from 2010 to 2020[1]. Phenomena such as whether and why consumers are willing to pay a premium for ethical products (De Pelsmacker et al., 2005; Kim & Han, 2020; Tsarenko et al., 2013; Tully & Winer, 2014) are widely analyzed in the literature. Even if consumers' behavior does not match their positive attitude towards ethical products, consumers were willing to pay a premium. De Pelsmacker et al. (2005) demonstrated that for fair trade coffee this average premium was around 10%, while Tully & Winer (2014), with a meta-analysis of 80 research papers, revealed that the mean percentage premium is 16.8%. Kim & Han .(2020) found that a price reduction entails a reaction in the consumer's mind, that of a distrust for the brand as well as the emergence of an ulterior motive to have an ulterior motive and to distrust the brand. Nevertheless, despite supporting the values of ethical consumerism, most consumers rarely put aside their beliefs when it comes to actually buying a product. Transforming intentions into behavior reflects "ethical consumption gap" (Carrington et al., 2010, 2014; Kilian & Mann, 2021; Shaw et al., 2016). Several factors have been identified such as habits, the priority given to ethics or the lack of opportunities, purchasing power, or time. In other words, ethical consumption means taking part in a collective action.

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[1] https://www.ethicalconsumer.org/sites/default/files/inline-files/EC_Market_Report_2021.pdf

If Bennett & Blaney (2002) show the relationship between social consensus, moral intensity and people's willingness to pay (WTP), however, to the best of our knowledge, no study has considered altogether the degree of ethics in stated preferences and the degree of cooperation in non-cooperative games. First, this study highlights the relationship between individuals' willingness to cooperate and their commitment to their ethical choices. Second, it answers the question of how reliable the use of the prisoners' dilemma game (and its variants) is in predicting ethical choices. To address this issue, we ran a questionnaire based on four motivation criteria: the eco-labels, the non-use of child labor, national manufacturing (in France), and biodegradable products in the first part. These four criteria cover all the major ethical themes and are consistent with our definition, they respond to the ethically minded consumer behavior (EMCB) scale developed by Sudbury-Riley & Kohlbacher (2016) [2], and allow to determine the stated preferences. In the second part, the implementation of the prisoners' dilemma (PD) and the public good (PG) games will reveal the correlation between the amount of the ethical premium and the degree of cooperation.

The remainder of this paper is structured as follows. Section 2 specifies our theoretical framework, hypotheses, and games modeling. Section 3 describes our survey. Section 4 shows our results and section 5 concludes.

2. Theoretical framework, hypotheses, and games modeling

2.1. Theoretical framework and hypotheses

The individual does not always maximize. There are cognitive biases, emotions, and moral values. Cooperation requires a social dimension. Therefore, social preference is a concept that becomes closely linked to the notion of ethics. This behavior is illustrated in a sacrifice of one's own wealth or utility, to increase the wealth or utility of another person. Individuals are naturally cooperative (Dawes & Thaler, 1988) even when reciprocity is not possible, such as in one-shot experiments: the rate of cooperation was around 50% in PD games.

In the same way, many studies (De Pelsmacker et al., 2005; Kim & Han, 2020; Tsarenko et al., 2013; Tully & Winer, 2014) have shown that being interested in consuming ethically increases consumers' WTP. Based on this premise, after identifying the stated preferences, we can hypothesize that the degree of cooperation is correlated with the WTP. Our hypothesis (H1) is: the more cooperative individuals are, the higher the ethical premium is.

However, when faced with a decision, social preference is not always natural. This incompatibility between individual and collective interests was demonstrated by Hardin (1968) in the tragedy of the commons, in the use and sharing of a common resource and thus reveals the problem of the free riding (Olson, 1965).

When it comes to social dilemmas and motivations, and when we try to understand their characteristics, the classical paradigm used is the PD game or/and its variants.

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[2] The Sudbury-Riley and Kohlbacher's scale is defined in 5 dimensions: the purchase of environment-friendly products (ECOBUY); the boycotting of environmentally harmful products (ECOBOYCOTT); the purchase of products having recycled content (RECYCLE); the purchase of product based on social issues (CSRBOYCOTT); and the WTP more for an ethical product (PAYMORE).

