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ABSTRACT

Ambiguity and Excuse-Driven Behavior in Charitable Giving*

A donation may have ambiguous costs or ambiguous benefits. Behavior in a laboratory experiment suggests that individuals use this ambiguity strategically as a moral wiggle room to act less generously without feeling guilty. Such excuse-driven behavior is more pronounced when the costs of a donation – rather than its benefits – are ambiguous. However, the importance of excuse-driven behavior is comparable under ambiguity and under risk. Individuals exploit any type of uncertainty as an excuse not to give, regardless of the nature of this uncertainty.

JEL Classification: C91, D64, D81

Keywords: ambiguity, excuse-driven behavior, charitable giving, social preferences, experiment

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1 Introduction

Donations are often subject to uncertainty, whether the latter consists of risk or ambiguity. First, the impact of donations on the beneficiaries may be uncertain as donations may not reach their recipients. Embezzlement is one cause of uncertainty. As an example, four cancer charities were charged with $187 million in fraud in the US in 2015. Donors were told that their money would help cancer patients while the majority of donations benefited only the perpetrators, their families and friends, and fundraisers.[1] Mismanagement is another source of uncertainty. Humanitarian crises often involve sudden and large amounts of donations raised to help people in need. Managing supplies during such crises is difficult, hence supplies do not always reach recipients. For instance, the action of the Red Cross during hurricane Harvey has been pointed out, as it had to throw out tens of thousands of meals, being unable to find the people who needed them.[2] Second, the cost of donations may also be uncertain. Uncertainty is particularly salient in the case of living organ donations. Living kidney donors may incur costs for transportation, lodging, medical and medication expenses, lost wages and other incidentals. These costs are uncertain, as they vary substantially between donors and they cannot be accurately predicted due to their complexity (Reese et al., 2015). As an illustration, Klarenbach et al. (2014) observe that, out of 100 donors, more than half incurred costs lower than $1000, while for a third of them they exceeded $5000.

Uncertainty is expected to have a primary impact on donations: when the costs of a donation increase or when its benefits decrease, individuals are expected to give less. Moreover, a secondary effect may lead to an even further decrease: individuals may use uncertainty as an excuse not to give. Indeed, giving decisions may be motivated by a genuine concern for others that leads individuals to maximize utility over payoff for self and payoff for others (Fehr and Schmidt, 1999; Bolton and Ockenfels, 2000; Andreoni and Miller, 2002; Charness and Rabin, 2002). However, they may also be motivated by the individuals' desire to be *perceived as* being concerned by others' well being (Ariely et al., 2009) or by a selfish pleasure associated with giving (Andreoni, 1990). Individuals are thus more likely to behave selfishly when their social and self-image is preserved from the judgment of others and from their own judgment (Hoffman et al., 1996; Dana et al., 2006;

[1]https://www.ftc.gov/news-events/press-releases/2015/05/ftc-all-50-states-dc-charge-four-cancer-charities-bilking-over

[2]https://www.washingtonpost.com/news/post-nation/wp/2017/08/28/people-are-urging-donations-for-harvey-relief-efforts-just-not-to-the-red-cross.

Hamman et al., 2010). Situations decreasing the guilt of not giving open a "moral wiggle room" to individuals for behaving less altruistically (Dana et al., 2007; Grossman and Van Der Weele, 2017; Bicchieri et al., 2018). When the direct link between an action (the donation) and its consequences (the cost or benefit of the donation) is blurred, individuals may use uncertainty strategically to make more selfish decisions.

A first type of uncertainty is based on known randomness: risk. Under risk, individuals know the probability distribution of outcomes. Krawczyk and Le Lec (2010); Brock et al. (2013) and Freundt and Lange (2017) use dictator games to highlight that generosity is reduced under risk. However, it does not provide definitive evidence of the existence of a moral wiggle room, as the primary, non-excuse driven, effect of risk on donations is not identified separately from the secondary, excuse-driven, effect. Exley (2015) reveals the existence of a moral wiggle room under risk using a laboratory experiment where subjects have to evaluate risky lotteries for themselves and risky lotteries for a charity. To isolate the excuse-driven effect of risk on donations, she compares lottery valuations when subjects are given an opportunity to donate and when they are not. Individuals are more sensitive to risk when they are given the opportunity to donate, which results in an additional decrease in donations.

A second type of uncertainty involves unknown randomness: ambiguity. Under ambiguity, individuals have only imprecise information on the probability distribution of the outcomes. In most instances in real life, donors are more likely to face situations that are better described by ambiguity than by risk. The risks of embezzlement and mismanagement are difficult to evaluate and the costs of organ donations are uneasy to anticipate due to their high volatility. Comparing decisions under risk and ambiguity usually reveals that most individuals prefer facing risk than comparable ambiguity. This behavior is known as ambiguity aversion (Ellsberg, 1961). Ambiguity increases the complexity of the decision process. Risk preferences express tastes over the solution of a trade-off between outcomes and probabilities. Ambiguity preferences are based on a similar trade-off, except that decisions request the subjective assessment of all available information (see Machina and Siniscalchi, 2014 for an extensive review). Such subjective evaluation may be a source of moral wiggle room because it gives an opportunity to individuals to manipulate their beliefs. For example, Akerlof and Dickens (1982) develop a theoretical model that allows individuals to alter their beliefs to justify their decisions. Based on probabilistic dictator games, Feiler (2014) highlights that situations allowing moral wiggle room are situations that enable individuals to manipulate their beliefs so as to increase the value of a selfish action. A similar belief manipulation may take place when individuals assess donations under ambiguity. It may lead individuals to be more pessimistic when evaluating a donation with ambiguous benefits than when evaluating ambiguity on their own earnings. It may also lead individuals to be more optimistic when evaluating a donation with ambiguous benefits than when evaluating ambiguity on their own earnings. Such strategic manipulations may enable individuals to choose not to donate without feeling guilty. While under risk individuals evaluate only objective information, we expect excuse-driven behavior to be reinforced under ambiguity. Our aim is measuring and comparing excuse-driven behavior under risk and under ambiguity to assess whether ambiguity aversion provides additional moral wiggle room. We address this question both when ambiguity affects the cost or the benefit of a donation. Indeed, first, the evaluation of uncertainty for oneself (i.e., the cost of a donation) or for others (i.e., the benefit of a donation) may differ (Reynolds et al., 2009; Eriksen and Kvaløy, 2010; Chakravarty et al., 2011). Second, excuse-driven behavior is expected to have opposite effects on the two types of ambiguity; thus, studying both of them allows us to highlight a strategic manipulation of ambiguity attitudes.

To the best of our knowledge, only two studies have focused on giving behavior under ambiguity. The most closely related study is the one by Haisley and Weber (2010) about self-serving interpretations of ambiguity in other-regarding behavior. They analyze binary dictator decisions when a recipient's payoff is determined by the outcome of a lottery. The lottery can be either risky or ambiguous. They find that subjects are less generous under ambiguity compared to risk. However, the observed behavior can be caused either by a primary effect of ambiguity on donations — donations are perceived as less valuable, thus donors give less — or by an secondary excuse-driven behavior— individuals act as if they were more averse to ambiguity when asked to give. Asking each dictator to estimate the expected value received by the receiver, Haisley and Weber (2010) find that the difference between the actual value and the estimated value is larger under ambiguity compared to under risk. The second closely related study focuses on ex-post and ex-ante fairness (Cettolin et al., 2017). It implements dictator games with a lottery involving risk for either the recipient or the dictator. It shows that dictators have similar behavior under ambiguity and under risk.

The studies of Haisley and Weber (2010) and of Cettolin et al. (2017) on the impact of ambiguity on donations when the recipient's payoff is ambiguous deliver different conclusions. This lack of consistency calls for further research on this topic. Furthermore, Haisley and Weber (2010) identify a self-serving use of ambiguity to decrease donations based on the subjects' estimations of the impact of their own past decisions. However, this may result both from a self-serving use of ambiguity when deciding whether to donate and from self-serving recalls (see, e.g., Carlson et al., 2018; Saucet and Villeval, 2019). Thus, instead of using the evaluation of past decisions, we use the method introduced by Exley (2015) to identify excuse-driven behavior based solely on decisions.[3] First, we replicate Exley (2015) to confirm evidence consistent with moral wiggle room under risk. Then, we use the same method to identify evidence consistent with moral wiggle room under ambiguity. Finally, we compare moral wiggle room under risk and under ambiguity to test for reinforced excuse-driven behavior under ambiguity. We assess and compare excuse-driven behavior when evaluating "lotteries-for-self" (*i.e.*, when uncertainty affects the cost of the donation) and "lotteries-for-charity" (*i.e.*, when uncertainty affects the benefit of the donation).

Under risk, we find evidence of excuse-driven behavior when subjects have to value lotteries-for-self and some evidence of excuse-driven behavior when they have to value lotteries-for-charity. These results hold under ambiguity. Our analysis suggests that self-serving behavior is more likely to emerge when individuals are evaluating uncertainty on their own payoffs than uncertainty on others' payoffs. Donations differ under risk and under ambiguity: individuals give less in ambiguous than in risky settings. However, once we isolate the differences in non-strategic preferences from excuse-driven behavior, we find no evidence consistent with an increased moral wiggle room under ambiguity compared to risk. These findings hold regardless of whether subjects face "full ambiguity" (probability completely unknown) or "partial ambiguity" (probability unknown within an interval). Overall, our findings suggest that some individuals exploit any type of uncertainty as an excuse not to give. In contrast with the previous literature, however, they show that the very nature of uncertainty does not matter in that respect.

The remainder of this paper is organized as follows: Section 2 details our framework and introduces our hypotheses. Section 3 presents our experimental design. The data analysis methodology and the results of our study are reported in Section 4. Section 5 concludes.

[3]This method is also used in Exley (2019) to document the use of charity performance metrics as an excuse not to give.

2 Framework and Hypotheses

2.1 Framework

Consider a situation where an individual can donate to a charity, and where either the cost of the donation for the individual (self-uncertainty) or the benefit of the donation for the charity (charity-uncertainty) is random. This randomness can be either risk or ambiguity. The evaluation of excuse-driven behavior for donations under risk or under ambiguity is based on the elicitation of the individuals' valuations of the donation in various scenarios.

We first define X as the monetary payoff such that the individual is indifferent between receiving €10 or donating €X to a charity. X is measured to calibrate altruistic preferences in the absence of risk and ambiguity. Formally:[4]

$$(10, 0) \sim (0\,, X) \tag{1}$$

Then, we introduce risk by means of two lotteries. "Lotteries-for-self" under risk, P_r^s, pay €10 to the subject with probability p and pay €0 to charity with certainty. "Lotteries-for-charity" under risk, P_r^c, pay €X to the charity with probability p and pay €0 to the subject with certainty. In other words, these two lotteries are obtained from the two allocations of $(10, 0)$ and $(0\,, X)$ by introducing a $(1 - p)$ probability of a €0 outcome for both agents.

$$Under\ risk : P_r^s = (p, (10, 0); 1 - p, (0, 0)) \text{ and } P_r^c = (p, (0, X); 1 - p, (0, 0)) \tag{2}$$

Under ambiguity, the probability of paying the non-zero amount is not unique but defined over the interval $[p - a, p + a]$, and it is denoted $\tilde{p}$.

$$Under\ ambiguity :$$
$$P_a^s = (\tilde{p}, (10, 0); 1 - \tilde{p}, (0, 0)) \text{ and } P_a^c = (\tilde{p}, (0, X); 1 - \tilde{p}, (0, 0)) \text{ with } \tilde{p} \in [p - a, p + a] \tag{3}$$

[4]In the pair (x,y) the first parameter corresponds to self-payoff and the second one to charity-payoff; both x and y are positive. X is unique if it exists, under the assumption that individuals strictly prefer more payoffs than less for the charity. This monotonicity toward charity-payoffs implies that they have altruistic motives in the sense that either i) they value charity-payoffs positively or ii) they value positively the payoffs of the charity's target, as there is a positive "ex-ante" (at the donation time) probability that increasing charity-payoffs increases the payoffs of the charity's target as well.

We measure how much individuals value these lotteries both in terms of self-valuation (*i.e.*, the payoff-for-self equivalent to the lottery) and charity-valuation (*i.e.*, the donation equivalent to the lottery). The self-valuation of a lottery is denoted $Y^s(P)$. It means that individuals are indifferent between the lottery P and receiving €$Y^s(P)$ and it gives the certainty equivalent of the lottery. Likewise, the charity-valuation of a lottery is denoted $Y^c(P)$.

There are two types of lotteries (lottery-for-self and lottery-for-charity) and two types of valuations (self-valuation and charity-valuation). It results in four types of lottery valuations, as summarized in Table 1. For lotteries-for-self, the two types of lottery valuations are: self-valuations of lotteries-for-self ("Self/Self" valuations) and charity-valuations of lotteries-for-self ("Self/Charity" valuations). For lotteries-for-charity, the two types of lottery valuations are: self-valuations of lotteries-for-charity ("Charity/Self" valuations) and charity-valuation of lotteries-for-charity ("Charity/Charity" valuations).

