Pay Your Debts: Moral Dilemmas of International Debt

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Abstract

Should a government repay its international debts even if this imposes severe hardships on its citizens? Drawing on moral psychology, we investigate when people think a government is morally obligated to pay its debts. Participants read about a government that has to decide whether to default on its debt payments or cut vital programs. Across conditions, we varied the number of jobs at stake and whether a full or partial default is required to save them. Overall, most participants judged that a government should pay its debt even when the damage to the debtor is greater than the benefit to the lender. As the damage to the debtor became extreme, participants increasingly said the government should default, but they still judged that defaulting is morally wrong. In Experiment 2, we find in a national sample of Americans that political conservatives were more opposed to default than liberals. We discuss implications for policy, public opinion, and public welfare during economic downturns.

Introduction

Should a government repay its international debts even if it means cutting programs when citizens need them most? This political dilemma has repeatedly shaken the international community in recent times. In Europe, for instance, Greece's

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government in the midst of financial crisis faced difficult choices between repaying lenders and meeting the dire needs of its citizens (Reinhart and Rogoff 2011). These decisions have much at stake for many citizens whose jobs, prosperity, and welfare depend on them (Karanikolos et al. 2013), and they have been divisive and polarizing in American and international politics (Pew Research Center 2012a). Here we use methods from moral psychology (Baron 1994; Tetlock 2003; Mitchell and Tetlock 2016) to investigate people's moral judgments about dilemmas of international debt.

The issue of debt is not only a matter of economics but also moral judgment (Rathbun et al. 2019; Ryan 2019). In addition to costs and benefits, people's judgments depend on how firmly they believe that a debt should be repaid, and how rigidly they enforce the obligation to repay. At one extreme, some people insist that a debtor should always pay their debt, no matter what the consequences. On the other side, some people believe that a debtor may default on their debt when repaying would harm them more than it benefits others, weighing the costs and benefits to everyone. Research in moral psychology finds that for many moral rules, such as prohibitions against killing or stealing, people have conflicting motives: they want to enforce the moral rule but they also want to maximize welfare, creating dilemmas when these motives collide (reviewed in Haidt 2012). Here we focus on the case of debt by examining how people's moral judgments about debt depend on the consequences at stake and moral prohibitions against defaulting on a debt.

Previous research has examined people's views of international debt by asking about a particular crisis familiar to them, such as studying citizens' views of contemporary crises in Europe, Iceland, and Argentina (Bechtel et al. 2014, 2017; Curtis et al. 2014; Tomz and Wright 2013). Here we study people's judgments about hypothetical dilemmas, which is a standard method in moral psychology. With hypotheticals, researchers have greater control of the stimuli, abstracted from participants' varied experiences of a complex crisis. Thus, we aim to understand the psychology underlying dilemmas of international debt in many forms. Hence, moral psychology complements research on public opinion: For a given crisis, people's judgments will be shaped by a mixture of general and particular features, meriting attention to both.

The Psychology of Moral Taboo

Psychologists have found that moral judgments include rigid taboos that resist cost–benefit tradeoffs, alongside and often conflicting with altruistic motives for the greater good (DeScioli and Kurzban 2009, 2013; Mikhail 2007; Tetlock 2003). Moral taboos focus on the category of the action rather than all of its consequences. Hence, they resist the cost–benefit considerations that guide other decisions such as matters of economics or safety. For instance, a patient who considers a risky surgery typically weighs the costs and benefits for their health, rather than abiding by firm prohibitions against dangerous surgeries. Indeed, most forms of judgment weigh the consequences, while moral judgment features distinctive taboos (DeScioli and Kurzban 2009, 2013; Mikhail 2007; Tetlock 2003).

Note that research on moral "taboos" includes other synonyms for judgments that resist tradeoffs including: moral absolutism (Ginges et al. 2007), deontological judgment (Amit and Greene 2012; DeScioli and Kurzban 2009, 2013; Greene et al. 2008; Mikhail 2007); nonconsequentialism (Baron 1994), protected values (Baron and Spranca 1997), and moral convictions (Delton et al. 2020; Ryan 2014; Skitka 2010). Moreover, moral psychologists continue to study and debate the psychological processes behind moral taboos, including emotions (Greene 2013; Haidt 2012), heuristics (Gigerenzer 2010; Sunstein 2005), absolute values (Baron 1994; Baron and Spranca 1997; Tetlock 2003), evolutionary strategies (DeScioli and Kurzban 2009, 2013), and unconscious cognition (Cushman et al. 2006; Mikhail 2007). But the key idea that connects this work is that moral judgment resists cost–benefit tradeoffs.