2.2. The prisoners' dilemma and the public good games

Understanding the drivers of cooperation between unrelated individuals remains a challenge for all social sciences. The PD and the PG game are the two most widely used standard models of cooperation.

The PD highlights the fact that individual action does not lead to an optimum for the group. Nash equilibrium is reached when no player cooperates, while the social optimum is reached when both cooperate. The PD is therefore an important point for introducing ethical concerns, notably through the link between cooperation, egoism, and ethics (Arce, 2010).

In the same way, the PG game is a general version of PD. Formally, our PG game proceeds in the following way. 4 players participate. Each has an endowment E that he can divide between a collective investment Y_i ($i = 1,2,3,4$) and private $E - Y_i$. Thus, there is a public good $\sum_{i=1}^{4} Y_i$ that is multiplied by 2, then divided into 4 equal shares, regardless of the amounts of tY_i. Thus, we have the individual payoffs P_i for each player i ($i = 1,2,..,4$):

$$P_i = (E - Y_i) + \frac{1}{2}\sum_{i=1}^{4} Y_i \tag{1}$$

And the overall payoff $P = \sum_{i=1}^{4} P_i$ for all players:

$$P = 4E + \sum_{i=1}^{4} Y_i \tag{2}$$

The social optimum is obtained when all the endowments are put into the PG, which maximizes P (2), with each person earning $2E$. Conversely, the search for individual gain (1) leads to contributing nothing to a PG, with each player collecting only E. As in the PD, Nash equilibrium occurs when the contributions are null, while the social optimum is reached if all individuals contribute their full endowment.

However, experiments in the PG game show that subjects bet between 40% and 60% of their initial endowment and have a natural propensity to cooperate. However, multi-player PG game, unlike two-player PD, introduce a problem of dilution of responsibilities (Darley & Latane, 1968). To initiate beneficial cooperation, a player must anticipate that all other players will reciprocate and that they are not left alone to make the effort for all (free rider problem). In the absence of a coordinating framework, cooperative strategies seem to be harder to implement in PG game (i.e., group interactions) than in the PD (i.e., pairwise interactions). Our within-subject design provides us with the ability to analyze individual-level decisions obtained in different experiments with the same sample (Blanco et al., 2011). The design with both games will allow to measure the dilution of responsibility effect. Our hypothesis (H3) is that the cooperation rate is higher in the PD game than in the PG game. Moreover, we have 2 treatments that allow us to play the PD twice, to understand if the repetition increases cooperation (H2).

Table 1. Hypotheses and tests

Tested by	**Stated preferences**	**PD**	**PG**
H1: The more altruistic individuals are, the higher the ethical premium.	X	X	X
H2: Reiteration increases cooperation		X	
H3: The cooperation rate is higher in the PD than in the PG		X	X

3. Experimental design

3.1. Survey design and data collection

The study was conducted online, among students at the University of Angers, and on the LinkedIn social network, from October 10, 2022, to October 25, 2022. The characteristics are gender, age (18+), study category (Bachelor's or Master's degree), and concerning the company: sector, size, and status. While there is little significant generational difference in work ethic (Zabel et al., 2017), generation Z (1996-2010) is still widely seen as the next consumer powerhouse (Le et al., 2020). A link was made available to each participant, who could answer the questionnaire and send it anonymously. Regarding the answers, as envisaged in AsPredicted[3], we removed an outlier (buying a -t-shirt for €1,000€ is an inconsistent response). The survey thus had a total of 114 respondents.

