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DOI:
10.1037/xge0001222

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*The research for this article has been partially funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) under Germany's Excellence Strategy, cluster EXC 2037 "CLICCS: Climate, Climatic Change, and Society" (project number: 390683824) and contributes to the Center for Earth System Research and Sustainability (CEN) of Universität Hamburg. The authors do not declare any conflict of interest. Study materials, experimental instructions, data, and data analysis files are published on the Open Science Framework (OSF) under DOI 10.17605/OSF.IO/5X3DW or URL https://osf.io/5x3dw/

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Abstract

Information avoidance is common when privately beneficial choices have uncertain and potentially adverse effects on others. A dominant theory holds that such "strategic ignorance" allows decision makers to circumvent inner moral conflict while acting self-servingly. In extension of this theory, we hypothesize that time pressure elevates the prevalence of strategic ignorance. We conduct a laboratory experiment with resolvable payoff uncertainty to test this hypothesis. We find that time pressure indeed significantly increases the incidence of information avoidance. As a result, self-serving choices are more common than in a baseline without time pressure. We empirically explore several potential interpretations of this main finding. First, in a control condition, in which payoffs are fully transparent, time pressure has no direct effect on self-serving behavior. This speaks against a general tendency to act more self-servingly or fairly under time pressure. Second, a follow-up study shows that information avoidance under time pressure is due to conflict avoidance, rather than providing decision makers with a convenient excuse for not becoming informed. We discuss these observations in the context of a recent body of literature on the cognitive underpinnings of pro-social behavior and argue that they have significant implications for information-based approaches to public policy.

1 Introduction

Decision-makers commonly avoid information that they know exists, even when the costs of access are negligible. Information avoidance is particularly common in situations where privately beneficial choices have uncertain effects on others (McGoey, 2012b; Her-

twig and Engel, 2016; Golman et al., 2017).[1]

Consider a generic setting in which a "decider" chooses between two alternatives, X and Y. This choice determines her own payoff and the payoff of a "bystander." Option X results in a higher payoff (€8) for the decider than option Y (€5). Whether option X also grants a higher payoff to the bystander than option Y is uncertain—each of the options could either pay €5 or €2 to the bystander. Before choosing between X and Y, however, the decider can obtain exact information about the bystander's payoff at no cost.

There is robust experimental evidence that in settings akin to the one we describe above, about half of deciders opt to avoid information (e.g., Dana et al., 2007; Larson and Capra, 2009). Based on the additional observation that those who avoid information choose X more often than those who reveal information, the phenomenon has been interpreted as "strategic" or "willful" ignorance: deliberate information avoidance circumvents inner moral conflict because it preserves the plausibility that X is in the common interest of both deciders and bystanders, such that uninformed deciders can maintain a virtuous self-image while still selecting the self-serving action X (Dana, 2005; Dana et al., 2007; Matthey and Regner, 2011; Grossman, 2014; Thunström et al., 2014; Arroyos-Calvera et al., 2020).

The phenomenon seems to appear in several domains relevant to public policy and litigation. For instance, Ehrich and Irwin (2005) and Onwezen and van der Weele (2016) find that consumers tend to ignore ethically relevant product information even when it is easily accessible. Hoeyer et al. (2015) interprets information avoidance in an organ transplantation context as a means of ignoring uncomfortable moral conflicts. Pope and

[1] Golman et al. (2017) provide a comprehensive review of this literature, covering both empirical evidence (e.g., Oster et al., 2013; Ganguly and Tasoff, 2016) and popular theoretical accounts of the information avoidance phenomenon (e.g., Caplin and Leahy, 2001, 2004; Köszegi, 2006; Grossmann et al., 2017).

Rauber (2004) collected evidence of chosen ignorance in an environmental policy setting. In a litigation context, if the degree of guilt due to a transgression of the law depends on premeditation (in that case, ignorance of the applicable law or the fact of transgression is valid for claiming negligence, or even less than that), there is an incentive for willful ignorance in the first place (Perkins, 1977; Robbins, 1990; Charlow, 1992; Calcote, 1992; Kozlov-Davis, 2001; Sarch, 2014; Wiseman, 2017). Messick (1999) and McGoey (2012a) describe cases of information avoidance to insulate against liability.

Strategic ignorance is also inconsistent with a popular class of outcome-based models of pro-social behavior (e.g., Fehr and Schmidt, 1999; Bolton and Ockenfels, 2000; Andreoni and Miller, 2002; Charness and Rabin, 2002; Engelmann and Strobel, 2004) that have specific implications for public goods provision, redistribution, and mechanism design (e.g., Fong, 2001; Fehr and Fischbacher, 2002; Bowles and Hwang, 2008). Clearly, decision makers who care about the equality or efficiency of an outcome should also be willing to acquire costless information on how their actions translate into such outcomes.

While strategic ignorance has been consistently observed across several experimental studies, little is known about the situational factors that could reduce or exacerbate its occurrence. In the present paper, we consider one such factor that is ubiquitous in day-to-day decision-making: time constraints. Based on several observations in the literature, it appears plausible that time pressure elevates the prevalence of strategic ignorance. Existing evidence suggests that decision-makers are well aware that strategic ignorance is a morally questionable act per se because it serves as an opportunistic means of insulating themselves against moral accountability. Grossman (2014) shows that decision-makers are less likely to display strategic ignorance if they have to actively hide information

("commission"), compared to a condition in which information can be avoided passively ("omission"). This suggests that the act of information avoidance itself requires a justification to grant self-image preservation (Grossman and Van Der Weele, 2017). A time constraint could serve as a convenient excuse to replace "I don't *want* to deal with this information" with "I *cannot* deal with this information." The idea of time pressure working as a justification for not becoming informed would also be in line with recent evidence on lying behavior: Shalvi et al. (2012) find lying to be more frequent under time pressure in an otherwise identical situation in which no other excuse for lying is available.

In the remainder of this paper, we investigate this hypothesis with a main and two further experiments, using a decision task like the one outlined above. The experimental design and procedures of the main experiment are described in Section 2, and its key results are reported in Section 3. Consistent with our initial hypothesis, we find that time pressure significantly increases the incidence of information avoidance. As a result, self-serving choices (henceforth labeled as option X) are more common than in a baseline without time pressure.

The remaining sections are devoted to the interpretation and discussion of this finding. In Section 4, we report results from two additional control conditions that we ran alongside the main experimental conditions. In the control conditions, bystanders' payoffs were fully transparent. This allows us to test whether there is a direct effect of time pressure on choices between X and Y, as suggested by recent literature on the cognitive underpinnings of pro-social behavior (an extensive summary of this literature is found in Capraro (2019)). We do not find compelling evidence for such direct effect in the control conditions.