To introduce a common denomination between the two types of lotteries, we refer to the decisions that involve only one agent as "decisions without self *vs.* charity trade-off". These decisions are the self-valuations of lotteries-for-self (when there is no possibility to give) and the charity-valuation of lotteries-for-charity (when there is obligation to give). In contrast, the other decisions are "decisions with a self *vs.* charity trade-off" as the lottery and its certainty equivalent are not associated to the same agent. They are the charity-valuations of lotteries-for-self and the self-valuations of lotteries-for-charity.

		Lottery: Self	Lottery: Charity
Valuation:	Self	Self/Self: $Y^s(P^s_u)$	Self/Charity: $Y^s(P^c_u)$
	Charity	Charity/Self: $Y^c(P^s_u)$	Charity/Charity: $Y^c(P^c_u)$

with $u = r$ for lotteries under risk and $u = a$ for lotteries under ambiguity

Table 1: Types of lottery valuations under uncertainty

2.2 Hypotheses

Our hypotheses are based on comparisons between self-valuations and charity-valuations. These valuations are obtained based on the donation €X equivalent to receiving €10. Self-valuations, $Y^s(P)$, are scaled as percentages of 10 being received by the subject. Charity valuations, $Y^c(P)$, are scaled as percentages of X being donated.[5]

[5]This rescaling is based on the assumption of a local linear utility in payoffs. It allows us to compare self-valuations and charity-valuations. This assumption is not crucial as most of our

If for a given lottery the charity-valuation is equal to the self-valuation, it means that the altruism of the individual is not affected by the presence of uncertainty. For an individual with standard preferences (*i.e.*, someone who does not violate the independence axiom), the self-valuation and the charity-valuation of the exact same lottery are thus similar. If for a given lottery the charity-valuation is above the self-valuation, it means that the individual decreases his altruism when confronted to the uncertainty induced by the lottery. Indeed, this decrease of altruism is identified by the fact that charity payoffs are less valuable under uncertainty compared to the situation without uncertainty. For an individual with excuse-driven preferences, the charity-valuation is thus above the self-valuation. Our first four hypotheses are based on the comparison of valuations for different types of lotteries:

H 1-R. *Excuse-driven behavior under risk-for-self:*

$$Y^c(P_r^s) > Y^s(P_r^s)$$

H 1-A. *Excuse-driven behavior under ambiguity-for-self:*

$$Y^c(P_a^s) > Y^s(P_a^s)$$

H 2-R. *Excuse-driven behavior under risk-for-charity:*

$$Y^c(P_r^c) > Y^s(P_r^c)$$

H 2-A. *Exhibit excuse-driven behavior under ambiguity-for-charity:*

$$Y^c(P_a^c) > Y^s(P_a^c)$$

For an individual with excuse-driven preferences, the magnitude of the difference between the charity-valuation and the self-valuation of a same lottery reflects the intensity of these excuse-driven preferences. A large difference (large deviation from non excuse-driven preferences) reflects strong excuse-driven preferences. Our last two hypotheses (Hypothesis 3 and Hypothesis 4) compare the intensity of excuse-driven behavior for a same lottery under risk and under ambiguity. In contrast to risk, decision making under ambiguity involves the subjective assessment of available information. Moreover, belief manipulation has been identified as a source of self-serving behavior and Haisley and Weber (2010) found a self-serving interpretation of ambiguity. We thus hypothesize that excuse-driven behavior is reinforced under ambiguity.

H 3. *Reinforced excuse-driven behavior under ambiguity-for-self compared to risk-for-self:*

results do not rely on such comparisons.

$$Y^c(P^s_a) - Y^s(P^s_a) > Y^c(P^s_r) - Y^s(P^s_r)$$

H 4. *Reinforced excuse-driven behavior under ambiguity-for-charity compared to risk-for-charity:*

$$Y^c(P^c_a) - Y^s(P^c_a) > Y^c(P^c_r) - Y^s(P^c_r)$$

3 Experimental Design

The experimental design consists of 13 price lists in which subjects have to make binary decisions to earn money for themselves and for a charity. The first price list serves as a calibration task used to estimate the charity-valuation equivalent of €10 for self-payoff. The remaining 12 price lists involve choices between a safe payoff and a lottery. These lotteries vary along two dimensions: the type of uncertainty (risk, partial ambiguity, and full ambiguity) and the beneficiary of each option (lotteries-for-self or lotteries-for-charity, safe payoffs for the subject or for the charity). All subjects face the 13 price lists. An example of price list is displayed in Figure 1. Other examples can be found in Appendix A.

3.1 Calibration

The calibration task allows us to estimate the charity-valuation equivalent to €10 of self-payoff (X as defined in Equation 1) for each individual.[6] We use this estimation to calibrate price lists and lotteries in the main task at the subject level.[7] The price list is composed of 16 binary decisions between two options (labeled option A and option B).[8]

[6]In the calibration task, individuals can donate to a charity. We refer to this decision as "riskless" so as to differentiate it from the decisions in the other parts. However, it should be kept in mind that this situation incorporates some natural uncertainty about the benefits of the donation. We acknowledge that more generally, like in the previous experiments, we test the aversion to additional risk and ambiguity on top of the risk and ambiguity present in natural settings. In the analysis, we assume that natural uncertainty is kept constant across conditions and we ignore this compound dimension of uncertainty. Indeed, we are interested in how individuals react to the manipulation of the artificially induced uncertainty, holding the natural uncertainty constant. We thank a reviewer for this comment.

[7]Subjects are unaware that their choices in this price list are used for calibration. While this could be considered as a mild form of deception by omission (although what constitutes deception in economic experiments is subject to debate, see Ortmann and Hertwig, 2002; Cooper, 2014; Charness et al., 2019; Krawczyk, 2019; Ortmann, 2019), we chose not to inform subjects about this calibration to prevent strategic behavior. Importantly, the main task and the calibration task are not presented as independent to the subjects.

[8]In the calibration price list as well as in following price lists, we did not constrain decisions by implementing enforced-single-switching, nor did we preselect any option. Instead, we follow Andreoni and Sprenger (2011) and Exley (2015) by informing subjects that most people start by

Option A always pays €10 to the subject, while option B pays an amount increasing from €0 to €30, by increments of €2, to the charity. When the value of the donation associated with option B increases, subjects should switch from option A to option B at some point if they prefer to donate €30 than to receive €10. Following Exley (2015), X takes the value of option B at the switching point from option A to option B.[9] X is an integer.

3.2 Main Task

The main task is composed of 12 price lists. Each price list is obtained by combining one type of uncertainty with one beneficiary combination, as detailed hereafter. The order of price lists is randomized at the individual level.

3.2.1 Beneficiaries

In all price lists, one option pays the outcome of a lottery while the other option pays a safe amount. The beneficiary of the lottery is either the subject or the charity. Likewise, the beneficiary of the safe payoff is either the subject or the charity. This 2×2 design gives four different configurations allowing us to estimate the certainty equivalents of lotteries-for-self and lotteries-for-charity, either in terms of self-payoff or in terms of charity-payoff, as presented in Table 1. Each price list is composed of 21 decisions. Lotteries-for-self pay €10 with probability p and €0 with probability $(1 - p)$. Lotteries-for-charity are obtained by replacing the potential self-payoff of €10 with the equivalent donation €X (as estimated at the individual level in the calibration task). Likewise, the safe payoff option is calibrated based on X. For the self-safe payoff, the payoff increases from €0 to €10 by increments of €0.5. For the charity-safe payoff, the payoff increases from €0 to €X by increments of €$\frac{X}{20}$. It means that price lists differ across subjects depending on the individual valuations in the calibration task.

selecting option A, and then switch to option B at some point in the price list (see the paragraphs "Successive decisions" of the instructions in Appendix Subsection A.1 for the actual phrasing).

[9] The actual certainty equivalent is included between the value of option B at the switching point and its previous value in the list. For a given level of altruism, the value of $Y^s(P^c_u)$ is increasing in X while the value of $Y^c(P^s_u)$ is decreasing in X (with $u = r$ or $u = a$). We thus consider that X is the maximum value possible to provide conservative testing of our hypotheses 1-R, 1-A, 2-R and 2-A.

3.2.2 Lotteries

We implement three types of uncertainty: one involving risk and two involving ambiguity. Under risk, the probability p is known and equal to 0.5. Giving the same likelihood to positive and null payoffs minimizes potential problems of understanding (Kahneman et al., 1982). Under ambiguity, the probability takes its value in an interval. The subject knows only the lower bound and the upper bound of this interval. For the two levels of ambiguity, the interval is centered in 0.5 to ensure comparability with the risky situation. Under "full ambiguity", the probability is defined in the interval $[0, 1]$, *i.e.* the probability is entirely unknown. Under "partial ambiguity", the probability is defined in the interval $[0.25, 0.75]$, reducing the interval size by half. Two levels of ambiguity are implemented because ambiguity aversion has been shown to increase with the size of the probability interval (Chew et al., 2017). This variation allows us to test whether this behavioral difference also exists for excuse-driven behavior.

To facilitate understanding, lotteries are associated with a visual aid. Lotteries under risk are presented as a circle divided into two equal portions to indicate that both outcomes are equally likely. "0" is displayed in the left portion of the circle and the positive payoff is displayed in the right portion. Both payoffs have the same font size. Under ambiguity, the size of each of the two portions of the circle is moving continuously, back and forth, to describe the probability set. The relative font size of each payoff also varies dynamically to reflect the difference in likelihood between the two outcomes. Additional information about the visual aid is given in Appendix Subsection A.3.

We use the procedure introduced by Stecher et al. (2011) to implement ambiguity. This procedure is based on successive draws in a distribution with no finite quantiles or moments, the Cauchy distribution. Using a divergent distribution guarantees that no probability can be associated with each event and thus provides ambiguity.[10]

3.3 Charity Choice

Before the calibration decision, subjects started by selecting a charity among three.[11] The three charities were major, well-known, French charities covering various domains: "La

[10]Subjects were told that the outcome would be randomly picked by the program and that it was not possible to determine the exact probability associated to each outcome. See the written instructions in Appendix Subsection A.1.

[11]The exact phrasing of the question was: "For which charity do you prefer to have the opportunity to earn money?". Subjects were unaware of the content of the remaining of the experiment when making their choice.

Ligue Contre le Cancer" supports research on cancer, "Les Restos du Coeur" provides food to the homeless, and "Médecins sans Frontières" organizes medical interventions in foreign countries. Giving subjects a choice between several charities aims at increasing their involvement in the experiment and the chance that they care about the charity.

3.4 Experimental Procedures

The experiment was conducted at Gate-lab (Ecully, France). In total, 200 individuals were invited using the Hroot software (Bock et al., 2014) and participated in one of nine sessions. 91 subjects were males (45.5%), 176 were students from the local business, engineering and medical schools (88%), and their average age was 22.7 years (s.d. = 3.64). The experiment was programmed using the Java language. A session lasted approximately an hour.

Subjects received no feedback on the outcome of their decisions before the display of the payment screen at the very end of the session. Two decisions were randomly selected for payment among the 273 decisions in the thirteen price lists. We imposed that these two decisions were drawn from different price lists. On average, the total payoff per subject was €25.8 (s.d. = 6.01) divided into €15.0 for personal earnings (including a €7 show-up fee) and €10.8 for donations. Subjects received their earnings privately in cash at the end of the session. Donations to charities were made immediately after using charities' respective online payment platforms.[12] To guarantee to subjects that the donations were actually transferred, we offered to every subject the possibility to observe the bank transfers; this was made common knowledge at the beginning of the session. On average, 4.9 subjects per session volunteered to witness the transfers.

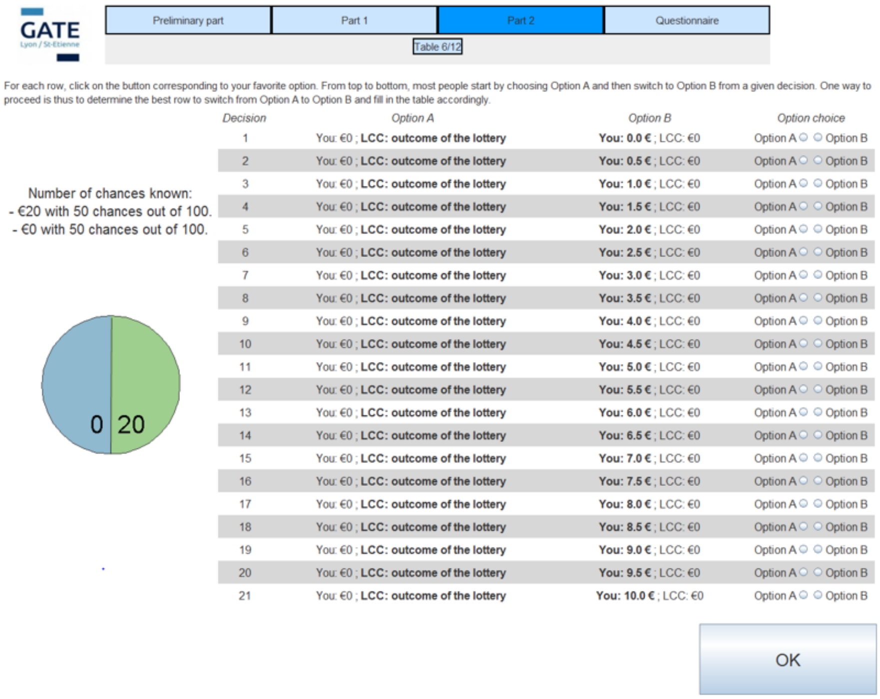
4 Results

First, we present the methodology used to analyze the experimental data and the results of the calibration task. Then, we explore excuse-driven behavior in the main task.