Table 2. General characteristics of the survey (N=114)[a]

Variable	%
Gender: Men	32,5
Generation group:	
Generation Z[4]	74,6
Generation Y	14,9
Generation X	8,8
Baby-boomers	1,8
Education:	
Youth Training/BTEC	0,9
A Level	27,2
Bachelor's degree 2	9,6
Bachelor's degree 3	8,8
Master's degree 1	19,3
Master's degree 2	29,8
PhD	4,4
Activity:	
Employee	21,9
student	72,8
other	5,3
Company type:	
private	61,4
public administration	21,9
cooperative	3,5

[3] https://aspredicted.org/B9B_652

[4] Each generation has their own behavior pattern, which can be used as a repository for matching behaviors of the same generation (Boyd, 2010). Generation Z corresponds to 12 to 26 years old, generation Z to 27 to 42 years old, generation X to 43 to 57 years old and baby-boomers to 58 to 76 years old.

other	13,2
Company size:	
Micro business < 10 FTEs	24,6
SME < 250 FTEs	46,5
Intermediate Size <5 000 FTEs	22,8
Large company > 5000 FTEs	6,1

[a] the number of the sample

The questionnaire was built with the Google Forms application and takes only 10 to 15 minutes to complete. It was composed of 17 questions and divided into 3 parts. Nowhere is the word «ethics» mentioned. The participants are simply told that they are invited to participate in a study on clothing buying motivations.

The first part is formed of 6 general questions and deals with their socio-demographic and economic profile. The second part is composed of two sets of 8 questions and deals with the ethical choices, as well as the indications of preference. We use a single-bounded dichotomous choice format (yes or no), with amounts in open-ended responses, for the WTP questions (Bennett & Blaney, 2002). The last part was modeled by the two games: the PD and the PG, thus making it possible to analyze and understand the preferences towards the collective, as well as the degrees of cooperation. Our purpose here is to understand the degree of ethics in stated preferences vs. the degree of cooperation, and as stated preferences were put in a hypothetical situation. The intention of the study was to keep this hypothetical situation, and not the participants' performance. That's the reason why our survey does not provide any incentive (Gneezy & Rustichini, 2000; Voslinsky & Azar, 2021).

3.2. Prisoners' Dilemma

The first game is the standard PD, played in one round (PD1[5]). The second is the repeated PD, played in two rounds in a row (PD2R1[6] and PD2R2[7]).

For both versions, each player has a starting sum of €5,000 and has the choice of giving this money to the other player or keeping it. If they decide to donate, the amount is multiplied by 2. Thus, if both donate, both win €10,000. If both keep it, each one will only win his €5,000. Finally, if one keeps and the other gives, the first one earns €15,000 and the other one earns €0.[8]

For the standard version, the game stops after the first choice. For the repeated version (PD2R1 and PD2R2), the rule is as follows: as soon as one of the players decides to keep a turn, the game stops automatically. If both give, both win €10,000, and the game continues. If one keeps, and the other gives, the first one wins €15,000 and the other wins €0, but the game stops. Therefore, for the game to go to the second round, both players must give, so each anticipates the benevolent cooperation of his opponent. To simulate the reaction of player 2, « give» or «keep», we made the game stop in G1 ($N = 59$), whatever the choice of the player in the first round. In G2 ($N = 55$), the other player always gives. We thus have 3 cases where the game
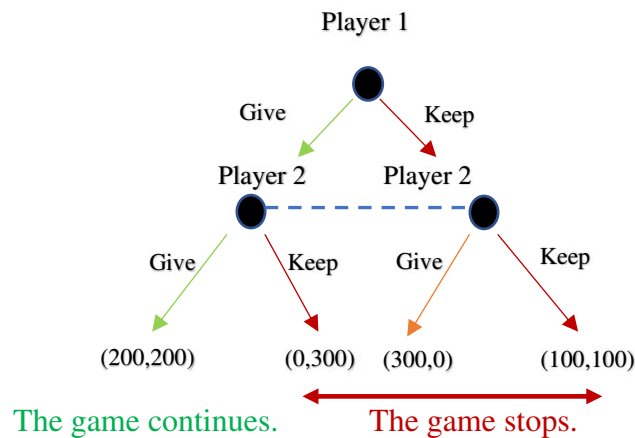
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[5] PD1: PD Game 1 Round
[6] PD2R1: PD Game 2 Rounds 1st one
[7] PD2R2: PD Game 2 Rounds 2nd one
[8] Regarding the games, we had two treatments: one group plays with people they do not know, while the other group plays with people they know. The difference has no impact on the result.

stops and only 1 case where the game continues, which reflects real situations if the players were playing simultaneously.