Section 5 summarizes the findings of a follow-up experiment designed to distinguish between the exculpation mechanism we outline above and an alternative mechanism informed by a recent body of literature on "conflict avoidance" (e.g., Evans et al., 2015). This literature suggests that resolving decision conflicts requires time. Thus, decision makers may find it useful to avoid such conflicts when under time pressure. In the follow-up experiment, deciders are again asked to make a choice under resolvable payoff uncertainty. However, this time, their own payoffs are uncertain, whereas the payoffs of bystanders are transparent. Here, information avoidance is not a morally questionable act and hence does not require any ex-ante justification. Not being informed may, however, reduce decision conflict, as uninformed deciders cannot know whether their interests and those of the bystander are in conflict or aligned without accessing further information on their own payoffs.

Our findings from the follow-up experiment suggest that increased information avoidance under time pressure is consistent with "decision conflict avoidance." So it seems that decision makers indeed "*cannot* deal with more information" under time pressure. However, in contrast to the original hypothesis that time pressure could serve as a justification for remaining uninformed, decision makers avoid information even when it is directly relevant to their own payoffs, such that no excuse for ignorance is required. This suggests that time pressure drives information avoidance, not because it serves as a justification for remaining uninformed but because it allows decision makers to make a quick decision without having to resolve potential conflicts.

We conclude with some real-world implications and avenues for further research in organizational and environmental contexts in Section 6. In particular, our findings highlight

that non-transparency can have significant effects on the incidence of pro-social behavior, in particular when decision makers under pressure reduce complexity by information avoidance.

2 Main Study

2.1 Design

The basis of the experiment is a simple allocation task involving a "decider" and a "bystander." The decider chooses between two alternative actions, X and Y. The choice determines the experimental payoffs for the decider and the bystander. Option Y always yielded €5 for each of the two; option X allocated €8 to the decider and €2 to the bystander. If all payoffs are transparent, this task is a standard binary "dictator game." Instead, in the main conditions of our experiment, the payoffs of the bystander were initially hidden behind question marks. As in Dana et al. (2007), deciders could reveal payoffs behind question marks by clicking a button. There was no monetary cost of revealing the information.

Participants were instructed that a question mark could either represent a payoff of €5 or a payoff of €2.[2] As in Dana et al. (2007), these instructions imply that deciders who remain ignorant about the exact values behind each question mark can maintain the belief that choosing the option with the highest payoff to themselves (€8) also grants the highest attainable payoff to the bystander (€5), that is, that their interests are aligned. Our

[2]The exact (translated from the German original) information provided in the experimental instructions was the following: "In the second column of the table, you can see what the other participant will receive if you choose a certain option. On the decision screen, this column will contain question marks instead of numbers. Behind these question marks is the payoff of a certain option for the other participant. The unknown payoffs can take either a value of 2 or 5."

design deviates from Dana et al. (2007) in two important ways. First, we slightly adapt the payoffs used in Dana et al. (2007) such that the sum of payoffs received by both players is the same across both options and only the distribution of payoffs differs. Second, in Dana et al. (2007), deciders knew that the unknown payoffs could resolve in exactly two ways with equal probability (resulting in either a game of aligned interest or a game of conflicting interests). In our design, we only provide deciders with two possible values a question mark may take, which implies four ways in which the unknown payoffs could resolve. Hence, a decider can principally believe they are in one of four possible games (before clicking the "reveal" button).[3] As long as they choose to remain uninformed, deciders are free to form any belief about those four states, that is, whether their decision (to select option X) will negatively affect the bystander or not.

As shown in Figure 1, payoffs were displayed in tabular form on the decision screen, and options were selected via a radio button and submitted by clicking the "continue" button. By clicking another button ("reveal numbers behind the question marks"), which was located directly underneath the payoff table on the decision screen, the decider could instantly reveal the payoffs for the bystander before choosing between option X and Y. She could also decide to make her choice under ignorance by not clicking the button. Hence, on the decision screen, there were two choices to be made: "reveal" vs. "not reveal" and

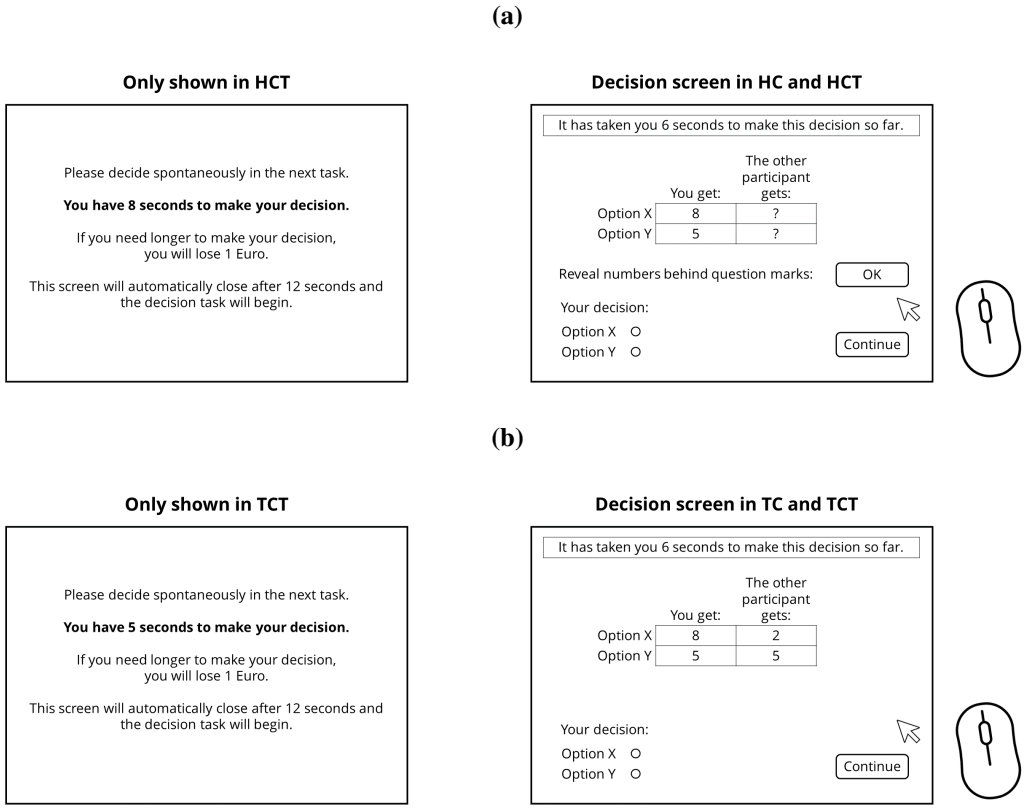
[3] Given the two possible values for each of the two question marks, four potential games are conceivable. As in Dana et al. (2007) there is an aligned interest game $(8,5)$ vs. $(5,2)$ and a conflicting interest game $(8,5)$ vs. $(2,5)$, where the first bracket represents the payoffs of option X and the second of option Y, and the first number in brackets is the payoff to the decider and the second is the payoff to the bystander, respectively. There are also two "neutral" games conceivable, where the action of the decider has neither a negative nor a positive impact on the bystander's payoff: $(8,5)$ vs. $(2,2)$ and $(8,5)$ vs. $(5,5)$. The presence of these additional games does not change the basic argument for strategic ignorance in that an ignorant decision maker can convince himself that choosing the more profitable action does not harm the receiver. This design feature arguably increases the scope of observing strategic ignorance because, as in Dana et al. (2007), these arbitrary beliefs cannot be maintained once decision makers reveal the bystander's payoffs and learn that their interests are not aligned.