4.1 Data Analysis and Calibration

We start by explaining how certainty equivalents are computed based on the price lists and how these certainty equivalents are scaled up to build measures that are easier to

[12] La Ligue Contre le Cancer: https://don.ligue-cancer.net/b/mon-don, Les Restos du Coeur: https://dons.restosducoeur.org/b/mon-don, Médecins sans Frontières: https://soutenir.msf.fr/b/mon-don.



Decision	Option A	Option B	Option choice
1	You: €0 ; **LCC: outcome of the lottery**	**You: 0.0 €** ; LCC: €0	Option A ○ ○ Option B
2	You: €0 ; **LCC: outcome of the lottery**	**You: 0.5 €** ; LCC: €0	Option A ○ ○ Option B
3	You: €0 ; **LCC: outcome of the lottery**	**You: 1.0 €** ; LCC: €0	Option A ○ ○ Option B
4	You: €0 ; **LCC: outcome of the lottery**	**You: 1.5 €** ; LCC: €0	Option A ○ ○ Option B
5	You: €0 ; **LCC: outcome of the lottery**	**You: 2.0 €** ; LCC: €0	Option A ○ ○ Option B
6	You: €0 ; **LCC: outcome of the lottery**	**You: 2.5 €** ; LCC: €0	Option A ○ ○ Option B
7	You: €0 ; **LCC: outcome of the lottery**	**You: 3.0 €** ; LCC: €0	Option A ○ ○ Option B
8	You: €0 ; **LCC: outcome of the lottery**	**You: 3.5 €** ; LCC: €0	Option A ○ ○ Option B
9	You: €0 ; **LCC: outcome of the lottery**	**You: 4.0 €** ; LCC: €0	Option A ○ ○ Option B
10	You: €0 ; **LCC: outcome of the lottery**	**You: 4.5 €** ; LCC: €0	Option A ○ ○ Option B
11	You: €0 ; **LCC: outcome of the lottery**	**You: 5.0 €** ; LCC: €0	Option A ○ ○ Option B
12	You: €0 ; **LCC: outcome of the lottery**	**You: 5.5 €** ; LCC: €0	Option A ○ ○ Option B
13	You: €0 ; **LCC: outcome of the lottery**	**You: 6.0 €** ; LCC: €0	Option A ○ ○ Option B
14	You: €0 ; **LCC: outcome of the lottery**	**You: 6.5 €** ; LCC: €0	Option A ○ ○ Option B
15	You: €0 ; **LCC: outcome of the lottery**	**You: 7.0 €** ; LCC: €0	Option A ○ ○ Option B
16	You: €0 ; **LCC: outcome of the lottery**	**You: 7.5 €** ; LCC: €0	Option A ○ ○ Option B
17	You: €0 ; **LCC: outcome of the lottery**	**You: 8.0 €** ; LCC: €0	Option A ○ ○ Option B
18	You: €0 ; **LCC: outcome of the lottery**	**You: 8.5 €** ; LCC: €0	Option A ○ ○ Option B
19	You: €0 ; **LCC: outcome of the lottery**	**You: 9.0 €** ; LCC: €0	Option A ○ ○ Option B
20	You: €0 ; **LCC: outcome of the lottery**	**You: 9.5 €** ; LCC: €0	Option A ○ ○ Option B
21	You: €0 ; **LCC: outcome of the lottery**	**You: 10.0 €** ; LCC: €0	Option A ○ ○ Option B

Figure 1: Decision example - self-valuation of lottery-for-charity (Self/Charity) under risk, charity: "Ligue Contre le Cancer" (LCC), $X = €20$.

Notes: Subjects have to choose between Option A and Option B in each row of the price list. Option A pays €20 to the "Ligue Contre le Cancer" with $p = 0.5$ and €0 otherwise. Option B pays a safe payoff to the subject that varies between €0 and €10.

interpret.

When decisions in a given price list exhibit a unique switching point from option A to option B, it means that the valuation is included between the value of option B at the switching point and its previous value in the list. We thus determine valuation as the mean of both values.[13]

Our treatment of multiple switching points is data-driven. In the calibration task, 22 subjects switch multiple times (11% of all subjects). Their average number of switches is 6.95 (out of the 15 possible switches). In the main task, 6.08% of all price lists contain more than one switching point. Note that subjects with multiple switching points in the calibration task are responsible for almost half of the multiple switches in the main task. They switched more than once in 24.2% of the price lists whereas it happened to other subjects in 3.8% of the price lists. Moreover, conditional on switching multiple times, they switched on average 7.51 times compared to 5.6 times for the remaining sample. These

[13]When a subject never switched to option B, the maximal value of option B was used (this case represents 316 observations out of 2600). When a subject never chose option A, the minimal value of option B was used (this case represents 89 observations out of 2600).

subjects' pronounced tendency for multiple switching is likely due to confusion. Following the same rule than Exley (2015), we exclude these 22 subjects from further analyses. For the remaining sample (178 subjects), we take the first switching point as the actual switching point (like, *e.g.*, Exley, 2015; Meier and Sprenger, 2015).[14]

Lottery valuations are scaled up as a percentage of the corresponding riskless lottery valuation. Self-certainty equivalents are thus divided by 10 since riskless lottery-for-self would pay €10. Charity-certainty equivalents are divided by X since lottery-for-charity would pay €X. For example, if the self-certainty equivalent of a lottery is €8.25, the valuation is $\frac{8.25}{10} = 82.5\%$. If the charity-certainty equivalent of a lottery is €13.5 and X equals €20, the valuation is $\frac{13.5}{20} = 67.5\%$. Both scaled certainty equivalents are comparable since donating €X to the charity is equivalent to receiving €10. For the sake of conciseness, lottery valuations scaled as a percentage of the corresponding riskless lottery valuation are referred to as "lottery valuations" thereafter.

The calibration task estimates, at the subject level, the value X such that the subject is indifferent between receiving €10 or donating €X to the charity. The distribution of these valuations is displayed in Figure 2. The average estimated charity-valuation of a self-payoff of €10, X, is 24.6 ($s.d. = 7.2$): to convince a subject to forgo a payoff of €10, the charity has to receive at least €24.6. Five subjects exhibit pure pro-social motivation as they prefer to donate any positive amount to the charity than receiving €10. On the other hand, the estimated X is €30 for 94 subjects. Among these 94 subjects, 23 subjects forgo the self-payoff of €10 if the charity receives €30 (12.9%) and 71 subjects never renounce to the €10 even if the charity receives the maximum transfer (39.9%, 71 subjects out of 178). For these 71 subjects, the estimation of X is censored since they exhibit choices consistent with pure selfish motivation. For these censored subjects, X is under-estimated.[15] We acknowledge that this is problematic when comparing self-valuations and charity-valuations, as under-estimating X inclines conclusions toward finding excuse-driven behavior (see footnote 9). An alternative could be to exclude censored subjects from further analysis. However, this introduces a selection bias in the data. Indeed, more altruistic subjects (who have a lower value of X) are less likely to exhibit a self-excusing

[14] Appendix E shows that our conclusions are robust to the inclusion of decisions by multiple switchers.

[15] Increasing the maximal transfer in the calibration task above €30 could reduce the number of censored subjects. However, censored subjects may have purely selfish preferences; moreover, increasing the maximal transfer would increase both the expected cost of the experiment and the number of decisions. Note that the percentage of censored subjects with selfish preferences is comparable with that found in Exley (2015, 42%) and Engel (2011)'s meta-study (36%).

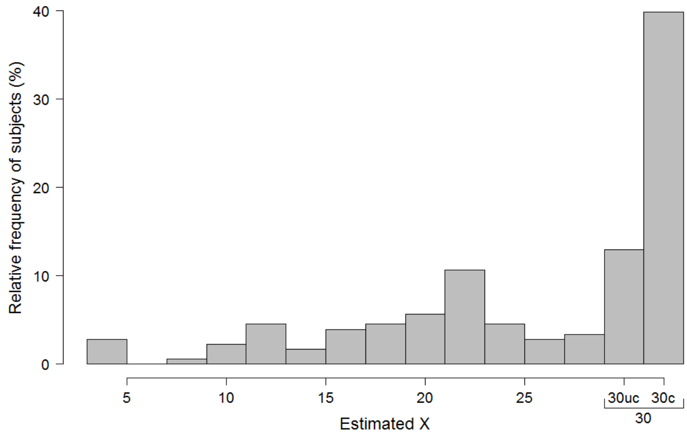


Figure 2: Distribution of estimated charity-valuation of €10 of self-payoff (X).

Notes: The histogram represents the percentage of the 178 subjects with a given X. "30uc" corresponds to subjects with an uncensored X equal to €30 and "30c" corresponds to subjects with a censored X equal to €30.

behavior (see Appendix D). Excluding censored subjects thus corresponds to excluding those who are more prone to self-excusing behavior. Therefore, exclusion provides a very conservative test of the existence of excuse-driven behavior.

To address this issue, the analyses involving comparisons between self-payoffs and charity-payoffs are reported using both the very conservative approach (excluding the censored subjects) and the less conservative one (including them). For each hypothesis, if the analysis excluding the censored subjects confirms the analysis including these subjects, it is reported in Appendix. Otherwise, it is reported and discussed in the main document.

4.2 Moral Wiggle Room Under Uncertainty

We first analyze separately behavior under risk and behavior under ambiguity to test the existence of self-excusing behavior in each setting. Second, we compare behavior under risk and under ambiguity to assess whether self-excusing behavior increases under ambiguity compared to risk. While in the first two subsections ambiguity encompasses both partial and full ambiguity, the third subsection distinguishes between the two levels of ambiguity. Descriptive statistics are summarized in Table 2 and excuse-driven behavior is analyzed throughout the results section.[16]

[16]Self-valuations of lotteries for self and charity-valuations of lotteries for charity are lower than 100% of all types of uncertainty ($p<0.001$). It means that subjects give less under uncertainty compared to the corresponding uncertainty-free situation. It thus appears that our subjects are not pure egoists as defined in the theory of warm glow of giving (Andreoni, 1990) since they are not influenced solely by a fixed utility associated with the act of giving (irrespective of whether

Decision type:	Self/Self	Charity/Charity	Charity/Self	Self/Charity	All
Including censored subjects (n=178):					
Risk	46.95	45.24	75.29	36.07	50.89
	(20.28)	(22.70)	(28.44)	(26.81)	(28.76)
Ambiguity	43.02	39.66	72.84	32.82	47.09
	(18.65)	(18.41)	(27.40)	(23.53)	(27.03)
Partial ambiguity	43.78	40.87	73.81	32.71	47.79
	(22.42)	(21.24)	(29.44)	(23.87)	(28.94)
Full ambiguity	42.26	38.46	71.88	32.92	46.38
	(21.96)	(20.75)	(31.01)	(25.73)	(29.32)
Excluding censored subjects (n=107):					
Risk	49.46	46.59	66.68	44	51.68
	(19.27)	(20.54)	(28.56)	(26.30)	(25.49)
Ambiguity	43.06	41.87	63.74	40.68	47.34
	(18.46)	(17.95)	(26.62)	(23.98)	(23.95)
Partial ambiguity	43.06	42.87	64.63	40.56	47.78
	(21.40)	(20.72)	(28.89)	(24.33)	(25.89)
Full ambiguity	43.06	40.86	62.85	40.79	46.89
	(21.43)	(20.30)	(30.62)	(26.90)	(26.73)

Table 2: Descriptive statistics - mean lottery valuations (expressed in terms of a percentage of the corresponding riskless lottery valuation) by decision and lottery type.

Notes: Standard errors are in parentheses below corresponding means. Decision types are referred to following the norm Safe/Lottery, except for "All" that give values for all decision types pooled together. For ambiguity, values are given either for both ambiguity levels pooled ("ambiguity") or by ambiguity level ("partial ambiguity" and "full ambiguity"). Censored subjects are included in the upper part of the table while they are excluded in the lower part.

4.2.1 Excuse-Driven Behavior Under Risk and Under Ambiguity

To test for excuse-driven behavior under risk and under ambiguity, we use linear regressions with errors clustered at the subject level since each subject made 12 repeated decisions. The dependent variable is the lottery valuation (*i.e.*, how much the subject values the lottery, expressed as a percentage of the corresponding riskless lottery). The independent variables include three dummy variables. "*Charity*" is equal to 1 for lotteries-for-charity (symmetrically, "$Self$" is equal to 0 in this case). "*Ambiguity*" is equal to 1 for lotteries under ambiguity (symmetrically, "*Risk*" is equal to 0 in this case). "*Trade-off*" is equal to 1 if the safe payoff and the lottery outcome do not have the same beneficiary. The independent variables also include interaction terms. Regressions are reported in Table 3. Figure 3-a displays a visual presentation of the effect of the self *vs.* charity trade-off under risk (on the left) and under ambiguity (on the right).