Figure 2. Prisoners' dilemma game simultaneous version

Player 1

Give   Keep

Player 2   Player 2

Give   Keep   Give   Keep

(200,200)   (0,300)   (300,0)   (100,100)

The game continues.   The game stops.

3.3. Public good game

Each participant is not able to communicate with the 3 other players. The parameters are $N = 4, D = 5,000$ and $k = 2$. Specifically, each player can put €0, €1,000, €2,000, €3,000, €4,000 or €5,000 to the PG.

4. Survey results

4.1. General results

For this second part of the questionnaire, the stated preferences (Andersch et al., 2019; Czajkowski et al., 2017; Mahmoudi et al., 2021; Vossler & Watson, 2013), are provided for our contingent valuation approach, which is used to reveal preferences and the WTP (Diamond & Hausman, 1994).

Table 3. Overall result ethical choices

T-shirt at 15€ WTP a premium from a t-shirt …	Rate of answer "yes" in %	Average of the premium (%)	
		Answer "yes"	All
with an eco-label	50,9	52,3	26,6
with no child labor	81,6	63,7	52,0
made in France	49,1	53,1	26,1
with natural and biodegradable products	51,8	48,2	25,0

We observe that the WTP is higher for products with a socially responsible element that benefits humans (i.e., labor practices) than for those that benefit the environment. This evidence corroborates the study by Tully & Winer (2014). It may be noted that the criterion "no child

labor" stands out considerably. The ethical themes are classified. Individuals are ready to make a real commitment when a theme affects them immediately.

Table 4. General results in the PD (in %)

Respondents who give	Other player…	
	keeps (N=59)	gives (N=55)
PD1[1]	55,9	54,5
PD2R1[2]	72,9	63,6
PD2R2[3]	X	82,9[a]

[1]PD One Round, [2]PD Two Round, first one, [3]PD Two Round, second one. [a] $N = 31$

In a second version of the prisoners' dilemma where the player can play twice, more participants trust the other player, 68,4% of the players give, against 55,3% when they play only once (p-value = 0,00652). This confirms H2: iteration increases cooperation.

Table 5. PG game results

| Contribution to the public good	Total (%)
€0	13,2
€1,000	23,7
€2,000	30,7
€3,000	13,2
€4,000	3,5
€5,000	15,8

On average, participants put 43.5% of the initial amount (i.e., €2,175) to the public good, which corresponds to the results of the literature with real payments. 87% of participants contribute to the public good, which reveals a strong willingness to cooperate. If we relate the amounts given in the two games, the correlation coefficient is equal to 0,283. The 63 subjects who have given in the PD, have given significantly more (2571.4) than the 50 ones who have kept (1686.3) The figure 1 illustrates this significant difference ($t = 3.1, P - value = 0.012\%$)

Figure 1. Amounts given in the PG game
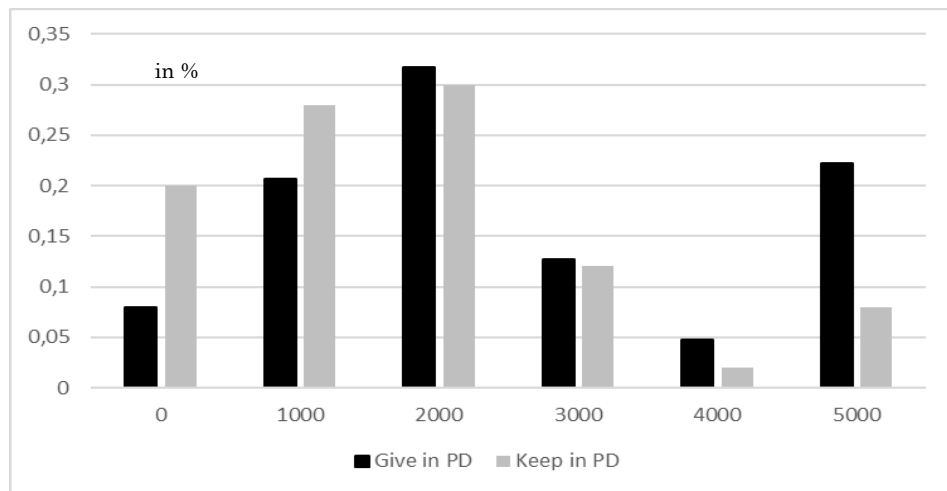
Since participants have given 43.5% of the initial amount in the PG and 55.3% in the PD, H3 is confirmed $(t = 2.13, P - value = 1.3\%)$, the cooperation rate is much stronger in a design with pairwise interactions than in a design with multi-interactions. In binary choices, the same individuals favor cooperation, although it involves more risk of losing (figure 2).