X vs. Y. The experimental design did not enforce making these decisions strictly sequentially. It was possible to click on X or Y without revealing payoffs. Similarly, participants could reveal payoffs first and then choose between X and Y. Whether decision makers revealed payoffs or not, their final choices were always implemented by clicking on "continue" (with X or Y being selected). Obviously, there was no way of hiding payoffs again after clicking "reveal." These elicitation procedures are common in the literature (e.g., Grossman and Van Der Weele, 2017).

We will first describe the two main experimental conditions of our study. Alongside these, we ran two additional control conditions. We will describe the exact design of these control conditions and any differences to the main conditions in Section 4. In the "hidden consequences" condition (HC), the deciders had unlimited time to make a decision. In the "hidden consequences under time pressure" condition (HCT), there was a time limit of 8 seconds to implement a decision. The limit was set at one standard deviation below the empirical mean response time observed in the HC condition, such that it could be expected to put the average subject under time pressure. Subjects learned about the time constraint just before entering the decision screen through an instruction screen. This screen disappeared automatically after 12 seconds to ensure that all mental effort associated with the decision was, in fact, exerted during the limited time period and not before. The key screens in the HC and HCT conditions are shown schematically in Figure 1a.

We incentivized subjects to comply with the time limit via a €1 penalty to be subtracted from a fixed show-up fee if they violated the time limit. Subjects were, of course, informed about this penalty before reaching the decision screen. We introduced this incentive for complying with the time constraint to encourage deciders to decide more quickly

Figure 1: Schematic illustration of the key screens in conditions HC and HCT (panel a), and conditions TC and TCT (panel b).



(successfully—as a manipulation check in the results section demonstrates). An alternative design could have enforced the time constraint more strictly by automatically closing the decision screen when the time limit is reached. This practice, however, is prone to result in problematic statistical selection effects (e.g., Trautmann, 2014; Kocher et al., 2019): any violation would essentially result in deciders being dropped from the experiment without their choice being recorded. We agree with the methodological issues raised in Trautmann (2014), and we think that our design choice allows us to use statistical methods to handle endogenous violations of the time limit.[4]

Another concern about applying a fine could be that its presence affects participants' choices. Whether time pressure should be incentivized has been discussed repeatedly in the existing literature, with advocates in both camps. Without a fine, the concern would be that the manipulation is weakened both in its internal validity (high levels of non-compliance) and in its external validity (ignoring time pressure in real-world situations often has consequences, financial or otherwise). In many of the studies in the "intuitive pro-sociality" literature we draw on, time pressure is hence incentivized in a similar fashion as in this paper. In particular, we choose a relatively small fine that reduces the show-up fee rather than excluding decision makers from receiving any game payoffs when violating the time constraint. This ensures that violating the time constraint (and hence facing the fine) has financial consequences, without affecting the consequentiality of the

[4]Notably, our approach requires responses of violators to be recorded. It is then possible (as we do in Section 3), to use an instrumental variable regression approach to recover what is called the local average treatment effect in the literature (e.g., Imbens and Angrist, 1994; Angrist et al., 1996). There, treatment assignment is used as an instrumental variable (which is exogenous by random assignment) for a subject's response time. The two-stage least squares approach that we are using below essentially assumes the time pressure treatment effect (vs. no time pressure) on the revelation decision is fully mediated by the response time, such that predicted response times isolate the exogenous variance in response times. Under the hypothesis that time pressure increases strategic ignorance, the average partial effect of (predicted) response time on the probability of revelation should be positive.

allocation decision, which may in itself affect choices in the main decision task (on this point, see, e.g., Goeschl and Lohse, 2018).

2.2 Procedures

Participants were 212 undergraduate students with various majors at the Universities of Heidelberg and Hamburg recruited to the HC and HCT conditions of the main study using the recruitment systems *ORSEE* (Greiner, 2015) and *hroot* (Bock et al., 2014). Subjects were randomly assigned to one of the two conditions and randomly matched into pairs.[5] In total, we had 76 subjects in the HC condition and 136 subjects in the HCT condition. The average subject spent about 40 minutes in the laboratory and earned €7.41, including a fixed show-up fee of €2 in Heidelberg and €3 in Hamburg.

Booths separated the participants visually, ensuring that they made their decisions anonymously and independently. Direct communication among them was strictly forbidden for the duration of the entire session. Furthermore, subjects did not receive any information on the personal identity of any other participant before, during or after the experiment.

The experimental instructions that explained the structure of the game and the procedural rules were shown on-screen. The full transcript of the experimental instructions (the German original and an English translation) are provided on OSF (Jarke-Neuert and Lohse, 2021). The experiment was framed in an abstract way, using neutral language and

[5]To be precise, subjects self-selected into one of the sessions (the target count of subjects per session was 16 in Heidelberg and 24 in Hamburg, reflecting differently sized labs), and treatments were randomly assigned to sessions by means of a lottery. Subjects did not know about the conditions when signing up. There were four HC and six HCT sessions. Sessions of each type were conducted at each of the two universities. The larger sample size in HCT was intended to account for an expected larger variance in behavior due to time pressure. The matching into pairs was done by matching computer terminals into pairs before the experiment, and then participants were randomly assigned to computer terminals through a lottery.

avoiding value-laden terms in the instructions. Post-experimental debriefings attested that no participant had difficulties in comprehending the instructions.

We elicited a choice in the role of a decider from each subject: both subjects in a matched pair made a choice before the computer randomly assigned subjects to role *B* (the "decider") or to role *A* (the "bystander") with equal odds. That is, participants did not know in advance whether they would be the "decider" or the "bystander." In the instructions, subjects went through an example on how to read the payoff table and how to select their preferred option. The exact payoffs associated with each option were only revealed (or not fully revealed, depending on the condition) on the actual decision screen. The subjects entered their decision privately and anonymously via a computer interface using *z-Tree* (Fischbacher, 2007). The decisions were made by clicking buttons with the computer mouse.

After completing the allocation task, subjects were asked to answer a short questionnaire while the experimenter prepared the payoffs. Subjects were then informed about their payoffs and then individually called to the experimenter booth, paid out (according to a random number matched to their decisions; no personal identities were used throughout the whole experiment) and dismissed. The study was exempt from formal IRB review because it involves benign behavioral interventions, participation is based on voluntary consent, and information is collected in de-identified form.[6]

[6]The study complies with the RESPECT Code of Practice (Professional and Ethical Codes for Socio-Economic Research in the Information Society), published under URL http://www.respectproject.org/code/index.php.