We introduce our first result:

the gift reaches its beneficiary or not).

Result 1-R. *There is evidence of excuse-driven preferences under risk-for-self.*

Support for Result 1-R: the coefficient associated with the "*Trade-off*" variable in model (1) of Table 3 measures the difference between charity-valuations and self-valuations of lotteries-for-self under risk. We find that the charity-valuations of lotteries-for-self are significantly increased by 28.34 percentage points (p.p.) compared to the self-valuations ($p < 0.001$).[17] It means that subjects are less risk-averse when the safe amount is donated to the charity than to themselves. This behavior that results in increased expected self-payoffs to the detriment of donations reveals a self-excusing behavior. This supports Hypothesis 1-R.[18]

Result 1-A. *There is evidence of excuse-driven preferences under ambiguity-for-self.*

Support for Result 1-A: the coefficient associated with the "*Trade-off*" variable in model (2) of Table 3 measures the difference between charity-valuations and self-valuations of lotteries-for-self under ambiguity. We find that charity-valuations of lotteries-for-self increase by 29.82 p.p. compared to self-valuations ($p < 0.001$). This indicates that subjects exhibit excuse-driven behavior also under ambiguity-for-self (Hypothesis 1-A).

Result 2-R. *There is some evidence of excuse-driven preferences under risk-for-charity.*

Support for Result 2-R: the coefficients associated with the "*Trade-off*" variable in models (3) and (5) of Table 3 measure the difference, including and excluding censored subjects, between self-valuations and charity-valuations of lotteries-for-charity under risk. When including censored subjects, the self-valuations of lotteries-for-charity are significantly decreased by 9.17 p.p. compared to the charity-valuations of the same lotteries ($p < 0.001$). The analysis including censored subjects thus supports the existence of excuse-driven behavior under risk-for-charity. However, excluding censored subjects leads to a non-statistically significant decrease by 2.59 p.p. ($p = 0.379$). The increase in the p-value is not only due to the decrease in the sample size but it is also associated with an effect size more than three times smaller (for comparable standard errors) due to this selection. This very conservative approach does not support Hypothesis 2-R.

[17] Throughout the paper, when discussing our regressions, we report the associated p-values. Otherwise, we report the p-values from two-sided t-tests when comparing one sample to a specific value and we report the p-values from two-sided paired t-tests when comparing two samples from repeated measures.

[18] As detailed in Appendix C, Result 1-R and Result 1-A are robust to the exclusion of censored subjects.

Result 2-A. *There is some evidence of excuse-driven preferences under ambiguity-for-charity.*

Support for Result 2-A: the coefficients associated with the variable "*Trade-off*" in models (4) and (6) of Table 3 measure, including and excluding censored subjects, the difference between self-valuations and charity-valuations of lotteries-for-charity under ambiguity. When including censored subjects, the charity-valuations of lotteries-for-self decrease by 6.85 p.p. compared to the self-valuations of the same lotteries ($p < 0.001$). The analysis including censored subjects thus supports the existence of excuse-driven behavior under ambiguity-for-charity. However, excluding censored subjects leads to a non-statistically significant decrease by 1.19 p.p. ($p = 0.618$). The effect is divided by more than five when excluding these subjects (for comparable standard errors). As for risk, this very conservative approach does not support Hypothesis 2-A.

To go further, we compare the strength of excuse-driven behavior for lotteries-for-self *vs.* lotteries-for-charity, under risk or under ambiguity. As stated above, excuse-driven behavior causes a change in lotteries-for-self valuations of 28.34 p.p. under risk and 29.82 p.p. under ambiguity (when including censored subjects). This leads to a change in lotteries-for-charity valuation of 9.17 p.p. under risk and 6.85 p.p. under ambiguity (also when including censored subjects). We find a statistically significant increase of excuse-driven behavior when individuals value lotteries-for-self compared to lotteries-for-charity for both types of uncertainty ($p < 0.001$ under risk and under ambiguity — regardless of whether the censored subjects are included or not).

To conclude, the separate analysis of the trade-off between self-payoffs and donations under risk and under ambiguity suggests the existence of a moral wiggle room both under risk and under ambiguity, even though subjects have been able to select their favorite charity. We observe that attitudes toward risk and ambiguity differ when there is a trade-off between self and charity. This difference results in a reduction of altruistic behavior compared to the baseline riskless situation captured in the calibration task. While we find only some evidence supporting the existence of excuse-driven behavior for lotteries-for-charity, it is unequivocal that excuse-driven behavior is stronger when individuals value lotteries-for-self than when they value lotteries-for-charity.

	Dependent variable: Lottery valuation (%)					
	(1)	(2)	(3)	(4)	(5)	(6)
Trade-off	28.34***	29.82***	−9.17***	−6.85***	−2.59	−1.19
	(2.53)	(2.32)	(2.41)	(1.90)	(2.95)	(2.39)
Ambiguity	−3.93***	−3.93***	−5.58***	−5.58***	−4.72***	−4.72***
	(1.49)	(1.49)	(1.44)	(1.44)	(1.67)	(1.67)
Charity	−1.71	−3.36**				
	(1.77)	(1.58)				
Self			1.71	3.36**	2.87	1.19
			(1.77)	(1.58)	(2.20)	(1.93)
Charity × Trade-off	−37.51***	−36.67***				
	(3.91)	(3.56)				
Self × Trade-off			37.51***	36.67***	19.81***	21.87***
			(3.91)	(3.56)	(5.00)	(4.53)
Charity × Ambiguity	−1.64					
	(1.92)					
Self × Ambiguity			1.64		−1.68	
			(1.92)		(2.59)	
Charity × Risk		1.64				
		(1.92)				
Self × Risk				−1.64		1.68
				(1.92)		(2.59)
Trade-off × Ambiguity	1.48		2.32		1.40	
	(2.13)		(2.12)		(2.74)	
Trade-off × Risk		−1.48		−2.32		−1.40
		(2.13)		(2.12)		(2.74)
Charity × Trade-off × Ambiguity	0.84					
	(2.93)					
Charity × Trade-off × Risk		−0.84				
		(2.93)				
Self × Trade-off × Ambiguity			−0.84		2.06	
			(2.93)		(4.06)	
Self × Trade-off × Risk				0.84		−2.06
				(2.93)		(4.06)
Intercept	46.95***	46.95***	45.24***	45.24***	46.59***	46.59***
	(1.52)	(1.52)	(1.70)	(1.70)	(1.99)	(1.99)
Censored subjects	Yes	Yes	Yes	Yes	No	No
Num. obs.	2136	2136	2136	2136	1284	1284
Num. ind. obs.	178	178	178	178	107	107

Table 3: Lottery valuations.

Notes: OLS regressions with errors clustered a the subject level. "Trade-off": Trade-off between self-payoff and donations. "Charity": Outcome of the lottery for the charity. "Self": Outcome of the lottery for the subject. "Ambiguity": Lottery under ambiguity. "Risk": Lottery under risk. The symbol "×" is used for interaction variables. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

4.2.2 Excuse-Driven Behavior Under Ambiguity Compared to Risk

We next compare the lottery valuations under risk and under ambiguity, first by decision type, then by lottery type.

For all types of decisions, valuations under ambiguity are lower than valuations under risk (Figure 8 of the Appendix). The mean self-valuation of the lotteries-for-self is €4.70 (47.0% of €10). Since risk neutral individuals would value this lottery €5 (since its outcome is €10 with one chance out of two), it indicates that subjects exhibit some risk aversion ($p = 0.046$). The valuation is even lower under ambiguity: €4.30 ($p = 0.009$), which reveals the presence of ambiguity aversion.

We observe a similar pattern for the charity-valuation of lotteries-for-charity. Subjects are averse to risk-for-charity and ambiguity-for-charity, as both valuations are significantly lower than 50% (respectively 45.2% and 39.7%, $p = 0.006$ and $p < 0.001$). Furthermore, the mean valuation decreases by 5.58 p.p. under ambiguity compared to risk ($p < 0.001$). The difference in valuation between ambiguity and risk is similar for lotteries-for-charity and for lotteries-for-self ($p = 0.391$). This reveals that there is no significant difference in ambiguity aversion when evaluating ambiguity-for-self or ambiguity-for-charity.

The charity-valuation of lotteries-for-self is above 50% ($p < 0.001$). The mean valuation is €7.53 under risk and €7.28 under ambiguity. For this type of decision, a higher lottery valuation increases the number of decisions in which the subject receives the lottery and decreases the number of decisions in which the charity receives a safe payoff. A higher lottery valuation is thus associated with lower donations. However, valuation decreases under ambiguity compared to risk but this is only borderline significant ($p = 0.094$). Without controlling for risk and ambiguity preferences, there is a trend suggesting that ambiguity tends to reduce excuse-driven behavior instead of reinforcing it.

The last type of valuation involves self-valuations of lotteries-for-charity. For this type of decision, a lower lottery valuation decreases the number of decisions in which the charity receives the lottery and increases the number of decisions in which the subject receives a safe payoff. A lower lottery valuation is thus associated with less donations. The mean valuation is 36.07% under risk and 32.81% under ambiguity. Without controlling for risk and ambiguity preferences, ambiguity decreases valuations significantly ($p = 0.034$). It thus seems that for lotteries-for-charity ambiguity increases the moral wiggle room. However, without using as a baseline the charity-valuation of lotteries-for-charity, we cannot disentangle the effect of ambiguity aversion from the effect of excuse-driven behavior, as both effects tend to decrease lottery valuations. Thus, we now compare the difference in lottery valuations with and without a self *vs.* charity trade-off under risk and under ambiguity to test Hypothesis 3 and Hypothesis 4. These differences are presented in Figure 3-b. Their comparisons are given by the coefficients associated with the "*Trade-off* $\times$ *Ambiguity*" variable in Table 3 (model 1 for lotteries-for-self and model 3 for lotteries-for-charity).

Result 3. *There is no evidence of a reinforced excuse-driven behavior under ambiguity-*

for-self compared to risk-for-self.

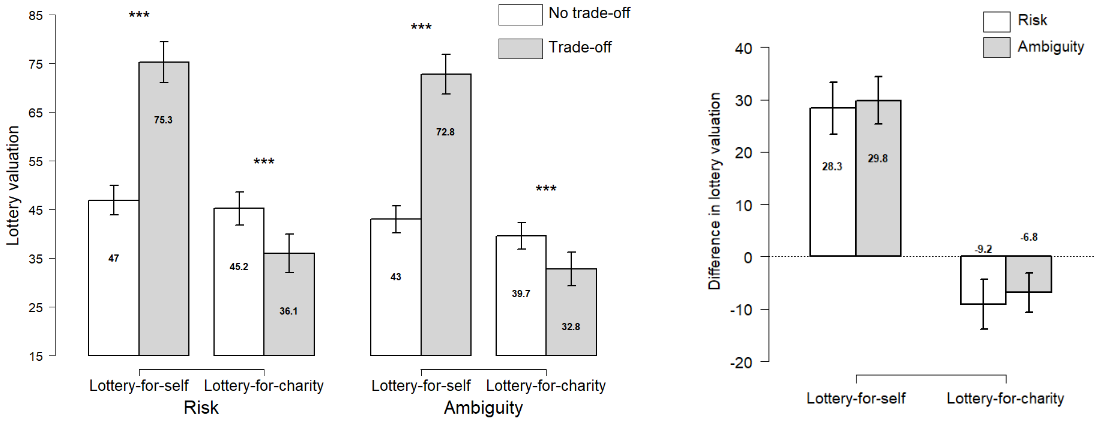
Support for Result 3: A larger difference between the self-valuations of lotteries-for-self (no self *vs.* charity trade-off) and the charity-valuations of lotteries-for-self (self *vs.* charity trade-off) informs on a reinforced excuse-driven behavior. Figure 3-b shows that the difference between self-valuation and charity-valuation of lotteries-for-self is 28.34 p.p. under risk and 29.82 p.p under ambiguity. Descriptively, an increased difference under ambiguity (1.48 p.p.) goes in the direction of reinforced excuse-driven behavior under ambiguity. However, this difference is not statistically significant (Table 3, model (1) - effect associated with "*Trade-off* × *Ambiguity*": p=0.486). Therefore, Hypothesis 3 is not supported. This result is robust to the exclusion of censored subjects (see Appendix C).