Across hundreds of experiments, researchers find that people judge that breaking moral rules is wrong and punishable even when the violation does more good than harm. For example, in the well-studied trolley problem, most people (~75%) judge that it is morally wrong to push one person in front of a trolley to save five people on the tracks (Mikhail 2007), condemning the action of killing even though it would achieve better consequences, one death instead of five deaths. Moreover, by experimentally varying the dilemma, psychologists found that seemingly minor details can shift most people's judgments. For instance, when the protagonist could flip a switch that would redirect the trolley toward one person, now most participants (~75%) said to flip the switch and kill one person to save five (Mikhail 2007). In short, people's moral judgments include taboos and concerns for the greater good, and details about causality, intentions, and relationships can tip the unsteady balance between them (De Freitas et al. 2017; Kurzban et al. 2012).

A strand of this research examines moral judgment in American and international politics (Dehghani et al. 2010; Ginges et al. 2007; Ryan 2014, 2017, 2019; Skitka and Bauman 2008). For instance, one study found that participants who moralized a political issue such as U.S. Social Security were more resistant to compromises on the issue, and they even wanted to punish politicians who were willing to compromise (Ryan 2017). In a further study, participants with strong moral convictions about a political issue ignored new facts about it and dismissed considerations based on costs and benefits (Ryan 2019). Another line of research examined moral absolutism about international conflicts. In one study, Palestinian and Israeli participants decided which deals they would accept to resolve issues surrounding the Israeli-Palestinian conflict (Ginges et al. 2007). Many participants were morally outraged by proposals to compromise, and they were even more outraged when the proposer added more perks to seal the deal. Similarly, Iranian participants who viewed their nuclear program as a moral right responded to offers of additional financial incentives with greater anger (Dehghani et al. 2010). Overall, this research illustrates how moral judgment can add a taboo character to politics, leading moralists to depart from rationality and react with outrage to incentives and compromise.

A recent study examined how people's moral judgments affect their views about international debt, specifically looking at the recent controversy over the Greek bailout in Europe (Rathbun et al. 2019). The researchers examined whether German citizens' views of the bailout depended on which moral values were more important

to them, including the values of care, fairness, and retribution, drawn from previous research in moral psychology (Haidt 2012). Participants who were more concerned with care were more likely to support a bailout, showing leniency in light of Greece's hardships. On the other hand, participants who were more concerned with fairness and retribution were more likely to oppose a bailout, enforcing the obligation to repay. Moreover, these results echo previous research finding that German participants who were more altruistic and cosmopolitan were more likely to support bailouts (Bechtel et al. 2014), and they were more likely to support bailouts when the costs were shared fairly among European countries (Bechtel et al. 2017).

But people's general commitments to values such as care and fairness are only part of the story. With motivated reasoning (Lodge and Taber 2013), people can quickly morph their seemingly fundamental values to make a case for their own interests (DeScioli et al. 2014). For instance, the same study of the Greek bailout also found that German participants who were more nationalistic had less of an association between care and support for the bailout. The point is even more clear in divergent opinion polls from Germany and Greece: Most Germans advocated Greek austerity and repayment, while most Greeks wanted to end austerity and provide relief to citizens (Pew Research Center 2012a). Similarly, research on Argentina's debt crisis of 2001 and Iceland's debt crisis of 2011 found that citizens' views reflected their own economic interests. Citizens who relied more on government provisions such as unemployment benefits were more opposed to cuts in government spending (Curtis et al. 2014; Tomz and Wright 2013).

Importantly, this previous research on international debt did not specifically assess whether people oppose defaulting on a debt when the benefits outweigh the costs, nor the resulting moral dilemmas when the prohibition against default clashes with the motive to maximize welfare. Hence, we examine these issues by drawing on the psychological literature about moral dilemmas.

The Conceptual Structure of Moral Dilemmas

As we have seen, people have both moral taboos against specific actions and altruistic motives to achieve the greater good. This creates the potential for moral dilemmas: When a person can do more good or less harm by choosing a prohibited action, such as lying, stealing, or killing, should they cross the line?