3 Main Results

Before moving to the main findings, we note in passing that behavior in the HC condition (row 1 of Table 1) is closely in line with previous evidence on the presence of "strategic ignorance" (Dana et al., 2007; Larson and Capra, 2009). We find that when the social consequences of their decision are initially unknown, 42% of the deciders choose to remain ignorant, and among the latter, there is a significantly larger frequency of X choices compared to the deciders who revealed the true social consequences ($p < 0.001$, Fisher's exact test).

We present the new results of the main study in two steps: in Subsection 3.1, we focus on the effects of time pressure on the decision to reveal information, which we treat as a measure of strategic ignorance. That is, we focus on a comparison of information revelation decisions under "time pressure" vs. "no time pressure" when consequences are hidden (i.e., HC vs. HCT). In Subsection 3.2, we analyze the effect of time pressure on the choices between X and Y when the social consequences of both options are initially hidden.

Table 1: Summary of decisions in the main study

	Overall		Revealer	Non-revealer
Condition	Option X	Reveal: Yes	Option X	Option X
HC	65.8%	57.9%	47.7%	90.6%
HCT	86.8%	25.7%	68.6%	93.1%

3.1 The effect of time pressure on payoff information revelation

The key results emerge from comparing information revelation choices between row 1 (HC) and row 2 (HCT) of Table 1.[7] Consistent with our initial hypothesis, time pressure has a medium-to-large and statistically significant effect on the frequency of payoff revelations. Without time pressure (HC), 58% (44 of 76) of the deciders revealed the bystander's payoffs, compared to 26% (35 of 136) in the time pressure condition (HCT). The first (logit reporting the odds ratio) and second (probit) column of Table 2 demonstrate this effect in a binary response regression framework. For both the logit and the probit specifications, we find that time pressure significantly reduces the probability of payoff revelation.

We next ask to what degree does this result reflect the fact that subjects in the time pressure conditions spent less time on the decision screen. A manipulation check ascertains that time pressure indeed significantly ($p < 0.001$, Mann–Whitney rank sum test) reduced median decision times (i.e., the time that subjects spent on the decision screen) across both information conditions from 13 seconds (95% confidence interval 12 to 15 seconds) to 7 seconds (95% confidence interval 7 to 8 seconds). However, it is possible that not all subjects are affected by time pressure equally because subjects could violate the time constraint. Therefore, we complement the average treatment effects reported above by estimating the local average treatment effect (LATE), taking subjects' response times (measured by the natural logarithm of actual times elapsed between the screen appearance and the decision submission) as a mediator and the time pressure treatment as-

[7] The key results reported below hold in both labs, such that we pool the data from Heidelberg and Hamburg for the sake of brevity and statistical power.

signment as an instrument (Imbens and Angrist, 1994; Angrist et al., 1996).[8] By design, treatment assignment is random and hence truly exogenous, while still being highly correlated with decision times (Kendall's $\tau_b = -0.6612$, z-test of independence $p < 0.001$). Consistent with our hypothesis, the third column of Table 2 indicates a highly significant relationship between instrumented response time and the probability of payoff revelation; that is, the shorter the decision time, the lower the probability of payoff revelation.

Table 2: The effect of time pressure on payoff revelation.

	Logit	Probit	IV Probit
Time pressure	0.252^a	-0.851^a	
	(0.077)	(0.185)	
Decision time			1.109^a
			(0.230)
Constant	1.375	0.199	-2.893^a
	(0.328)	(0.148)	(0.562)
n	212	212	212
Wald χ^2	20.59	21.15	23.28
Prob $> \chi^2$	0.0000	0.0000	0.0000
Pseudo R^2	0.0765	0.0765	

Regressions with the probability of payoff revelation as dependent variable. "Time pressure" indicates whether the decision was made under a time limit (1 = yes, 0 = no). "Decision time" is the natural logarithm of actual time elapsed between the screen appearance and the decision submission. The first column reports the odds ratios of a logistic regression with respective bootstrapped (1,000 replications) standard errors in parentheses. Superscripts indicate whether a two-tailed z-test rejects the null that the odds ratio is equal to one at a significance level of 1% (a), 5% (b) or 10% (c), respectively. The second and third columns report the coefficients of probit regressions with respective bootstrapped (1,000 replications) standard errors in parentheses. Superscripts indicate whether a two-tailed z-test rejects the null that the coefficient is equal to zero at a significance level of 1% (a), 5% (b) or 10% (c), respectively. The regression in the third column uses "Decision time" as a mediator and "Time pressure" as an instrument.

3.2 The effect of time pressure on X vs. Y choices

Time pressure significantly increases the frequency of X choices. In HC, 66% (50 of 76) of the deciders selected the self-serving option X compared to 87% (118 of 136) in HCT.

[8] Using a log transformation for response times is a common way of accounting for their skewed distribution and large outliers (Luce, 1991)

This difference is statistically significant, but we relegate the details of the formal test to Section 4, where we can draw on additional information from the control condition that aids with the interpretation.

The data summarized in Table 1 also show that the increase in self-serving behavior is mostly driven by differences in the revelation decision and, to a small extent, also by a shift in allocation choices (X vs. Y) among those who reveal payoff information. Among deciders who do not reveal payoff consequences, 91% (29 of 32) selected option X without time pressure (HC) compared to 93% (94 of 101) under time pressure (HCT). This difference in proportions is not significant (Fisher's exact test, $p = 0.942$). However, among deciders who reveal payoffs, there is a small-to-medium difference that is not statistically different from zero by a margin ($p = 0.103$): without time pressure (HC), 48% (21 of 44) selected option X, whereas under time pressure (HCT), 69% (24 of 35) did so. Hence, the overall shift towards more X choices in HCT mostly reflects the fact that roughly twice as many participants in HCT choose to remain ignorant, and almost all of them choose option X.

Wrapping up, behavior in the HC and HCT conditions of the main study is consistent with the hypothesis stated in the introduction; namely, that time pressure elevates the prevalence of ignorance. Specifically, they are consistent with the interpretation that this ignorance is strategic in the sense that it serves as an opportunistic means to insulate against moral accountability. This interpretation is supported by the observation that both in the presence and absence of time pressure, there is a higher frequency of X choices among those who avoid being informed about the consequences of their choices. A plausible interpretation of a higher prevalence of ignorance under time pressure would be that

the time constraint is indeed used as a convenient excuse to exculpate responsibility for behaving in a calculating, self-serving manner.