Result 4. *There is no evidence of reinforced excuse-driven behavior under ambiguity-for-charity compared to risk-for-charity.*

Support for Result 4: A larger difference between charity-valuations of lotteries-for-charity (no self *vs.* charity trade-off) and self-valuations of lotteries-for-charity (self *vs.* charity trade-off) informs on a reduced excuse-driven behavior. Figure 3-b shows that this difference is -9.17 p.p. under risk and -6.85 p.p. under ambiguity. Descriptively, a decreased difference under risk goes in the direction of reinforced excuse-driven behavior under risk (Table 3, effect associated with "*Trade-off* × *Ambiguity*": $\beta = 2.32$, $p = 0.273$ in model 3 and $\beta = 1.40$, $p = 0.609$ in model 5). It rejects that ambiguity reinforces excuse-driven behavior (one-sided t-test, $p = 0.863$). We therefore conclude that Hypothesis 4 is not supported.

Thus, controlling for the primary effect of ambiguity on lottery valuations reverses potential conclusions. In fact, disentangling between the primary effect and the secondary excuse-driven effect reveals no evidence of reinforced excuse-driven behavior under ambiguity compared to risk, both for lotteries-for-self and for lotteries-for-charity. We conclude that any type of uncertainty is used as an excuse not to give and thus, the type of uncertainty is not determinant.

This finding contrasts with those of Haisley and Weber (2010) on the higher prevalence of self-excusing behavior under ambiguity compared to risk for subjects without previous encounter of risk or ambiguity on their own payoffs. In Appendix F, we investigate whether this dimension could explain the absence of support for Hypothesis 3 and Hypothesis 4. In



a - Effect of a self vs. charity trade-off *b - Effect of ambiguity by lottery type*

Figure 3: Comparison of lottery valuations (%) under risk and under ambiguity

Notes: (a) Mean lottery valuation for each decision. (b) Difference in mean lottery valuations between decisions with a self vs. charity and without this trade-off either for lotteries-for-self or lotteries-for-charity. While there is evidence of excuse-driven behavior under risk and ambiguity (a), this behavior is not reinforced under ambiguity compared to risk (b). Censored subjects are not excluded. Mean values are written at bars' centers. White bars provide valuations: (a) without a trade-off, (b) under risk. Grey bars provide valuations: (a) with a trade-off, (b) under ambiguity. The horizontal lines represent 95% confidence intervals. Stars represent the level of significance for paired t-tests. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

fact, we do not find an effect of having previously faced a lottery-for-self on decisions with a self *vs.* charity trade-off. We thus conclude that there is no evidence that behavioral differences between constrained and unconstrained decisions explain Result 3 or Result 4.

4.3 Excuse-Driven Behavior Under Partial and Full Ambiguity

In this section, we distinguish between the two levels of ambiguity. We study decisions under partial ambiguity ($\tilde{p} \in [0.25, 0.75]$) and decisions under full ambiguity ($\tilde{p} \in [0, 1]$) separately before comparing them with decisions under risk.

Hypothesis 1-A regarding excuse-driven behavior under ambiguity-for-self is supported both for partial ambiguity and for full ambiguity ($p < 0.001$ in both cases). Hypothesis 2-A regarding ambiguity-for-charity is supported for partial ambiguity ($p < 0.001$) and full ambiguity ($p = 0.009$) when censored subjects are included. However, when excluding these subjects, Hypothesis 2-A is supported neither for partial ambiguity ($p = 0.383$), nor for full ambiguity ($p = 0.979$).

To compare behavior under risk vs. ambiguity by decision type, we regress "Partial ambiguity" (equal to 1 for lotteries under partial ambiguity) and "Full ambiguity" (equal to 1 for lotteries under full ambiguity) on the lottery valuation for each decision type.

Errors are clustered at the subject level, as each subject made three choices per decision type. Table 4 reports the estimates. Full ambiguity decreases valuations for all decision types. Partial ambiguity has a negative effect on valuations for all decision types at the exception of the self-valuation of lotteries-for-charity ($p = 0.297$). Our conclusions by decision type are thus largely confirmed for each ambiguity level. When comparing valuations within ambiguity levels, we find no statistical difference between valuations under partial ambiguity and under full ambiguity even if, descriptively, most valuations under full ambiguity are lower than corresponding valuations under partial ambiguity (except for Self/Charity decisions).

Result 3 is supported for any level of ambiguity. Under partial ambiguity, charity-valuations of lotteries-for-self increase by 30.03 p.p. compared to self-valuations of the same lotteries. Under full ambiguity, they increase by 29.62 p.p. The difference with the increase under risk (28.34 p.p.) is not significant either compared with the increase under partial ambiguity (1.68 p.p., $p = 0.403$) or with the increase under full ambiguity (1.27 p.p., $p = 0.667$). Likewise, Result 4 is supported for any level of ambiguity. Under partial ambiguity, self-valuations of the lotteries-for-charity decrease by 8.16 p.p. compared to charity-valuations of the same lotteries. Under full ambiguity, they decrease by 5.54 p.p. The difference with the decrease under risk (9.17 p.p.) is not significantly different from the decrease under partial ambiguity (1.01 p.p, $p = 0.667$) or from the decrease under full ambiguity (3.64 p.p., $p = 0.109$). In conclusion, previous findings hold for both levels of ambiguity.

	Dependent variable: Lottery valuation (%)			
Type of decision (Safe/Lottery):	Self/Self	Charity/Charity	Charity/Self	Self/Charity
	(1)	(2)	(3)	(4)
Partial ambiguity	-3.17^{**}	-4.37^{***}	-1.49	-3.36^{**}
	(1.60)	(1.60)	(1.43)	(1.62)
Full ambiguity	-4.69^{**}	-6.78^{***}	-3.41^{*}	-3.15^{*}
	(1.87)	(1.64)	(2.02)	(1.65)
Intercept	46.95^{***}	45.24^{***}	75.29^{***}	36.07^{***}
	(1.52)	(1.70)	(2.14)	(2.01)
Num. obs.	534	534	534	534
Num. ind. obs.	178	178	178	178

Table 4: Effect of partial ambiguity and full ambiguity by decision type.

Notes: OLS regressions with errors clustered at the subject level. "Partial ambiguity": Lottery under partial ambiguity. "Full ambiguity": Lottery under full ambiguity. Lotteries under risk compose the reference category. Censored subjects are not excluded. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

5 Discussion and Conclusion

Our laboratory experiment aims at disentangling between a direct, non-excuse driven, effect of risk and ambiguity on charitable giving and excuse-driven behavior. Our findings indicate that the valuation of lotteries for self is affected by self-excusing behavior: individuals use the pretext of risk to decrease their donations. The valuation of lotteries for self is more strongly affected by such behavior than the valuation of lotteries for others. Overall, we find no evidence that excuse-driven behavior is reinforced under ambiguity compared to risk. It suggests that individuals use any type of uncertainty as an excuse not to give but do not care about the type of uncertainty.

Regarding risk as an excuse not to give, our results are in line with those of Exley (2015). The only difference is that Exley (2015) finds evidence of excuse-driven behavior in the valuation of lotteries-for-charity both with and without censored subjects, while we only find evidence of such behavior when including censored subjects in the analysis. We reject that this difference is driven by statistical power, but a lower number of decisions in our within-subject design may reduce behavioral changes between decisions.[19] Indeed, subjects may have a better recollection of previous decisions that could lead to some anchoring effect. Also Exley (2019) provides converging evidence of the existence of excuse-driven response to charity performance indicators: the low-rating of a charity gives individuals an excuse not to give. A low rating affects the benefit of the donation and is thus related to risk-for-charity. Overall, these different studies point to the existence of excuse-driven behavior under risk-for-charity.

Our extension of Exley (2015) to ambiguity reveals no difference in the use of moral wiggle room under risk or ambiguity. This result contrasts with those of Haisley and Weber (2010) that conclude on reinforced self-serving behavior under ambiguity compared to risk for a group of subjects. As already pointed out, Haisley and Weber (2010) based their analysis on the evaluation of past decisions. Differences between risk and ambiguity can therefore be due to an excuse-driven use of ambiguity when deciding to donate, but also to self-serving selective recalls. In our settings, selective memory is excluded by design, and this may contribute to explain the difference between our results and those of Haisley

[19] In Exley (2015) subjects evaluate seven different lotteries that vary regarding their probability of paying the non-zero amount, while our design includes a unique probability ($p = 0.5$). From a statistical point of view, we have collected more independent observations (180 subjects against 99 subjects) and the magnitude of excuse-driven behavior is globally stable for all probabilities in her study (except a decrease for probabilities smaller than 0.1).

and Weber (2010).

Our study highlights differences in excuse-driven behavior when individuals evaluate uncertainty for themselves or for a charity. It extends the findings of previous studies that have compared risk evaluation in both settings. Whereas Reynolds et al. (2009) and Eriksen and Kvaløy (2010) find increased risk aversion when deciding on behalf of others, Chakravarty et al. (2011) conclude that individuals are more risk seeking, and Pollmann et al. (2014) find that such decrease in risk aversion when deciding on behalf of a principal is mitigated by accountability (see Polman and Wu (2019) for a meta-analysis highlighting that what matters is when decisions for others are riskier). We do not find difference in either risk attitudes (similar to Andersson et al. (2016) in the absence of losses) or ambiguity aversion (similar to Konig-Kersting and Trautmann (2016)) between lotteries for self and lotteries for charity. This suggests that individuals assume that the charity values uncertainty like themselves. However, the evaluation of lotteries for self is more prone to excuse-driven behavior than the evaluation of lotteries for charity, both under risk and under ambiguity.

While we implemented two levels of ambiguity, we did not find any behavioral differences when subjects face full or partial ambiguity. This lack of effect of the level of ambiguity on behavior could be related to the higher importance of the source of uncertainty on ambiguity attitudes compared to its level (Abdellaoui et al., 2011; Li et al., 2017). As our two levels of uncertainty were provided using the same source (a computerized random generator), subjects may not have distinguished between them in their own valuations, nor did they use the increase in the ambiguity level as an excuse to give less.

Lastly, our experiment provides some insights on how individuals integrate uncertainty in the expression of their social preferences. The impact of risk on social preferences could be modeled through a distinction between ex-ante and ex-post fairness (Saito, 2013). While we interpret the decrease in donations under risk and ambiguity as a self-serving interpretation of uncertainty, it could also be interpreted as evidence of a mixture of ex-ante and ex-post fairness (see Cettolin et al., 2017 for a discussion of Saito's predictions about giving behavior under uncertainty). The observed adjustment of social preferences to the social context as well as the lack of additional effect of ambiguity compared to risk open questions on how to model the complex interactions between uncertainty and social preferences in a charitable giving setting.

Our findings stress the importance for non-profit organizations of reducing uncertainty to increase donations. Indeed, reducing uncertainty could increase donations through a twofold process: it would increase the value of a donation and also discourage excuse-driven behavior. It would be difficult for charities to reduce uncertainty on the costs of donations, as these costs are induced by the intrinsic characteristics of potential donors. Charities should rather target the reduction of uncertainty on the benefits of donations (e.g., by fighting embezzlement and mismanagement though an increase in transparency or a reduction in the number of intermediaries between donors and recipients). We also inform on the gain of providing potential donors with more precise information on the costs and benefits of the donations. Indeed, our results show that more precise information increases the value of the donation although it does not discourage excuse-driven behavior. As clarifying randomness usually comes at a cost, better understanding its gain can help design more efficient interventions for the collection of charitable donations.

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APPENDICES

A Experimental Design

A.1 Instructions (original in French)

Instructions for Part 1 were distributed after the choice of the charity; instructions for Part 2 were distributed after the calibration task.

Instructions

Welcome to this experiment on decision making. Please turn off your phone and put it away. You are not allowed to communicate with other participants for the duration of the experiment, otherwise you will be excluded from the session without receiving your gains.

All the decisions you make during the session are anonymous: you will never be asked to enter your name into the computer.

During this session, you can make money for yourself and for a charity that you can choose among three. The amount you will earn depends on your decisions. Please read the instructions carefully.

This session consists of two parts in which you will make decisions grouped in tables. At the end of the session, two decisions will be randomly selected by the computer program in two different tables. The two selected tables may or may not belong to the same part. Your earnings and the earnings of the charity for these two parts will be the sum of the amounts respectively earned in these two decisions. Your total earnings consist of your payoff in these two parts, €5 for participating in this session and an additional amount for completing a questionnaire at the end of the session. The total earnings of the charity are equal to its payoff in these two decisions. To summarize:

Your earnings =
your payoff in Decision A (part 1 or 2) + your payoff in Decision B (part 1 or 2) + €5 +
payoff from the questionnaire
Charity earnings =
charity earnings in Decision A (part 1 or 2) + charity earnings in Decision B (part 1 or 2)

Your earnings will be paid in cash, in a separate room, privately and confidentially at the end of the session. The earnings of each charity will be paid to these charities by an experimentalist also at the end of the session. The earnings written on your receipt of payment will be equal to the sum of your earnings and the earnings of the charity. We remind you that our ethical rules are strict: all information that we communicate to you during the session is true and we commit to transfer the sums earned by the charities to these charities. We wish that at the end of the session at least one of you stays a few minutes to attend the transfer of the payment to the charities. We will make a call for volunteers at the end of the session.

We first present the instructions for the preliminary part. You will receive instructions for each new part at the end of the previous part.