The combination generates any number of dilemmas such as whether someone should kill one person to rescue five people, steal medicine to save a spouse, or lie about a tragedy to comfort a child. In these cases, a *prohibited action* (killing, stealing, lying) collides with the benevolent motive to achieve *better consequences* (fewer deaths, curing disease, relieving distress). The collision is enabled by basic elements of human cognition: the distinct concepts for an agent's *action* and its *effects*, such as causing a change of state to an object or person (Pinker 2007). These concepts also structure human language such as the distinction between a verb, specifying an action, and its direct object, specifying the object affected by the action (De Freitas et al. 2017; Pinker 2007). Likewise, moral prohibitions refer to the agent's action,

while the consequences refer to the effects on the people involved, such as their states of health, contentment, or poverty.

The same combination underlies many moral dilemmas in politics. For instance, a government may have to decide whether to kill civilians in a military strike to prevent further deaths, such as weighing the collateral damage of a drone strike or a horrifying nuclear attack like in WWII (see Press et al. 2013, and Sagan and Valentino 2017 for related experiments). Another perennial dilemma is whether the government should raise taxes and take more money from wealthy citizens, which some see as violating their property rights, to provide more benefits to the poor. Also, governments must regulate technologies that some people fear while others see enormous benefits, such as nuclear power and editing human genes. In these and many other political dilemmas, there is a tension between a prohibited action (killing civilians, taking money, editing genes) and the potential for beneficial consequences (ending a war, relieving poverty, curing genetic diseases).

We suggest that international debt is another major political issue that is fraught with moral dilemmas. During an economic crisis, a government must balance the moral obligation to pay its debts against meeting the dire needs of its citizens. Hence, a prohibited action (defaulting on a debt) could be at odds with better consequences (providing relief in a crisis).

The Present Experiments

International debt can generate moral dilemmas but it is unclear just how potent these dilemmas might be. It depends on how firm is the moral taboo against default. For any powerful taboo, there will be situations where the forbidden action would do more good overall, arousing the competing, benevolent motive to achieve better consequences (Tetlock 2003).

Surprisingly, there is little research specifically on the moral psychology of debt, whether personal or international. There is an extensive literature on related morals such as reciprocity, fairness, and promises (reviewed in Haidt 2012), but not for repaying a debt and the resulting dilemma when the debtor would suffer hardship. Given the key role of reciprocity in human societies (Alford and Hibbing 2004; Axelrod 1984), people are likely to regard paying debts as a moral obligation. As a possible hint, in some languages such as ancient Hebrew and modern German, the word for debt also means sin or guilt. On the other hand, debt is an economic concept and so might be more amenable to weighing costs and benefits, compared to other moral violations like killing or lying.

Thus, the main focus of the present experiments is to apply moral psychology to the critical issue of international debt. Accordingly, we use methods from moral psychology combined with content about the international politics of debt. Participants read a hypothetical dilemma in which a government must choose whether to default on its debt or cut vital programs, and then they decide what the government should do and whether each choice would be immoral and deserve punishment. Across experimental conditions, we manipulate the amount of damage that is at stake for the debtor, which we denominate in the number of jobs that would be lost if the

government cuts programs. By holding constant the violating action (defaulting on a debt) while varying the consequences (job losses), we can assess participants' moral taboos about debt, indicated by how much they adhere to the taboo as the beneficial consequences increase. This is a common experimental method in moral psychology (Baron 1994; Kurzban et al. 2012; Tetlock 2003) and it directly follows from the conceptual structure of moral dilemmas, discussed above, in which the moral severity of a violation competes against the amount of good it could do.

Hypothetical scenarios are commonly used in moral psychology because they allow researchers to control and vary the situation while minimizing many other influences such as participants' private interests and prior beliefs about real situations (e.g., a specific debtor was reckless or the lender was predatory). For the same reasons, researchers use hypothetical scenarios in the broader social sciences, such as for studying people's economic judgments about fair prices (Kahneman et al. 1986) and their judgments about tax policies and distributions of wealth (Mitchell and Tetlock 2016; Norton and Ariely 2011). Particularly, we use hypothetical countries to minimize the powerful effects of motivated reasoning (Lodge and Taber 2013), post hoc rationalization (Haidt 2012), and self-interest (DeScioli et al. 2014), which would generally skew someone's judgments to favor their own country. We aim to temporarily isolate the structure of debt dilemmas from these other powerful influences. It also approximates the judgments of impartial bystanders such as neighboring countries who participate in the international politics of debt (see also Mitchell and Tetlock 2016).