There could be an alternative interpretation, resting on the observation that time pressure may impose a cognitive tax on subjects. Such cognitive tax could have two separate effects: a direct effect on pro-sociality, which we will explore in more detail in Section 4, and an impairment of the deciders' ability to draw on the kind of strategic reasoning required for engaging in "strategic ignorance." The pattern of payoff revelation and X-choices we observe in the HC and HCT conditions is inconsistent with a tax on the ability to engage in strategic reasoning: if ignorance was indeed "strategic" as typically defined in the literature, then time pressure should also tax (the quite complex) reasoning suggested to underlie the deliberate choice to avoid information. We would thus expect to observe less strategic ignorance under time pressure. This means that cognitively taxed deciders should display *more* revelations under time pressure (HCT) than without (HC). Instead, as discussed above, we observe the opposite pattern.

However, there are (at the minimum) two further interpretations that could, at least partially, account for the observed pattern of behavior. In the subsequent two sections, we investigate each of them empirically using data from an additional control condition we conducted alongside the main study (Section 4) and data from a follow-up experiment we ran after the main study (Section 5). Another possible interpretation is briefly discussed here: revealing payoffs and then choosing payoffs requires two clicks, whereas just choosing either X or Y requires one, such that deciders may just do what is physically fastest under time pressure (i.e., not revealing payoffs).[9] A problem with this theory is that it would not predict anything about the subsequent choice between X and Y without

[9] We thank an anonymous reviewer for raising this point.

further assumptions because it is one click either way.[10] Our psychologically grounded hypothesis derived from the theory of strategic ignorance makes a prediction regarding the payoff revelation decision *and* the choice between option X vs. Y. We investigate and discuss an extension of this interpretation in Section 5 where we consider "conflict avoidance" as a means to do "what is fastest".

4 Transparent Consequences Conditions

One possibility is that the time pressure effect on X vs. Y choices observed in the main study is not due to a sophisticated exculpation strategy but a direct effect of time pressure on the mode of cognition used and thereby on the propensity to act in a self-serving manner. That is, time pressure could work as a cognitive tax that sways subjects away from more reflective and towards more intuitive choices. Drawing on the dual-process model (Kahneman, 2003; Hallsson et al., 2018), several studies have used time pressure or other methods (e.g., cognitive load or conceptual priming) to exogenously vary the relative weights of system 1 ("intuition") and system 2 ("reflection") in a variety of experimental paradigms eliciting pro-social behavior. Because reflection is cognitively more demanding and time consuming, decisions made under time pressure are expected to be based on a first impulse (intuition) rather than a careful weighting of all features and consequences of the alternatives (Wright, 1974).

The direction of a potential direct effect of time pressure on pro-social behavior is

[10] In addition, process evidence in the form of response times from the HCT condition suggests that the time cost of clicking the reveal-button can only be a part of a theory of "doing of what is fastest." The mode time elapsed (from the time the decision screen was displayed) until the reveal-button was clicked in the HCT condition is 2 seconds, whereas the mode decision time net of that clicking-time was between 3 and 4 seconds. Thus, the time cost of clicking the reveal button seems to be negligible relative to the time cost of processing the information provided.

contested both theoretically and empirically. One prominent theoretical account holds that humans are inherently predisposed to act in their self-interest, while pro-social behavior requires reflection to invoke higher principles of acquired moral reasoning (Kohlberg, 1963, 1976). Thus, if time pressure or cognitive load "taxes" reflection, self-interested affect will dominate over these moral considerations.

An alternative theory, the social heuristics hypothesis (Rand et al., 2014), posits that decision makers cultivate pro-social intuitions during their repeated daily interactions. They then misapply these intuitions during one-shot interactions in laboratory experiments when not reflecting sufficiently on the differences between both decision environments. This theory implies that "taxing" reflection should result in more pro-sociality.

Empirical tests of these two competing theories have produced mixed results so far: while some studies find evidence consistent with intuitive pro-sociality (Rand et al., 2012, 2014; Rand, 2016; Schulz et al., 2014; Cappelen et al., 2016; Evans and Rand, 2019; Grossmann et al., 2020), other studies detect no systematic or a more complex relationship (Cappelletti et al., 2011; Tinghög et al., 2013, 2016; Kessler and Meier, 2014; Verkoeijen and Bouwmeester, 2014; Krajbich et al., 2015; Hauge et al., 2016; Grossmann et al., 2017; Bouwmeester and colleagues, 2017; Capraro et al., 2017; Andrighetto et al., 2020), still others find that pro-social choices depend on deliberation (Piovesan and Wengström, 2009; Fiedler et al., 2013; Achtziger et al., 2015; Lohse et al., 2016; Lohse, 2016; Capraro and Cococcioni, 2016; Kocher et al., 2017; Brozyna et al., 2018).[11]

To test whether this direct effect of time pressure is important in our setting, we ran two further experimental control conditions alongside the main conditions (HC and HCT).

[11] An interesting example that highlights the importance of moderating variables is the study by Rand et al. (2016), who find that several manipulations favoring intuitive decision-making leads to more altruism in women but not in men.

Both control conditions are essentially identical to the main conditions. They only differ in transparently displaying the bystander's payoffs in the decider's decision table. In other words, deciders play a binary dictator game and have no choice to remain ignorant about the consequences of their actions. As before, option Y pays the same amount (€5) to both participants, while option X pays €8 to the decider and €2 to the bystander.

We contrast a condition in which deciders had unlimited time (the "transparent consequences" condition, TC) and a condition with a time constraint ("transparent consequences under time pressure," TCT). Of course, the decision in TCT is simpler than in HCT because there is no revelation decision, such that a shorter time limit seems appropriate to induce approximately the same level of time pressure as in HCT. We implement this by setting the limit again one standard deviation below the empirical mean response time observed in TC, which in this case results in a limit of 5 seconds (cf. 8 seconds in HCT). The key screens in the TC and TCT conditions are shown schematically in Figure 1b.

TC and TCT essentially construct a situation in which all deciders are forced to see the bystander's payoffs. This is an informative baseline condition, as it identifies the time pressure effect on X vs. Y choices alone, given the bystanders' payoffs are revealed. This is important because if the social heuristics hypothesis were true, it might constitute a problem for our main experiment as doing what is fastest would mean acting altruistically, which may mean revealing information to learn what is altruistic. It is hence important to identify whether one type of choice (altruistic or selfish) is faster than the other when all consequences are transparent.

The protocol and procedures were identical to those in the main study described above.

We gathered data from 78 subjects in the TC condition and 112 subjects in the TCT condition alongside the data collected for the main conditions (HC and HCT).

We find no evidence of a time pressure effect under transparent consequences: in TC, 53% (41 of 78) selected the self-serving option X compared to 59% (66 of 112) in TCT. The equality test is done by means of binary response regressions capturing all four conditions (HC, HCT, TC, and TCT) simultaneously. The first (logit with odds ratio) and second (probit) columns of Table 3 show the respective time pressure effects; the interaction term coefficient is significantly different from zero. That is, time pressure has no detectable effect in the transparent conditions but significantly increases X choices when consequences are hidden.