Preliminary part

During this part, you will have to select which charity your decisions will affect. You will have to choose between three charities. The names of these charities and a brief description of their fields of action are listed below, in alphabetical order:

- Ligue Contre le Cancer: this charity aims to support medical research, information and public awareness as well as the fight for the respect of the sick person and his family.
- Médecins Sans Frontières: this charity provides medical assistance to populations whose lives or health are threatened in the event of armed conflicts, epidemics, natural disasters or exclusion of care.
- Restos du Coeur: this charity provides volunteer assistance to poor people by promoting their access to free meals, their social and economic integration, and by fighting against poverty.

When you have selected a charity, please press OK. When all participants have made their decision, the instructions for Part 1 will be distributed.

***

Please read these instructions again. During the whole session if you have any questions, please raise your hand or press the red button on the side of your desk. We will answer your questions in private.

Part 1

During this part, you will have to make 16 decisions presented in a single table. Each decision consists in choosing between two options that influence your payoff and the payoff of the chosen charity if this decision is drawn for payment at the end of the session.

The decisions are presented in a table displaying 4 columns:

- The first column indicates the number of the decision.
- The second column indicates your payoff and the charity payoff with Option A.
- The third column indicates your payoff and the charity payoff with Option B.
- In the fourth column you enter your choice between Option A and Option B.

You must choose between the two options in each row of the table:

- With Option A your payoff is €10 and the charity payoff is €0.
- With Option B your payoff is €0 and the charity payoff is a certain amount between €0 and €30.

Consider for example Decision n°10.

- With Option A your payoff is €10 and the charity payoff is €0.
- With Option B your payoff is €0 and the charity payoff is €18.

The corresponding table row is shown below:

Decision	*Option A*	*Option B*	*Option choice*
10	**You €10** ; Charity €0	You €0 ; **Charity €18**	Option A ○ ○ Option B

If you choose Option A and this decision is selected for payment, you earn €10 for you and €0 for the charity. If you wish to choose this option, select the button to the right of "Option A" as shown below:

Decision	*Option A*	*Option B*	*Option choice*
10	**You €10** ; Charity €0	You €0 ; **Charity €18**	Option A ◉ ○ Option B

If you choose Option B and this decision is selected for payment, you earn €0 for you and €18 for the charity. If you wish to choose this option, select the button to the left of "Option B" as shown below:

Decision	*Option A*	*Option B*	*Option choice*
10	**You €10** ; Charity €0	You €0 ; **Charity €18**	Option A ○ ◉ Option B

Following decisions

In the table, the amount earned by the charity increases from one row to another. From top to bottom, most people start by choosing Option A and then switch to Option B from a given decision. One way to proceed is thus to determine the best row to switch from Option A to Option B and fill in the table accordingly.

Once you have made your decisions, please press OK. You can validate your choices only once you have made all your decisions. When all participants have completed Part 1, the instructions for Part 2 will be distributed.

***

Please read these instructions again.

Part 2

This part is composed of 12 tables which will appear successively. In each table, you must make 21 decisions.

As in Part 1, in each row of each table you have to choose between two options. But there are two differences from the table in Part 1:

- First, the beneficiary of Option A and the beneficiary of Option B vary from one table to another. There are 4 cases:
  - You are the beneficiary of both Option A and Option B.
  - The charity is the beneficiary of both Option A and Option B.

  - You are the beneficiary of Option A and the charity is the beneficiary of Option B.
  - The charity is the beneficiary of Option A and you are the beneficiary of Option B.

  You will be informed of the beneficiary of each option in each table.

- Second, the beneficiary of Option B payoff is still certain while the beneficiary of Option A payoff is not certain: it depends on the outcome of the lottery. The outcome of a lottery can take two values. Each value is associated with a number of chances that this value is drawn at random to be the outcome of the lottery. For example: €20 with 80 chances out of 100 and €0 with 20 chances out of 100.

  You will always be informed of the two possible payoffs. However, the number of chances of each payoff is not always known. There are 2 possible cases:

  - The number of chances is known. You will then be informed about the lottery itself. For example: €20 with 80 chances out of 100 and €0 with 20 chances out of 100.
  - the number of chances is unknown. You will then be informed of only the minimum number and the maximum number of chances for each of the two values. For example: €20 with a number of chances between 50 and 100 and €0 with a number of chances between 50 and 0. In this example, this means that €20 can have 50, 51, 52, and so on up to 100 possible chances, while €0 can have 50, 49, 48, and so on, respectively, up to 0 possible chances.

    Here is another example: €20 with a number of chances between 25 and 0 and €0 with a number of chances between 75 and 100. In this example, this means that €20 can have 25, 24, 23, and so on up to 0 possible chances, while €0 can have 75, 76, 77, and so on up to 100 possible chances.

Lotteries can change from one table to another. Before discovering each table, the characteristics of the lottery will be communicated to you using numbers, like in the examples above, and graphics. The outcome of the lottery is drawn at random by the program. When the number of chances is unknown, it is selected at random among the possible numbers of chances. In this case, it is not possible to determine the probability that each number of chances will be selected.

Description of the task

In each table, for each of the 21 decisions you have to choose between:

- Option A that may pay the outcome of the lottery, either to you or to the charity;
- and Option B that pays for sure a certain amount either to you or to the charity.

As in Part 1, you have to select an option in each row of the table and validate your decisions at the end of each table.

Following decisions

As in Part 1, all the choices in each table are ordered. The amount associated with Option B increases from one row to another. From top to bottom, most people start by choosing Option A and then switch to Option B from a given decision. One way to proceed is thus to determine the best row to switch from Option A to Option B and fill in the table accordingly.

Once you have completed Part 2, you will have to complete a brief questionnaire. After the questionnaire, you will be informed of the decisions drawn by the program, of your earnings and those of your chosen charity. Then, you will be called to receive your earnings in a separate room. Please carry out your label and your pre-filled payment receipt, and leave the instructions on your desk.

***

Please read these instructions again.

A.2 Screenshots

We report below decisions as they appeared on the subjects' computer screens. The text has been translated from French into English.

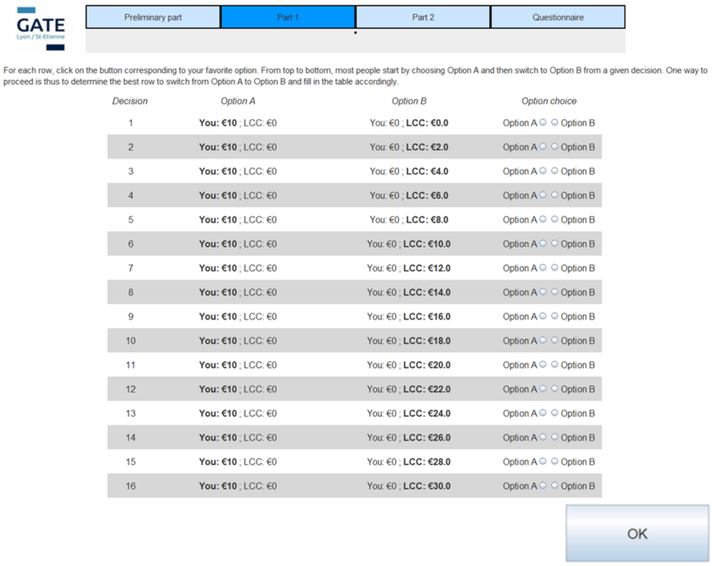

Figure 4: Calibration task, charity: "Ligue Contre le Cancer" (LCC).

Notes: Subjects have to choose between Option A and Option B for each row of the price list. Option A pays €10 to the subject. Option B pays a payoff to the "Ligue Contre le Cancer" that varies between €0 and €30.

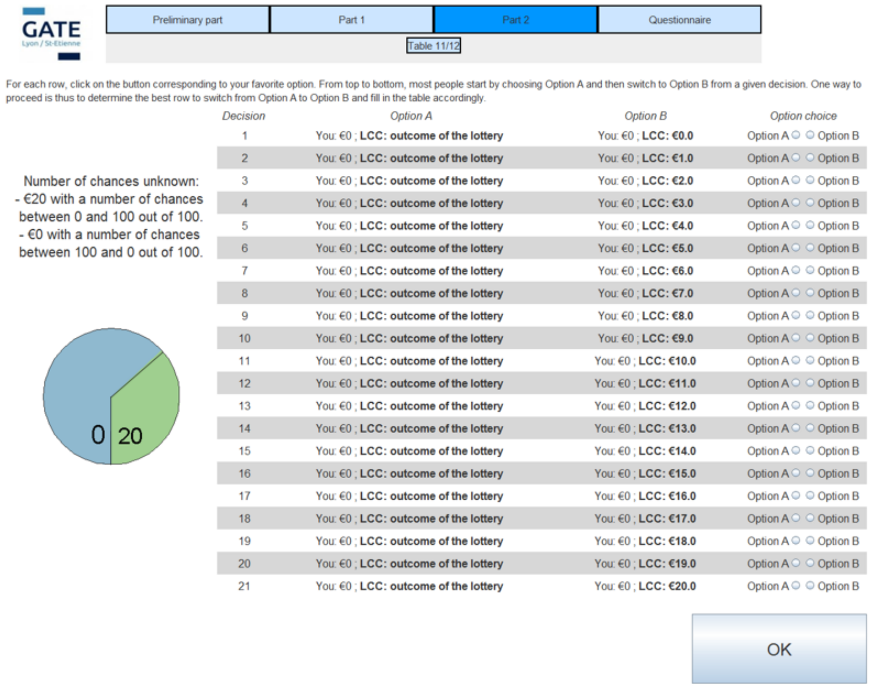

Figure 5: Decision "charity-valuation of lottery-for-charity" (Charity/Charity) under full ambiguity, charity: "Ligue Contre le Cancer" (LCC), $X = €20$.

Notes: Subjects have to choose between Option A and Option B for each row of the price list. Option A pays €20 to the "Ligue Contre le Cancer" with $p \in [0, 1]$ and €0 otherwise. Option B pays a safe payoff to the "Ligue Contre le Cancer" that varies between €0 and €20.

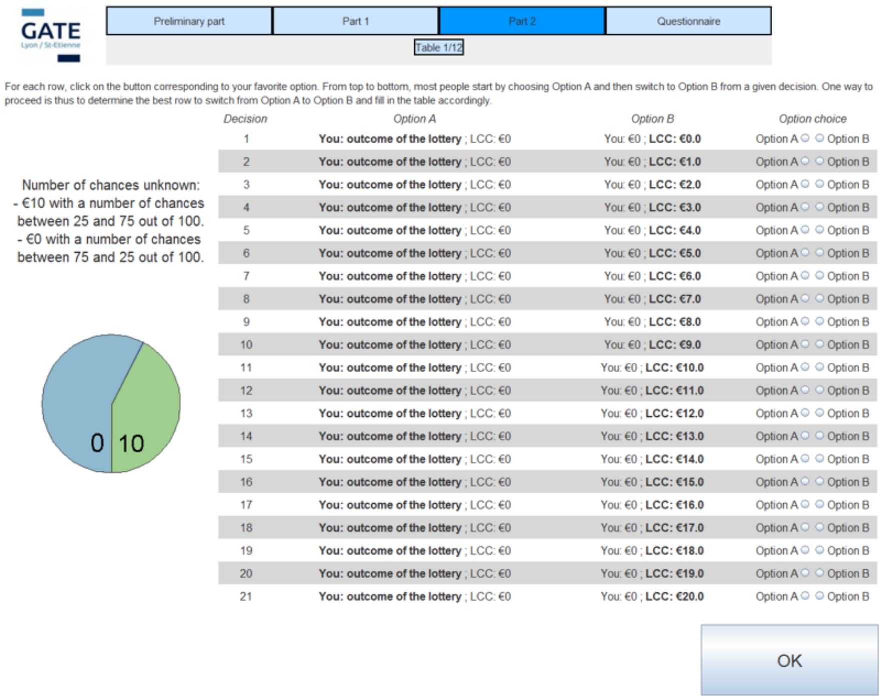

Figure 6: Decision "charity-valuation of lottery-for-self" (Charity/Self) under partial ambiguity, charity: "Ligue Contre le Cancer" (LCC), $X = €20$.

Notes: Subjects have to choose between Option A and Option B for each row of the price list. Option A pays €10 to the subject with $p \in [0.25, 0.75]$ and €0 otherwise. Option B pays a safe payoff to the "Ligue Contre le Cancer" that varies between €0 and €20.

A.3 Lottery Visual Aid

We describe the visual aid for the lotteries. We use as an example the lottery-for-charity of a subject with $X = 20$. Under risk the lottery is $(20, 0.5; 0, 0.5)$. Its presentation is stationary (Figure 7-a). Under partial ambiguity, the lottery is $(20, p; 0, p)$ with $p \in [0.25, 0.75]$. The limit between the two portions of the circle is moving back and forth between one extreme situation *i.e.* $(20, 0.75; 0, 0.25)$, and the other *i.e.* $(20, 0.25; 0, 0.75)$ (Figure 7-b). Under full ambiguity, the lottery is $(20, p; 0, p)$ with $p \in [0, 1]$. The limit between the two portions of the circle is thus moving back and forth between one extreme situation *i.e.* $(20, 1; 0, 0)$, and the other *i.e.* $(20, 0; 0, 1)$ (Figure 7-c). Under ambiguity, the font size of each payoff ("0" or "20") increases with its likelihood. Finally, the time needed to describe all possible situations, *i.e.* return to the same initial situation, is controlled to be equal to 10 seconds.