Also standard, we present participants with dilemmas that are brief and idealized, abstracted from the many complexities of real conflicts over debt, just as the trolley problem is abstracted from real decisions with lives on the line. Especially, we simplify the consequences as the quantity of jobs that would be lost in the debtor country and the lender country. We focus on job losses to make the consequences comparable between the debtor and lender. Job losses are common in debt crises. For instance, Greece's repayments in the debt crisis of 2015 came with enormous job losses (150,000 government jobs cut between 2011 and 2015; Featherstone 2015). To capture a dilemma in which the debtor suffers an economic downturn, the debtor's potential job losses are always greater than the lender, which are held constant across conditions. For understanding people's judgments, simplified scenarios offer key advantages over real dilemmas where the consequences of a policy are highly uncertain and contentious, making it difficult to distinguish taboos from cost–benefit judgments.

In Experiment 1, we vary the debtor country's job losses if they make cuts to repay the debt (6000; 10,000; 25,000; or 100,000 jobs), while the lender country would always lose 5000 jobs if the debt is not paid. Hence, the relative consequences are summarized by the *damage ratio* (1.2x, 2x, 5x, and 20x) for the debtor's potential job losses compared to the lender. In all conditions, the possible losses are greater for the debtor than the lender, so defaulting on the debt would achieve better consequences (according to the idealized parameters of the scenario representing a debtor's economic crisis). Thus, the moral taboo against default is at odds with the greater good in terms of job losses, and we can gauge the magnitude of the taboo by participants' resistance to the increasing benefits of crossing it.

We also manipulate whether the government is considering a full or partial default (holding constant the consequences in job losses). Often, a government does not entirely default in a crisis but instead negotiates a reduction in payments. People might judge a partial default more leniently (holding constant the consequences) because the partial repayments show an intention to repay, which is expected to reduce the severity of the moral violation (e.g., Darley and Pittman 2003; De Freitas et al. 2017; Young and Saxe 2011).

In Experiment 2, we recruit a national sample of Americans to test whether political conservatives are more opposed to a government default than liberals. People's political ideologies are closely linked with their moral judgments about how citizens and governments should behave (Graham et al. 2011). Traditionally, political conservatives are relatively more concerned with issues surrounding government spending and debt, while liberals are more concerned with relieving citizens' hardships. This suggests that compared to liberals, conservatives might be more opposed to default.

Experiment 1

Methods

We recruited 648 participants from the United States (46.1% female; age: $M = 35.4$, SD 10.7) using a convenience sample from Mturk (Berinsky et al. 2012) in the Fall of 2017. (See Online Appendix for more about the sample and methods.) Participants read a hypothetical scenario about a government in a debt crisis and then answered questions about it. In the baseline scenario, a government can repay its debt only by cutting major programs, which will lead to a loss of 6000 jobs. However, if the debtor government does not repay, then the lender government will have to make cuts to its own programs and will lose 5000 jobs. Thus, the debtor must choose between a prohibited action: defaulting on the debt, and a worse consequence: more job losses in total (6000 vs. 5000). Participants read:

Avalon and Fredonia are two countries in the same region. A few years ago, Avalon suffered hard times and Freedonia loaned $100 billion to Avalon. Avalon promised to repay the loan regularly over the course of 15 years.
Now, a few years later, Avalon is experiencing more economic hardship and cannot afford to make its loan payments. The only way Avalon can make the payments is by drastically cutting its government programs. With these cuts, 6000 citizens would lose their jobs.
At the same time, Freedonia has stressed that Avalon must continue to repay the loan. If Avalon stops repaying the loan, then Freedonia will have to make big cuts to its government programs and 5000 citizens would lose their jobs.
In this difficult situation, the government of Avalon continues to debate whether they should stop repaying the loan or cut government programs for their citizens.

In a between-subject design, we manipulated the potential damage in job losses to the debtor country. We varied the debtor's job losses as a relative ratio compared to the lender's potential damage (always constant at 5000 jobs) in four levels of escalating damage: 1.2x (6000 jobs), 2x (10,000 jobs), 5x (25,000 jobs), and 20x (100,000 jobs).