Again, we report IV regression results that are robust to time limit violations in the remaining columns of Table 3. The third column does not indicate a significant relationship between instrumented response times and the probability of selecting option X under transparent payoffs (TC and TCT). The fourth column confirms a negative relationship between instrumented response time and X-choices when consequences are hidden (HC and HCT); that is, subjects who spend less time on the decision screen are more likely to choose option X.

The non-effect under transparent consequences is consistent with a recent meta-study on dictator game giving, which concludes that the overall effect of manipulating cognitive resources to promote pro-social behavior is essentially zero (Fromell et al., 2020).[12]

In sum, the fact that time pressure has an effect on X vs. Y choices only under hidden

[12] Apart from the mixed empirical evidence, there are also methodological concerns regarding the use of time pressure to uncover intuitive tendencies in pro-social behavior (Myrseth and Wollbrant, 2017). Myrseth and Wollbrant (2016) note that even if "intuitive" means "fast," this does not imply the reverse. Drawing on recent applications of the drift-diffusion model, Krajbich et al. (2015) and Merkel and Lohse (2019) provide theoretical arguments showing under which conditions an increase in pro-social behavior due to time pressure indeed provides unambiguous evidence in favor of the social heuristics hypothesis.

Table 3: The effect of time pressure on the probability of selecting option X.

	Logit	Probit	IV Probit (TC & TCT)	IV Probit (HC & HCT)
Time pressure	1.295	0.161		
	(0.399)	(0.192)		
Decision time			−0.278	-0.973^{a}
			(0.319)	(0.276)
Hidden payoffs	1.735	0.342^{c}		
	(0.583)	(0.207)		
Interaction	5.916^{a}	1.051^{a}		
	(2.013)	(0.195)		
Constant	1.108	0.064	0.735	3.143^{a}
	(0.256)	(0.144)	(0.671)	(0.694)
n	402	402	190	212
Wald χ^2	30.70	34.45	0.76	12.46
Prob $> \chi^2$	0.0000	0.0000	0.3835	0.0004
Pseudo R^2	0.0757	0.0757		

Regressions with the probability of selecting option X as dependent variable. "Time pressure" indicates whether the decision was made under a time limit (1 = yes, 0 = no). "Hidden payoffs" indicates whether the bystander's payoffs were initially hidden (1 = yes, 0 = no). "Interaction" is the product of "Time pressure" and "Hidden payoffs." "Decision time" is the natural logarithm of actual time elapsed between the screen appearance and the decision submission. The first column reports the odds ratios of a logistic regression with respective bootstrapped (1,000 replications) standard errors in parentheses. Superscripts indicate whether a two-tailed z-test rejects the null that the odds ratio is equal to one at a significance level of 1% (a), 5% (b) or 10% (c), respectively. The second through fourth columns report the coefficients of probit regressions with respective bootstrapped (1,000 replications) standard errors in parentheses. Superscripts indicate whether a two-tailed z-test rejects the null that the coefficient is equal to zero at a significance level of 1% (a), 5% (b) or 10% (c), respectively. The regression in the third and fourth column uses "Decision time" as a mediator and "Time pressure" as an instrument. The third column contrasts the TC and TCT conditions; the fourth column contrasts the HC and HCT conditions.

payoffs suggests that this effect is unlikely to be driven by a direct effect of time pressure on pro-sociality. This backs the strategy interpretation given above empirically.

The absence of a direct effect of time pressure on X vs. Y choices also excludes a more sophisticated explanation for why we see more information avoidance in the HCT condition than in the HC condition. If subjects knew that they feel an intuitive pull to give under time pressure while they are actually reluctant to give, they should avoid bringing themselves into a situation where they are asked to give under time pressure. This explanation would be consistent with the increased levels of information avoidance we observe

under time pressure (HCT vs. HC). However, as we do not observe an intuitive pull towards option *Y* under transparent consequences (TC vs. TCT), this more sophisticated explanation is not in line with behavior in the control conditions.

5 Follow-up Experiment: The Effects of Hiding the Decider's Payoffs

To reconcile the mixed evidence regarding the relationship between response times and pro-social behavior, Evans et al. (2015) argue that decision conflict (rather than the use of intuition vs. reflection) drives response times. They provide evidence that (i) intermediate decisions take longer than both extremely selfish and extremely pro-social decisions, (ii) conflict between self-interested and pro-social motives explains individual differences in response times, (iii) manipulating conflict causes longer response times and more intermediate decisions, (iv) response times mediate the relationship between conflict and intermediate decisions, and (v) conflict is distinct from reflection.

Given this evidence, one could also interpret the findings in our main study as follows: time pressure induces subjects to avoid decision conflict in order to be able to decide more quickly.[13] In a sense, this avoidance of conflict is also a deliberate or "strategic" decision. The difference to the selfishly motivated strategic ignorance interpretation from before is subtle: by general conflict avoidance, deciders will not reveal the bystander's payoff to commit to a fast decision (by circumventing difficult moral conflict that would require more time to resolve); by selfish strategic ignorance, deciders will choose not to reveal information that could damage their self-image. The key difference between these

[13] We thank the editor and the referees for alerting us to this possibility.

two competing theories thus lies in what motivates the revelation decision and, hence, what they predict about choices between X and Y. Ignorance for self-image preservation necessarily coincides with an increased tendency to choose X. Instead, if ignorance is chosen for conflict avoidance, the choice between X and Y is not pre-determined by this motivation. However, choices may still reflect the partial information available to the decision maker who avoids being fully informed.

This core difference provides an avenue to empirically discriminate between these two interpretations in a follow-up study. In the HC and HCT conditions of the main study, it is impossible to discriminate between them, as they make observationally equivalent predictions. In these conditions, deciders know that option X provides higher payoffs to themselves than option Y. Avoiding information thus allows them to maintain a positive self-image when selecting X, as the potentially negative consequences for the bystander remain hidden. Similarly, if they avoid information to avoid conflict, they would still choose X as this is the most reasonable or focal option given the information that is available to them.

Now imagine a variant of this situation, where the decider's own payoffs are hidden, whereas the bystander's payoffs are known. Here, if deciders choose to avoid conflict by avoiding information, the only information they have is that the bystander earns less if she chooses option X and more if she chooses option Y. Hence, with this limited information, Y becomes the focal option for a conflict avoider.

We implemented this latter variant in a follow-up experiment conducted online in July 2021. A total of 232 UK participants were invited to take part in our study via Prolific, restricting the sample to all UK residents with a Prolific accuracy score of above 90 and

requiring them to take part from a desktop computer.[14] All instructions were computerized, and data were collected via Qualtrics. Following common rules for remuneration on Prolific, participants received a £1 show-up fee and bonus payments according to the decisions made in the study. Game payoffs were expressed in points and then translated into £ at a rate of £0.5 per point.

The follow-up serves two purposes. First, we replicate the HC and HCT conditions with 51 and 52 subjects, respectively. All instructions for these replications conditions (HCr and HCTr) are taken from the main study and minimally adapted for the online version. Replication of the main conditions is important, as we moved the study online and drew on a different subject pool.