Figure 2. Difference between contribution and gain
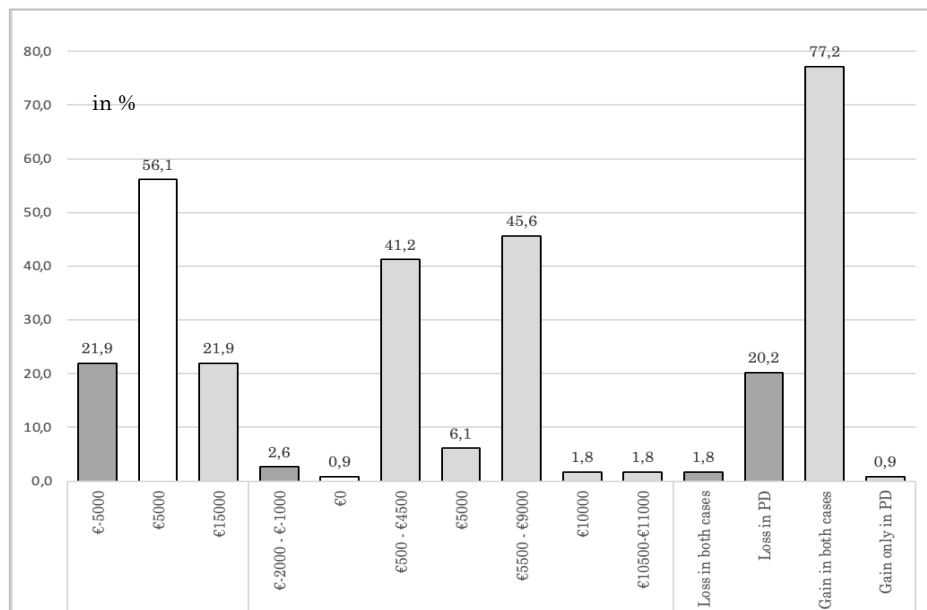
Individuals are cooperative. 22% lost all of their bets. Among the individuals who decided to keep in the PD, 35% give in the PG game.

4.2. Econometric analysis

We use the ordinary least square method. For each premium, a continuous variable is treated as a dependent variable. Since PD1 give and PD2R1give are very strongly correlated at 45.1%, we only consider PD2R1Give in Table 6.

Table 6. Dependent variable: Premium Amount
PG game and PD game - OLS

γ_i	Premium			
	Eco-label	**No child labor**	**Local product**	**Natural**
Constant	-2.384	-2.051	-4.562	-1.772
	(2.889)	(5.341)	(3.452)	(2.899)
Men	1.246	-2.862	0.4928	-0.7851
	(1.081)	(1.998)	(1.291)	(1.085)
Generation Z	0.290	1.849	-0.790	1.631
	(1.798)	(3.323)	(2.148)	(1.804)
Worker	0.474	0.234	4.931	1.781
	(2.490)	(4.603)	(2.975)	(2.499)
Student	-1.600	-2.007	3.635	-0.922
	(2.712)	(5.013)	(3.240)	(2.721)
Master's degree and up	0.0580	1.536	1.627	0.0452
	(1.039)	(1.921)	(1.242)	(1.043)
Private company	3.591**	1.749	1.441	2.305
	(1.515)	(2.801)	(1.810)	(1.520)
Public Admin	7.898***	8.888**	4.541**	5.911***
	(1.901)	(3.514)	(2.272)	(1.908)
Micro Company	3.113*	2.993	1.244	2.075
	(1.605)	(2.967)	(1.918)	(1.611)
Small N Med Comp	-0.460	1.812	-2.453*	-0.647
	(1.186)	(2.193)	(1.417)	(1.190)
Contribution PG	0.000509*	0.00169***	0.000818**	0.000653**
	(0.000335)	(0.000619)	(0.000400)	(0.000336)
PD2R1Give	1.739*	2.498	2.162*	0.689
	(1.131)	(2.091)	(1.352)	(1.135)
N	114	114	114	114
R²	0.245	0.227	0.227	0.182
lnL	-341.1	-411.2	-361.4	-341.5