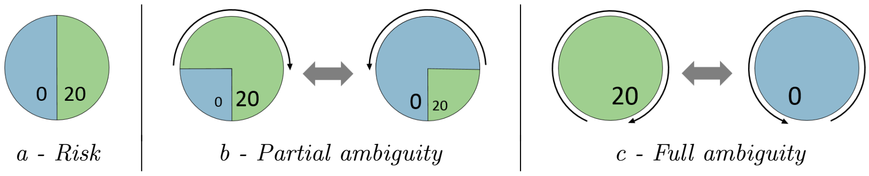

Figure 7: Schematic presentation of the lottery visual aid (potential gain of €20).

Notes: Thin black arrows represent movements of the limit between both parts of the circle. Thick grey arrows indicate the constant repetition of these movements.

B Additional Figure

Figure 8 presents the valuation for each decision type under risk and under ambiguity. While these values are also in Figure 3, Figure 8 focuses on the effect of ambiguity on each type of decision.

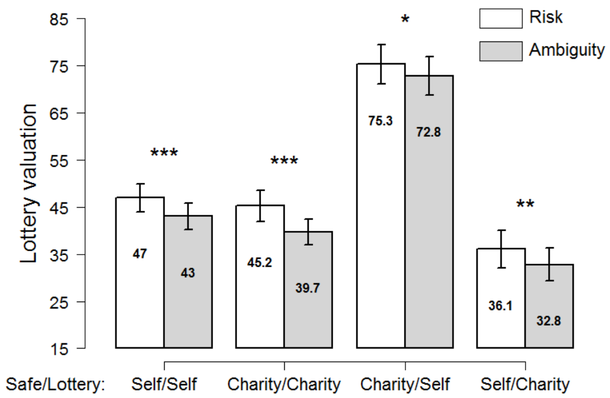

Figure 8: Effect of ambiguity by decision type.

Notes: Subjects behave differently under risk and under ambiguity. Censored subjects are not excluded. Mean values are written at bars' centers. White bars provide valuations under risk and grey bars provide valuations under ambiguity. The horizontal lines represent 95% confidence intervals. Stars represent the level of significance for paired t-tests. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

C Robustness Analysis with Exclusion of Censored Subjects

X is defined as the monetary payoff such that a subject is indifferent between receiving €10 or donating €X to the charity. For 71 subjects out of 178 the estimation of X is censored because these subjects have always chosen the selfish option in the calibration task. For these subjects, we consider in the main analysis that X is equal to 30 because 30 is the maximal value of X that can be identified with our task.

Some analyses are based on comparisons between self-payoffs and charity-payoffs that use X to express both measures on the same scale. These results may thus be impacted by censorship as charity-valuations are then over-estimated when compared to self-valuations. In this section, we replicate these analyses after excluding the censored subjects to check whether censorship impacts our conclusions. First, we replicate the analysis that aggregates partial ambiguity and full ambiguity and second, the analysis that differentiates between these two levels of ambiguity.

C.1 Risk and Ambiguity

Table A-1 reproduces model (1) and model (2) of Table 3 after excluding censored subjects. The coefficient associated to the "Trade-off" dummy (equal to 1 if the safe amount and the lottery outcome do not have the same beneficiary) gives the effect of the trade-off between lotteries-for-self and donations under risk (model 1) and under ambiguity (model 2). We find an increase of the lottery valuation by 17.22 p.p. under risk ($p < 0.001$) and 20.68 p.p. under ambiguity ($p < 0.001$). Result 1-R and Result 1-A are thus robust to the exclusion of censored subjects. These two increases are not significantly different from each other ($p = 0.243$, Table A-1 model (1): effect associated with "Trade-off $\times$ Risk"). Result 4 is thus also robust to the exclusion of censored subjects.

C.2 Risk, Partial Ambiguity, and Full Ambiguity

When differentiating between ambiguity levels, Result 2-A regarding excuse-driven behavior under ambiguity-for-self is supported both for partial ambiguity and for full ambiguity ($p < 0.001$ in both cases). Result 3 is also supported for any level of ambiguity. Under partial ambiguity, the charity-valuations of lotteries-for-self increases by 21.57 p.p. compared to self-valuations. Under full ambiguity, it increases by 19.79 p.p. The difference with the increase under risk (17.22 p.p.) is not significantly different either from the increase under partial ambiguity (4.34 p.p., $p = 0.102$) or the increase under full ambiguity (2.57 p.p., $p = 0.524$). Likewise, Result 4 is supported for any level of ambiguity. Under partial ambiguity, the self-valuation of lottery-for-charity decreases by 2.31 p.p. compared to the charity-valuation of the same lottery. Under full ambiguity, it decreases by 0.07 p.p. The difference with the decrease under risk (2.59 p.p.) is not statistically significantly different from the decrease under partial ambiguity (0.28 p.p, $p = 0.928$) or the decrease under full ambiguity (2.52 p.p., $p = 0.384$). In conclusion, previous findings are supported for each level of ambiguity when excluding censored subjects.

	Dependent variable: Lottery valuation (%)	
	(1)	(2)
Trade-off	17.22^{***}	20.68^{***}
	(3.30)	(3.01)
Charity	-2.87	-1.19
	(2.20)	(1.93)
Ambiguity	-6.40^{***}	-6.40^{***}
	(1.94)	(1.94)
Charity × Trade-off	-19.81^{***}	-21.87^{***}
	(5.00)	(4.53)
Charity × Ambiguity	1.68	
	(2.59)	
Charity × Risk		-1.68
		(2.59)
Trade-off × Ambiguity	3.46	
	(2.96)	
Trade-off × Risk		-3.46
		(2.96)
Charity × Trade-off × Ambiguity	-2.06	
	(4.06)	
Charity × Trade-off × Risk		2.06
		(4.06)
Intercept	49.46^{***}	49.46^{***}
	(1.87)	(1.87)
Censored subjects	No	No
Num. obs.	1284	1284
Num. ind. obs.	107	107

Table A-1: Lottery valuation excluding censored subjects

Notes: OLS regressions with errors clustered at the subject level. "Trade-off": Trade-off between self-payoff and donations. "Charity": Outcome of the lottery for the charity. "Self": Outcome of the lottery for the subject. "Ambiguity": Lottery under ambiguity. "Risk": Lottery under risk. The symbol "×" is used for interaction variables. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

D Censorship and Selection Bias

In this section we study whether excluding censored subjects from the analysis introduces a selection bias that biases results against excuse-driven behavior. Indeed, recall that censored subjects are those who have more selfish preferences in the calibration task.

To test this assumption, we evaluate whether increased altruism is associated with reduced excuse-driven behavior. The level of altruism is given by X (the value of the donation equivalent to receiving €10). The size of excuse-driven behavior is proxied by the difference in lottery valuation in situations with a self *vs.* charity trade-off and in situations without such trade-off. Excuse-driven behavior in the valuation of lotteries-for-self is identified by a positive difference while excuse-driven behavior in the valuation of lotteries-for-charity is identified by a negative difference.

We report the results of four linear regressions with errors clustered at the subject level. Models (1) and (3) include all subjects, whereas models (2) and (4) exclude the censored subjects. The dependent variable is the lottery valuation. The independent variables include three dummy variables. "$Charity$" is equal to 1 for lotteries-for-charity (symmetrically "$Self$" is equal to 0 in this case). "*Trade-off*" is equal to 1 if the safe payoff and the lottery outcome do not have the same beneficiary. "$(X - \bar{X})$" is equal to the centered calibration value X. We also interact the previous variables to generate interaction terms. The coefficient associated with the variable "*Trade-off* × $(X - \bar{X})$" gives the effect of an increase in X in trade-off situations on: lottery-for-self valuation in models (1) and (3), and on lottery-for-charity valuation in models (2) and (4). Regressions are reported in Table A-2.

We find that excuse-driven behavior is reinforced for subjects with a high value of X for both types of lotteries. Conclusions are similar when considering all subjects or only uncensored subjects ($p < 0.001$ in the four models). We conclude that excluding censored subjects corresponds to excluding subjects that are more prone to behave in a self-excusing manner. It supports previous findings from Exley (2015).

	Dependent variable: Lottery valuation (%)			
	(1)	(2)	(3)	(4)
Trade-off	29.33***	−7.62***	19.52***	−1.66
	(1.76)	(1.62)	(2.33)	(1.96)
$(X - \bar{X})$	1.72***	−2.71***	1.72***	−2.21***
	(0.40)	(0.43)	(0.48)	(0.59)
Charity	−2.81**		−1.75	
	(1.37)		(1.61)	
Self		2.81**		1.75
		(1.37)		(1.61)
Charity × Trade-off	−36.95***		−21.18***	
	(2.67)		(3.40)	
Self × trade-off		36.95***		21.18***
		(2.67)		(3.40)
Trade-off × $(X - \bar{X})$	2.33***	−1.57***	2.09***	−1.52***
	(0.25)	(0.25)	(0.30)	(0.32)
Charity × $(X - \bar{X})$	−0.18		−0.11	
	(0.17)		(0.22)	
Self × $(X - \bar{X})$		0.18		0.11
		(0.17)		(0.22)
Charity × Trade-off × $(X - \bar{X})$	−3.90***		−3.61***	
	(0.37)		(0.42)	
Self × Trade-off × $(X - \bar{X})$		3.90***		3.61***
		(0.37)		(0.42)
Intercept	44.33***	41.52***	45.19***	43.44***
	(1.26)	(1.33)	(1.57)	(1.65)
Censored subjects	Yes	Yes	No	No
Num. obs.	2136	2136	1284	1284
Num. ind. obs.	178	178	107	107

Table A-2: Effect of the level of altruism (X) on excuse-driven behavior

Notes: OLS regressions with errors clustered at the subject level. "Trade-off": Trade-off between self-payoff and donations. "Charity": Outcome of the lottery for the charity. "Self": Outcome of the lottery for the subject. "$(X - \bar{X})$": centered calibration value X. The symbol "×" is used for interaction variables. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

E Robustness Analysis with Exclusion of Multiple Switchers

38 subjects out of 178 (21%) have switched multiple times in one of the twelve price lists of the main task. In total, these decisions represent 3.8% of all decisions. In the main analysis, we have included these decisions by considering the first switching point as being the true switching point. This section replicates this analysis after excluding the subjects who switched more than once to test whether our results are impacted by multiple switchers.[20]

[20] Alternatively, we could have excluded only the price lists in which subjects switched more than once. However, since we used a within-subject design, excluding some decisions made by a

Table A-3 replicates the regressions displayed in Table 3 excluding multiple switchers (models (1), (2), (5), and (6)), or excluding both multiple switchers and censored subjects (models (3), (4), (7), and (8)).

Excuse-driven behavior under risk-for-self is confirmed, as the coefficients associated with "*Trade-off*" in models (1) and (3) are significant ($p < 0.001$). Result 1-R is thus robust to the exclusion of multiple switchers. Likewise, excuse-driven behavior under ambiguity-for-self is also confirmed, as the coefficients associated with "*Trade-off*" in models (2) and (4) are significant ($p < 0.001$). It confirms the robustness of Result 1-A.

We find evidence of excuse-driven behavior under risk-for-charity only when including the censored subjects (coefficient associated with "*Trade-off*": model (5) $p < 0.001$, model (7) $p = 0.585$). Likewise, excuse-driven behavior under ambiguity-for-charity is supported only when including censored subjects (coefficient associated with "*Trade-off*": model (6) $p < 0.001$, model (8) $p = 0.961$). Result 2-R and Result 2-A are thus robust to the exclusion of multiple switchers.

The coefficients associated with "Trade-off × Risk" in models (1) and (3) are not significant ($p = 0.630$ and $p = 0.149$, respectively). Result 3 on the absence of reinforced excuse-driven behavior under ambiguity-for-self compared to risk-for-self is supported when excluding multiple switchers.

Finally, the coefficients associated with "Trade-off × Risk" in models (5) and (7) are also not significant ($p = 0.163$ and $p = 0.458$, respectively). Result 4 on the absence of reinforced excuse-driven behavior under ambiguity-for-charity compared to risk-for-charity is also supported when excluding multiple switchers.

F Excuse-Driven Behavior and Prior Experience

Haisley and Weber (2010) differentiate between two types of subjects based on their previous experiences. They define "constrained" subjects as those that have made decisions under risk and ambiguity involving only themselves earlier in the experiment. In these decisions, there is no tension between self-interest and fairness. In contrast, the "unconstrained" subjects have not such experience. Based on this concept, Haisley and Weber (2010) conclude to a higher prevalence of self-excusing behavior under ambiguity compared to risk, but only for unconstrained subjects. In our experiment, some decisions were also made by unconstrained subjects while others were made by constrained subjects. We can thus test whether Result 3 and Result 4 could be explained by the proportion of decisions made by constrained subjects.