The main focus of the follow-up was two new conditions: In the "reversed hidden consequences" (RHC) and "reversed hidden consequences with time pressure" (RHCT) conditions, we have 66 and 63 subjects, respectively. These conditions are similar to HCr and HCTr, with the only difference that now payoffs for the bystander are automatically shown in the decision table, while payoffs for the decider are initially hidden. The appearance of the decision screen and the mechanics of selecting an option and revealing information closely resemble the main study. In contrast to HCr and HCTr, the decider's own payoffs are hidden in RHC and RHCT, while the bystander's payoffs are known. This difference allows us to distinguish between the exculpation mechanism and an alternative mechanism centered around decision conflict. For a conflict avoider, X is focal in HCr and HCTr (as the only information automatically given is that they earn more through option X) and Y is focal in RHC and RHCT (as the only information automatically given

[14]The second restriction was enforced via a respective exclusion restriction in Qualtrics. It serves to ensure that the display of the decision screens did not vary too much across participants using different devices.

is that the bystander earns more through option Y).

Table 4: Summary of decisions in the reverse hidden payoffs study

	Overall		Revealer	Non-revealer
Condition	Option X	Reveal: Yes	Option X	Option X
HCr	39.2%	72.5%	21.6%	85.7%
HCTr	63.5%	38.5%	30.0%	84.4%
RHC	30.3%	66.7%	38.6%	13.6%
RHCT	34.9%	28.6%	38.9%	33.3%

The results are summarized in Table 4. The first thing to notice is that in HCr and HCTr (rows 1 and 2), we closely replicate the findings of the main study both in qualitative and quantitative terms. Again, in the absence of time pressure (HCr), approximately a third of participants chose to avoid information about the bystander's payoffs, and a large majority of uninformed deciders chose option X.

The main results of the follow-up study are derived from comparing the effects of time pressure for each pair of conditions (HCr vs. HCTr and RHC vs. RHCT) in Table 4. Most importantly, results from the four conditions are remarkably consistent with a "conflict avoidance" interpretation. In both the standard and reversed conditions, we observe a drop in revelation decisions under time pressure: from 73% (HC) to 38% (HCT), and from 67% (RHC) to 29% (RHCT).

The regressions in Table 5 confirms that this drop in revelation choices is statistically significant and of similar magnitude in both conditions. Across the three different specifications we employ, we find a significant coefficient for the time pressure treatment (columns 1–2) or significantly fewer revelations for faster decisions (column 3). The significant interaction term indicates that the time pressure effect is stronger in the reverse than in the normal condition.

Table 5: The effect of time pressure on payoff revelation (follow-up study).

	Logit	Probit	IV Probit
Reverse condition	0.757	−0.169	
	(0.329)	(0.259)	
Time pressure	0.236[a]	−0.893[a]	
	(0.106)	(0.270)	
Interaction	0.151[a]	−1.165[a]	
	(0.067)	(0.261)	
Decision time			3.242[a]
			(0.372)
Constant	2.643[a]	0.599[a]	−7.839[a]
	(0.004)	(0.197)	(0.904)
n	232	232	232
Wald χ^2	28.27	30.28	76.14
Prob $> \chi^2$	0.0000	0.0000	0.0000
Pseudo R^2	0.1021	0.1021	

Regressions with the probability of payoff revelation as dependent variable. "Reverse condition" indicates whether the decider's own payoffs were hidden (1 = yes, 0 = no) instead of the bystander's payoffs. "Time pressure" indicates whether the decision is was made under a time limit (1 = yes, 0 = no). "Decision time" is the natural logarithm of actual time elapsed between the screen appearance and the decision submission. The first column reports the odds ratios of a logistic regression with respective bootstrapped (1,000 replications) standard errors in parentheses. Superscripts indicate whether a two-tailed z-test rejects the null that the odds ratio is equal to one at a significance level of 1% (a), 5% (b) or 10% (c), respectively. The second and third columns report the coefficients of probit regressions with respective bootstrapped (1,000 replications) standard errors in parentheses. Superscripts indicate whether a two-tailed z-test rejects the null that the coefficient is equal to zero at a significance level of 1% (a), 5% (b) or 10% (c), respectively. The regression in the third column uses "Decision time" as a mediator and "Time pressure" as an instrument.

The final two columns of Table 4 show the pattern of X choices among revealers and non-revealers. Like in the main study, the vast majority of *non-revealers* choose option X, if the bystander's payoffs are hidden both in the HCr (Fisher's exact test, $p < 0.001$) and HCTr conditions (Fisher's exact test, $p < 0.001$). The proportions are opposite when the decider's own payoffs are hidden. In particular, without time pressure, a majority of *revealers* chooses option X (Fisher's exact test, $p < 0.048$), a result that is consistent with Kandul and Ritov (2017). With time pressure, there are again more revealers choosing option X but insignificantly so (Fisher's exact test, $p = 0.772$). Overall, this pattern is hardly consistent with the selfish strategic ignorance interpretation. Deciders with self-

serving motives should not avoid information about their own payoffs, and yet they do. This avoidance increases with time pressure. Instead, deciders seem to be driven by conflict avoidance when not revealing payoffs and then maximize the payoff of the player whose payoffs are automatically shown, whether it is themselves or the bystander.

Table 6: The effect of time pressure on the probability of selecting option X (follow-up study).

	Logit	Probit	IV Probit (HCr & HCTr)	IV Probit (RHC & RHCT)
Reverse condition	0.674	−0.242		
	(0.265)	(0.240)		
Decision time			−1.7792[a]	−0.486
			(0.619)	(0.779)
Time Pressure	2.692[b]	0.618[b]		
	(1.144)	(0.261)		
Interaction	0.832	−0.114		
	(0.344)	(0.254)		
Constant	0.645	−0.274	4.379[a]	0.743
	(0.196)	(0.187)	(1.492)	(1.925)
n	232	232	103	129
Wald χ^2	13.20	13.67	8.25	0.39
Prob $> \chi^2$	0.0042	0.0034	0.0041	0.5322
Pseudo R^2	0.0475	0.0475		

Regressions with the probability of selecting option X as dependent variable. "Reverse condition" indicates whether the decider's own payoffs were hidden (1 = yes, 0 = no) instead of the bystander's payoffs. "Time pressure" indicates whether the decision was made under a time limit (1 = yes, 0 = no). "Hidden payoffs" indicates whether the bystander's payoffs were initially hidden (1 = yes, 0 = no). "Interaction" is the product of "Time pressure" and "Hidden payoffs." "Decision time" is the natural logarithm of actual time elapsed between the screen appearance and the decision submission. The first column reports the odds ratios of a logistic regression with respective bootstrapped (1,000 replications) standard errors in parentheses. Superscripts indicate whether a two-tailed z-test rejects the null that the odds ratio is equal to one at a significance level of 1% (a), 5% (b) or 10% (c), respectively. The second through fourth columns report the coefficients of probit regressions with respective bootstrapped (1,000 replications) standard errors in parentheses. Superscripts indicate whether a two-tailed z-test rejects the null that the coefficient is equal to zero at a significance level of 1% (a), 5% (b) or 10% (c), respectively. The regression in the third and fourth columns uses "Decision time" as a mediator and "Time pressure" as an instrument. The third column contrasts the TC and TCT conditions; the fourth column contrasts the HC and HCT conditions.