***, ** and *: significance at 1%, 5% and 10% levels – unilateral test for Contribution PG and PD2R1Give
standard errors in parentheses.
For each variable, the value is 1 if it is the situation described in the table, and 0 otherwise.

These results confirm H1. There is a very significant correlation between the amounts of the ethical premiums and the cooperation. Regardless of the premium, this is true for the contribution to the PG game. For the first gift in the repeated PD (PD2R1), this is true for 2 premiums and coefficient is positive for the two others: this indicates that a long-term commitment increases the WTP and confirms a social motivation.

However, the cooperation is not the only factor that can explain the ethical choice. The amount of the ethical premium is strongly correlated with working for public administration, for all the premiums: being in the public sector reveals a willingness for collective action.

There might be several explanations. First, the values of « national manufacturing » directly reflect employment, the safeguarding of jobs, or the defense of a fairer employability. This is a value that makes sense and that directly affects individuals. In the PG game where responsibility is shared and where fear of the free rider may appear, the fact that these values impact directly the subjects may have an impact on choice (Slovic, 2007). The individuals adopt familiar judgments, with a marked preference for what is known or, on the contrary, an aversion to ambiguity.

When the PD game is repeated, the eco-label and Made in France criteria emerge. Individuals cooperate and trust, especially when there is a possibility for further interactions and especially if the danger is visible (unemployment and standard of living), individuals will seek to be cooperative and therefore will prefer to play the collective game to preserve the relationship in the group (Axelrod, 1984; Axelrod & Dion, 1988; Zhang, 2019).

5. Conclusion

Experiments using non-cooperative games are by default paid. As mentioned earlier, our goal is to understand the degree of ethics in stated preferences versus the degree of cooperation in non-cooperative games. We have contextualized the stated preferences in a hypothetical situation, and we have kept it for the non-cooperative games. Because the goal of our study is to keep the consistency of stated preferences in the first game and their behavior toward strategic games, and not the performance of participants per se, our survey provides no incentives for strategic games (Voslinsky & Azar, 2021). In addition, since the topic of the survey is ethics and cooperation, compensation could have the opposite effect (Gneezy & Rustichini, 2000)

Our results thus show that ethical choices can be explained by cooperative behavior and illustrate the interest of the behavioral approach with both the modeling of non-cooperative games and stated preferences.

The more cooperative individuals are, the greater the ethical premium. In addition, individuals naturally seek to cooperate. The more the game is repeated, the greater the degree of cooperation. Depending on the items, the degree of contribution is smaller in the case of a dilution of the responsibility. In addition, the OLS model reveals that some ethical criteria related to WTP are directly correlated with cooperation for the public good and the repeated prisoner dilemma games.

Social environment can have a strong influence on the ethical values affecting employment. The incorporation of these values by the various economic actors can be considered as a priority. On the one hand, because they are more identifiable/representative, which makes it easier to make ethical choices. On the other hand, this high rate of acceptance also makes it easier to reach the social optimum. However, although individuals integrate the ethical values related

to the environment, there is only a little correlation regarding their behavior towards the defense of the collective (for the item biodegradable product). Nevertheless, in the repeated PD game, we found a strong significance with the WTP ethical premiums for all four items. This shows that individuals cooperate especially in pairwise relationships, and when there is no dilution of responsibilities. They know why they participate in the collective but above all with whom they participate and that their actions count (Darley & Latane, 1968). The issue of heterogeneity of meaning (including ethical/moral values) of participation in collectives is an major factor in behavior. Research perspectives on these items are topics for further refinement. Modeling strategic games in a hypothetical context with meaningful actions allows to make some individual motivations salient, and not others. In this search for the preservation of a public good, the more targeted results may allow decision-makers to adjust their actions accordingly before the implementation of public policy.