Applying the definition of Haisley and Weber (2010), we consider that a decision is made by a constrained subject if he has previously made a decision without a self *vs.* charity trade-off.[21] It gives 2004 constrained decisions out of the 2136 decisions. 76 different subjects made unconstrained decisions.

To test whether ambiguity has a different impact on unconstrained decisions compared to constrained decisions, we focus on decisions that are potentially different when constrained: decisions with a self *vs.* charity trade-off. We regress on the lottery valuation: two dummy variables, "*Ambiguity*" (equal to 1 if decisions are made under ambiguity) and "*Unconstrained*" (equal to 1 if decisions are unconstrained), their interaction

subject but not others could bias our results.

[21] Other definitions could be used. For example, differentiating constrained decisions for lotteries-for-charity and lotteries-for-self or differentiating constrained decisions under risk and under ambiguity. The definition implemented favors the potential effect of being constrained because decisions are more likely to be classified as constrained.

	Dependent variable: Lottery valuation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Trade-off	30.80***	31.68***	19.53***	22.56***	−9.65***	−6.76***	−1.69	0.13
	(2.59)	(2.47)	(3.37)	(3.34)	(2.62)	(2.08)	(3.09)	(2.57)
Ambiguity	−2.47*	−2.47*	−4.58***	−4.58***	−6.48***	−6.48***	−5.92***	−5.92***
	(1.37)	(1.37)	(1.44)	(1.44)	(1.57)	(1.57)	(1.80)	(1.80)
Charity	0.66	−3.36**	−0.09	−1.44				
	(1.74)	(1.53)	(2.07)	(1.75)				
Self					−0.66	3.36**	0.09	1.44
					(1.74)	(1.53)	(2.07)	(1.75)
Charity × Trade-off	−40.45***	−38.45***	−21.22***	−22.44***				
	(4.24)	(3.92)	(5.55)	(5.17)				
Self × Trade-off					40.45***	38.45***	21.22***	22.44***
					(4.24)	(3.92)	(5.55)	(5.17)
Charity × Ambiguity	−4.02**		−1.34					
	(1.74)		(2.08)					
Self × Ambiguity					4.02**		1.34	
					(1.74)		(2.08)	
Charity × Risk		4.02**		1.34				
		(1.74)		(2.08)				
Self × Risk						−4.02**		−1.34
						(1.74)		(2.08)
Trade-off × Ambiguity	0.89		3.03		2.89		1.81	
	(1.84)		(2.10)		(2.07)		(2.44)	
Trade-off × Risk		−0.89		−3.03		−2.89		−1.81
		(1.84)		(2.10)		(2.07)		(2.44)
Charity × Trade-off × Ambiguity	2.01		−1.22					
	(2.55)		(3.04)					
Charity × Trade-off × Risk		−2.01		1.22				
		(2.55)		(3.04)				
Self × Trade-off × Ambiguity					−2.01		1.22	
					(2.55)		(3.04)	
Self × Trade-off × Risk						2.01		−1.22
						(2.55)		(3.04)
Intercept	46.77***	46.77***	49.84***	49.84***	47.43***	47.43***	49.75***	49.75***
	(1.56)	(1.56)	(1.72)	(1.72)	(1.81)	(1.81)	(1.94)	(1.94)
Num. obs.	1728	1728	960	960	1728	1728	960	960
Num. ind. obs.	144	144	80	80	144	144	80	80
Sub. Mult. Switch	No	No	No	No	No	No	No	No
Censored subjects	Yes	Yes	No	No	Yes	Yes	No	No

Table A-3: Lottery valuation without multiple switchers

Notes: OLS regressions with errors clustered at the subject level. "Trade-off": Trade-off between self-payoff and donations. "Charity": Outcome of the lottery for the charity. "Self": Outcome of the lottery for the subject. "Ambiguity": Lottery under ambiguity. "Risk": Lottery under risk. The symbol "×" is used for interaction variables. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

("*Ambiguity* × *Unconstrained*"), and a continuous variable "*Trial*" (equal to the number of the decision). This last variable controls for a possible time effect since unconstrained decisions were made before constrained decisions. Finally, we distinguish charity-valuations of lotteries-for-self (model 1) from self-valuations of lotteries-for-charity (model 2) since reinforced excuse-driven behavior under ambiguity has opposite effects on lotteries-for-self and lotteries-for-charity.

As reported in Table A-4, ambiguity does not have a significantly different impact on unconstrained decisions and on constrained decisions on any decision types (Charity/Self decisions: $p = 0.719$, Self/Charity decisions: $p = 0.658$). Moreover, the coefficient signs are opposed to the expected ones, as reinforced excuse-driven behavior under ambiguity for unconstrained decisions was expected to be associated with a positive effect in model (1) and a negative effect in model (2).

As our experiment was not designed to study the behavioral differences between constrained and unconstrained subjects, our tests do not have a high statistical power. Yet, we do not find evidence that differences between constrained and unconstrained decisions explain Result 3 or Result 4.

	Dependent variable: Lottery valuation (%)	
Type of decision:	Charity/Self	Self/Charity
	(1)	(2)
Ambiguity × Unconstrained	−2.61	3.13
	(7.26)	(7.25)
Ambiguity	−2.11	-3.56^{**}
	(1.63)	(1.72)
Unconstrained	6.16	−9.80
	(6.26)	(6.60)
Trial	−0.05	−0.59
	(0.46)	(0.42)
Intercept	74.88^{***}	41.15^{***}
	(4.28)	(3.76)
Num. obs.	534	534
Num. ind. obs.	178	178

Table A-4: Effect of being unconstrained on lottery valuation under ambiguity in situations with a self *vs.* charity trade-off.

Notes: OLS regressions with errors clustered at the subject level. "Ambiguity": Lottery under ambiguity. "Unconstrained": Decision made by an unconstrained subject. "Trial": Number of the decision. The symbol "×" is used for interaction terms. Decision types are referred following the norm Safe/Lottery. Censored subjects are not excluded. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

G Robustness Analysis with Only First Trials

Our experiment is based on a within-subject design in order to control for individual preferences and avoid confounds due to heterogeneous preferences. For example, the Self/Self decision aims at controlling for risk preferences regarding one's own payoffs. To limit the effect of repetition on decisions, we have randomized the order of decisions at a subject level. However, it is important to test whether a between-subject design would have led to different conclusions.

The first approach implemented consists of replicating our main analysis excluding the decisions from all 12 trials except the first one.[22] Models (1) to (4) of Table A-5 replicate models (1) to (4) displayed in Table 3 using only observations from the first trial (excluding calibration). We find robust evidence of excuse-driven preferences under

[22]Due to randomization, there is a different number of observations per type of decision. 15 subjects (out of 178) have faced a certain decision type during the first trial. 18 subjects have faced charity-valuation of lotteries-for-charity under risk, 9 subjects have faced charity-valuation of lotteries-for-self under risk, the number of subjects facing the other decision types is included between these two extremes.

risk-for-self (Result 1-R), under risk-for-charity (Result 1-A) and under ambiguity-for-self (Result 1-R) (coefficients associated with *"Trade-off"*: model (1) p=0.002, model (2) p=0.006 and model (3) p=0.043). We do not find robust evidence of excuse-driven preferences under ambiguity-for-charity (coefficient associated with *"Trade-off"*: model (4) p=0.433). Finally, we find robust evidence that excuse-driven behavior is reinforced neither under ambiguity-for-self compared to risk-for-self (Result 3), nor under ambiguity-for-charity compared to risk-for-charity (Result 4) (coefficients associated with *"Trade-off×Ambiguity"*: model (1) p=0.952 and model (3) p=0.210).

Overall, our findings based on decisions in the first trial only are in line with our main findings. However, we do not find evidence of excuse-driven preferences under ambiguity-for-charity. This absence of effect may be due to a lack of statistical power. Yet, such a lack of power might also explain why our findings on Result 3 and Result 4 are robust. To test this hypothesis, we now extend the number of trials included in our analysis. While including the first two trials or the first three trials, results are the same as the one based on the first trial only. However, including the first four trials lead to new findings.

We report in models (5) to (8) of Table A-5 the replication of models (1) to (4) of Table 3 using only observations from the first four trials.[23] We find robust evidence of excuse-driven preferences under risk-for-self (Result 1-R) and under risk-for-charity (Result 1-A) (coefficients associated with *"Trade-off"*: model (5) and model (6) p<0.001). We find robust evidence of excuse-driven preferences under ambiguity-for-self (Result 2-R) and under ambiguity-for-charity (Result 2-A) (coefficient associated with *"Trade-off"*: model (7) and model (8) p=0.003 and p=0.049). Finally, we find robust evidence that excuse-driven behavior is reinforced neither under ambiguity-for-self compared to risk-for-self (Result 3), nor under ambiguity-for-charity compared to risk-for-charity (Result 4) (coefficients associated with *"Trade-off×Ambiguity"*: model (1) p=0.523 and model (3) p=0.220). We thus conclude that the robustness of Result 3 and Result 4 based on the first trial is not due to a lack of power.

To sum up, we have investigated in this appendix if our results are driven by the choice of a within-subject design over a between-subject design. We started by analyzing decisions of the first trial only (to mimic the results of an equivalent between-subject design), then we progressively increased the number of trials considered to increase the statistical power while focusing only on the decisions the less likely to be affected by a decrease of the subjects' attention toward changes from one trial to another. We find no evidence that opting for a within-subject design drives our results.

[23] As for the first trial, there is a different number of observations per decision type. On average, 59 subjects have faced a certain decision type during the first four trials. 70 subjects have faced self-valuation of lotteries-for-self under partial ambiguity, 49 subjects have faced charity-valuation of lotteries-for-charity under partial ambiguity, the number of subjects facing the other decision types is included between these two extremes.

	Dependent variable: Lottery valuation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Trade-off	26.01^{***}	25.33^{***}	-18.08^{**}	-4.64	29.96^{***}	26.17^{***}	-11.79^{***}	-6.01^{**}
	(8.43)	(7.41)	(8.94)	(5.92)	(4.83)	(3.79)	(4.04)	(3.06)
Ambiguity	7.49	7.49	-12.18^{*}	-12.18^{*}	0.82	0.82	-3.46	-3.46
	(6.38)	(6.38)	(6.38)	(6.38)	(3.40)	(3.40)	(3.45)	(3.45)
Charity	2.82	-16.84^{***}			-3.05	-7.33^{**}		
	(6.60)	(6.14)			(4.14)	(3.01)		
Self			-2.82	16.84^{***}			3.05	7.33^{**}
			(6.60)	(6.14)			(4.14)	(3.01)
Charity × Trade-off	-44.10^{***}	-29.97^{***}			-41.74^{***}	-32.17^{***}		
	(12.29)	(9.48)			(6.05)	(5.40)		
Self × Trade-off			44.10^{***}	29.97^{***}			41.74^{***}	32.17^{***}
			(12.29)	(9.48)			(6.05)	(5.40)
Charity × Ambiguity	-19.66^{**}				-4.28			
	(9.02)				(4.81)			
Self × Ambiguity			19.66^{**}				4.28	
			(9.02)				(4.81)	
Charity × Risk		19.66^{**}				4.28		
		(9.02)				(4.81)		
Self × Risk				-19.66^{**}				-4.28
				(9.02)				(4.81)
Trade-off × Ambiguity	-0.68		13.44		-3.79		5.78	
	(11.22)		(10.73)		(5.93)		(4.72)	
Trade-off × Risk		0.68		-13.44		3.79		-5.78
		(11.22)		(10.73)		(5.93)		(4.72)
Charity × Trade-off × Ambiguity	14.12				9.57			
	(15.53)				(7.36)			
Charity × Trade-off × Risk		-14.12				-9.57		
		(15.53)				(7.36)		
Self × Trade-off × Ambiguity			-14.12				-9.57	
			(15.53)				(7.36)	
Self × Trade-off × Risk				14.12				9.57
				(15.53)				(7.36)
Intercept	46.76^{***}	46.76^{***}	49.58^{***}	49.58^{***}	47.14^{***}	47.14^{***}	44.09^{***}	44.09^{***}
	(4.45)	(4.45)	(4.87)	(4.87)	(2.88)	(2.88)	(2.88)	(2.88)
Num. obs.	178	178	178	178	712	712	712	712
Num. ind. obs.	178	178	178	178	178	178	178	178
Trial	n°1	n°1	n°1	n°1	n°1 to n°4	n°1 to n°4	n°1 to n°4	n°1 to n°4

Table A-5: Lottery valuation with only first trials.

Notes: OLS regressions (with errors clustered at the subject level for model (5) to (8)). "Trade-off": Trade-off between self-payoff and donations. "Charity": Outcome of the lottery for the charity. "Self": Outcome of the lottery for the subject. "Ambiguity": Lottery under ambiguity. "Risk": Lottery under risk. The symbol "×" is used for interaction variables. Censored subjects are included in all regressions. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.