These patterns also have ramifications for the overall effect of time pressure on the frequency of X choices. As we show in Table 6, we replicate the finding of our main study that time pressure increases the frequency of X choices if the bystander's payoffs are uncertain. If, however, the payoffs of the bystander are transparent and the payoffs of

the decision maker are hidden, time pressure does not affect the frequency of X choices significantly.

Could the results indicate a combination of "confusion and rushing"? This does not appear plausible. First, "confusion" as an alternative explanation appears rather unlikely, as the task could not be any simpler as far as economic experiments go (choosing between two options, clearly illustrated in a table). In any case, there should be no more confusion as in the main experiment (Section 2) or as in the large literature on strategic ignorance, which is largely based on subjects deciding between two options.

Second, in the baseline of the reverse conditions (RHC), where there was no reason to rush, a third of deciders avoid being informed. This is reassuringly close to the approximately 29% of subjects who avoid information about their own payoffs in Kandul and Ritov (2017), who use a similar design to ours.[15]

So why would not all deciders reveal information that pertains to their own payoffs? If one assumes purely selfish preferences, then we should indeed see a 100% revelation rate. Yet, as in the original conditions, deciders know that there may be a conflict between choosing what is best for themselves and what is best for the bystander. The instructions clearly state that a question mark (hiding their own payoffs) can resolve into £5 or £8. This implies that the full set of conceivable games includes games with conflicting interests (one option is payoff-maximizing for one player and payoff-maximizing for the other) and games with aligned interests (one option is payoff-maximizing for both players). More precisely, a decider can learn that there is aligned interest or that there is

[15] Furthermore, the effect of time pressure is significantly stronger in the reverse hidden payoff conditions than in the replication of the normal hidden payoff conditions we run on the same platform. If all information avoidance could be explained by rushing and confusion, or a general tendency to do what is fastest (one click vs two clicks), we should see similar rates of avoidance in the baselines of both conditions.

conflicting interest by revealing her own payoffs. By not revealing payoffs, a decider can maintain the belief that interests are aligned, whereas revealing payoffs implies a risk that conflicting interests, or "conflict" for short, materializes.

Analogous to the motives behind strategic ignorance, deciders may choose deliberate ignorance to commit to (blindly) choosing the option that grants the higher payoff to the bystander. As explained in more detail in Kandul and Ritov (2017) and Saccardo and Serra-Garcia (2020), deciders may not wish to learn the costs of a kind action in order to commit to it. This interpretation is also in line with the observation that 86% of uninformed deciders choose the higher payoff option for the bystander. We take the result that revelation rates were significantly below 100% (with and without time pressure) as a strong indication that there must be a motive for why deciders forgo the information on their own payoffs. We refer to this "something" as expected "conflict," as the information regarding the decider's own payoffs clearly has value to a decider who cares about her own earnings.

Now let us recapitulate how the reverse order conditions are helpful in distinguishing between two different interpretations of the results of the main experiment presented in Section 3. We designed the main experiment (Section 2) around a hypothesis that time pressure may serve as a justification for remaining uninformed. The behavioral data collected in the main experiment were in line with this interpretation. An alternative possibility is that time pressure induces subjects to do what is fastest. While this is not convincing if "what is fastest" is narrowly (mechanically) defined as economizing on the time required to click a button, the results in this section suggest that it is plausible, given an extended (psychological) definition that also includes the time the decider anticipates

requiring to resolve a potential inner conflict between choosing what is best for herself and what is best for the recipient.

6 Conclusion

Our study speaks to a recent body of literature concerned with the cognitive underpinnings of pro-social behavior (Capraro, 2019). All experimental studies on intuition and pro-social behavior have so far used tasks in which it is fairly obvious how choices affect the outcomes of other participants. This abstracts from the fact that this link is more opaque in many natural decision environments. In such environments, the acquisition of information can be seen as a pro-social act itself, and remaining uninformed can have a strategic dimension. The finding that, in our experiment, time pressure had no effect on pro-social behavior if consequences were transparent but a large effect if they were hidden constitutes an important piece of new evidence about how situational factors like time pressure affect pro-social behavior.

Our study also speaks to a growing literature on information avoidance. First, across two different experiments, we reaffirm that information avoidance is an important phenomenon and significantly more common than standard models of outcome-based preferences would predict. Extending the existing literature, we show that the prevalence of information avoidance is strongly moderated by time pressure. Our follow-up experiment in Section 5 clarifies that a plausible mechanism by which time pressure drives revelation choices is conflict avoidance, that is, time pressure drives information avoidance, not because it serves as a justification for remaining uninformed but because it allows decision makers to make a quick decision without having to resolve potential conflicts.

This has practical implications for the importance of transparency in situations where choices can have detrimental effects on bystanders. If these detrimental effects are hidden, time pressure exacerbates both information avoidance and the frequency with which bystanders are negatively affected. However, if these detrimental effects are obvious, time pressure does not have such stark effects, although information avoidance is again widespread. Our follow-up study also poses new questions for the literature on information avoidance. In this literature, the preferred interpretation is that individuals avoid information because it allows them to preserve a positive self-image (Dana et al., 2007; Grossmann et al., 2017). We show, consistent with Kandul and Ritov (2017), that in the absence of time pressure, individuals still avoid information even when self-image preservation cannot be a motive for remaining uninformed.

In principle, our findings could apply in any setting in which individual decisions have social consequences, such as in teamwork, resource use or public goods provision. Specifically, we see interesting applications in organizational (Dana, 2005; Dana et al., 2007) and environmental settings (Thunström et al., 2014; Lohse et al., 2016; Brozyna et al., 2018), in which time constraints are common. If structures and processes in organizations impose time pressure on decision-makers, elevated self-serving behavior may hamper overall team performance and lead to organizational misbehavior. But a different reading of our findings also suggests that high transparency mitigates the adverse effect of time pressure. Both time pressure and transparency are malleable by organizational management.

Likewise, the time constraints under which many consumption decisions are made (think grocery store) may be conducive to "strategic ignorance" of social and environ-

mental impact information (Ehrich and Irwin, 2005; Onwezen and van der Weele, 2016). This has implications for consumer information and labeling instruments: the information must be presented as clearly and bluntly as possible in a way that is hard to ignore. This may "nudge" consumers to more socially and environmentally conscious consumption choices with minimal force. We think those applications provide interesting avenues for researching "strategic ignorance" in the field.

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