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Appendix: Survey

This questionnaire was run in French. It is translated into English here for the appendix.

Preferences and choice behaviors

As part of an academic research project, we invite you to participate in a survey on clothing buying motivations.

This questionnaire should only take you 15 minutes at most.
It consists of three parts:
- Part 1: general questions
- Part 2: questions about your purchase motivations.
- Part 3: questions involving financial amounts.

You are asked to answer each question as if you were in the situation described. The results of the experiment are and will remain anonymous and confidential. For best results, please answer the given questions as fairly and reliably as possible and take the time to think carefully about what is being asked of you. The final results can be sent to you upon request, by filling in your e-mail address at the end of the survey. For any additional information, you can contact me at the following e-mail address: ngoc-thao.noet@etud.univ-angers.fr

Thank you in advance for your participation

*Mandatory

Part 1: General questions

1.
You are: *
Several answers are possible.
- o   A man
- o   A woman

2.
Please indicate your age *

3.
You are: *
Only one answer is possible.
- o   Student
- o   Employee
- o   Other, go to question 4

4.

What is your level of education?

Several answers are possible.

- o   General certificate of secondary education or GCSE
- o   Youth Training / BTEC First Diploma
- o   A Level
- o   Bachelor's degree 2
- o   Bachelor's degree 3
- o   Master's degree 1
- o   Master's degree 2
- o   PhD
- o   Other:

5.

What is the type of company you work for? *

For students, this is the last company you worked for.

Only one answer is possible.

- o   Private company
- o   Public administration (including Chambers of Commerce and Industry, Regional Council, etc...)
- o   Association
- o   Cooperative
- o   Other

6.

Approximately how many people work (or worked) in the company, all locations combined? *

Part 2: Questions about your purchase motivations

You walk into a clothing store.

7.

You can choose between two similar t-shirts A and B. **The only difference is that T-shirt B has an eco-label, unlike product A.** T-shirt A costs 15€. Are you willing to pay more for T-shirt B? *

Only one answer possible.

- o   Yes, *go to question 8*
- o   No, *go to question 9*

8.

If yes, how much are you willing to pay at most (in €)? *

9.

You can choose between two similar t-shirts C and D. **The only difference is that T-shirt D does not use child labor, unlike C.** T-shirt C costs 15€. Are you willing to pay more for T-shirt D? *

Only one answer possible.

   o   Yes, *go to question 10*
   o   No, *go to question 11*

10.

If yes, how much are you willing to pay at most (in €)? *

Go to question 11

11.

You can choose between two similar t-shirts E and F. **The only difference is that t-shirt F is Made-in-France, unlike E.** T-shirt E costs 15 €. Are you willing to pay more for T-shirt F? *

Only one answer possible.

   o   Yes, *go to question 12*
   o   No, *go to question 13*

12.

If yes, how much are you willing to pay at most (in €)? *

Go to question 13

13.

You can choose between two similar t-shirts G et H. **The only difference is that T-shirt H uses organic and biodegradable products, unlike G.** T-shirt G costs 15€. Are you willing to pay more for T-shirt H? *

Only one answer possible.

   o   Yes, *go to question 12*
   o   No, *go to question 13*

14.

If yes, how much are you willing to pay at most (in €)? *

Go to question 15

15.

To be able to divide you into four groups, please indicate if the last 2 digits of your phone number (the 9th and 10th digits) are between: *

Only one answer possible.

   o   Between 00 and 24, *go to question 16*
   o   Between 25 and 49, *go to question 19*
   o   Between 50 and 74, *go to question 16*
   o   Between 75 and 99, *go to question 19*

Part 3 – Financial amounts (a)

Part 3: Questions involving financial amounts
Consider each of the situations in isolation

Game 1

In this **4**-player game, you will play with 3 other players that you do not know and with whom you will not be able to communicate. A benefactor gives each of the players €5,000, if they participate. He explains the game rules to you.

« You will each put whatever amount you want into the public good. I will multiply the total amount by two, and then I will divide it equally among the four of you, no matter how much you put in. So, you will each receive a quarter of the public good, plus the amount you kept. »

16.
How much do you put in the public good? *
Only one answer possible
- o   €0
- o   €1,000
- o   €2,000
- o   €3,000
- o   €4,000
- o   €5,000

Game 2

In this **2**-player game, you will play once with another player you don't know, and with whom you will not be able to communicate. A benefactor gives each of you €5,000, if you participate. He explains the rules of the game to you.

Each of you keeps or gives to the other the €5,000, knowing that the donated amounts are multiplied by 2.
If both give, both win €10,000.
If both keep, both win €5,000.
If one keeps and the other gives, the first wins €15,000 and the other wins €0.

17.
What do you do? *
Only one answer possible
- o   You keep the €5,000
- o   You give the €5,000

Game 3

In this **2**-player game, you will play twice with the same player you don't know, and with whom you will not be able to communicate. A benefactor gives each of you €5,000 if you participate. He explains the game rules to you.

Each one keeps or gives to the other the €5,000, knowing that the donated amounts are multiplied by 2. But as soon as one of the players decides to keep in the 1st round, the game stops automatically.

If both players give, both win €10,000, and the game continues.
If both keep, you each win €5,000, and the game ends.
If one keeps, and the other gives, the first wins €15,000 and the other wins €0, and the game stops.

18.
What do you do in the first round? *
Only one answer possible
    o   You keep the €5,000
Go to question 23
    o   You give the 5 000€
The other player decides to keep the €5,000. The game ends.
Go to question 23

Part 3 - Financial amounts (b)
Part 3: Questions involving financial amounts
Consider each of the situations in isolation

Game 1
In this **4**-player game, you will play with 3 other players that you do not know and with whom you will not be able to communicate. A benefactor gives each of the players €5,000, if they participate. He explains the game rules to you.
« You will each put whatever amount you want into the public good. I will multiply the total amount by two, and then I will divide it equally among the four of you, no matter how much you put in. So, you will each receive a quarter of the public good, plus the amount you kept. »

19.
How much do you put in the public good? *
Only one answer possible
    o   €0
    o   €1,000
    o   €2,000
    o   €3,000
    o   €4,000
    o   €5,000

Game 2
In this 2-player game, you will play once with another player you don't know, and with whom you will not be able to communicate. A benefactor gives each of you €5,000, if you participate. He explains the rules of the game to you.
Each of you keeps or gives to the other the €5,000, knowing that the donated amounts are multiplied by 2.
If both give, both win €10,000.
If both keep, both win €5,000.

If one keeps and the other gives, the first wins €15,000 and the other wins €0.

20.
What do you do? *
Only one answer possible
  o You keep the €5,000
  o You give the €5,000

Jeu 3

In this **2**-player game, you will play twice with the same player you don't know, and with whom you will not be able to communicate. A benefactor gives each of you €5,000 if you participate. He explains the game rules to you.

Each one keeps or gives to the other the €5,000, knowing that the donated amounts are multiplied by 2. But as soon as one of the players decides to keep in the 1st round, the game stops automatically.

If both players give, both win €10,000, and the game continues.

If both keep, you each win €5,000, and the game ends.

If one keeps, and the other gives, the first wins €15,000 and the other wins €0, and the game stops.

21.
What do you do in the first round? *
Only one answer possible
  o You keep the €5,000, *go to question 23*
  o You give the €5,000

The other player has decided to give the €5,000. The game continues.

22.
What do you do in the second round? *
Only one answer possible
  o You keep the €5,000, *go to question 23*
  o You give the €5,000

Thank you for your participation.

23.
For Survey Circle users, feel free to copy and paste the code below for your credits:
ZB1Q-TQW3-NYPX-X3JX

24.
If you would like to add comments, feel free to use the slot below.

25.
If you would like to receive your results, please let us know.

- o Yes, I would like to receive the results
- o No, I do not wish to receive the results

26.
To receive the results, please enter your e-mail address. *

- o Yes, I would like to receive the results
- o No, I do not wish to receive the results