We also manipulated whether the debtor government had to default in full or partially in order to prevent job losses. Partial default might be judged more leniently because it shows the debtor's intention to preserve a positive relationship with the lender. In the partial default conditions, the relevant portion of the scenario instead said that Avalon "can afford to pay only half of the amount due each period", and that Avalon had to choose whether to repay the total amount due or "underpay with half of the amount due each period".

After reading the scenario, participants answered the policy question, "What do you think Avalon's government should do?" by choosing either repay the loan by cutting programs or stop repaying the loan. Next, participants made moral judgments about each option, first for defaulting on the debt, which was our main focus, and then for cutting government programs. They answered whether each option is morally wrong (forced-choice yes/no), how morally wrong (0–10 scale from *not at all morally wrong* to *extremely morally wrong*), and whether this action should be punished "such as by protests, lawsuits, removal from office, and/or international sanctions" (0–10 scale from *not at all punished* to *severely punished*). Finally, participants answered questions about how they made their decisions (open-ended), their political views, demographic characteristics, and general comments.

Results

### What Should the Government Do?

Figure 1 shows the percentage of participants who opposed default in their policy judgments. When the debtor's potential job losses were a little greater than the damage to the lender (1.2x), most participants (72%) opposed default, even if it would save more jobs in total. As the damage to the debtor further increased, participants became relatively more lenient. But even when the damage to the debtor was 20x greater, a substantial percentage (39%) continued to oppose default. Finally, participants were generally more accepting of the partial default than full default.

Next, we analyze participants' policy judgments with linear regression (Table 1).[1] The damage ratio X partial default interactions were not significant so we report the model without them (for the interactions, see the Appendix). Compared to the reference category of 1.2x damage, participants were less likely to oppose default when the damage increased to 2x, 5x, and 20x. Also, participants were less likely to oppose partial default than full default (holding constant the consequences in job losses).

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[1] The results are the same with logistic regression.

Fig. 1 Percentage of participants who opposed default. Judgments are shown by the ratio of potential damage to the debtor relative to the lender and by whether the required default was full or partial. The line at 50% indicates the majority tendency; the percentages statistically differed from 50% (binomial tests) except for the 2x/full and 5x/partial conditions (see Online Appendix for details)
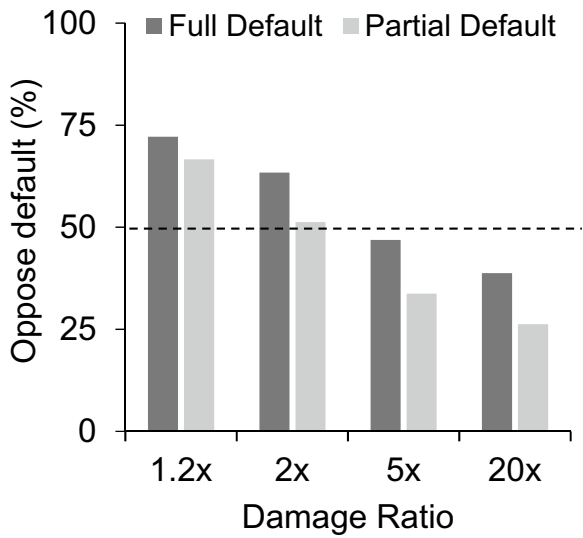
**Table 1** Linear regression of participants' opposition to defaulting on the debt

	Coefficient (*SE*)
Constant	0.75 (0.04)***
2x ratio	− 0.12 (0.05)*
5x ratio	− 0.29 (0.05)***
20x ratio	− 0.37 (0.05)***
Partial default	− 0.11 (0.04)**

The reference category is 1.2x damage ratio and full default. $N = 648$

*$p < .05$, **$p < .01$, ***$p < .001$

These results show that participants' policy judgments partly resisted and partly conformed to the benefits of default. Participants often opposing default when it could achieve better consequences, consistent with a taboo against debt. Importantly, however, participants also became less opposed to default as the potential damage to the debtor increased from only a little more than the lender to higher levels (2x, 5x, or 20x), showing that greater harm can weaken the moral taboo against default. In this case, varying the damage from small (1.2x) to great (20x) was sufficient to sway the majority, swinging from about 70% to 40% opposed to full default. At the same time, it is notable that 40% of participants continued to oppose default even when it could save 100,000 jobs for the debtor compared to 5000 jobs for the lender.

Is it Morally Wrong to Default on the Debt?

Figure 2 shows participants' moral judgments for defaulting on the debt. Overall, a substantial percentage of participants in every case judged that it would be morally
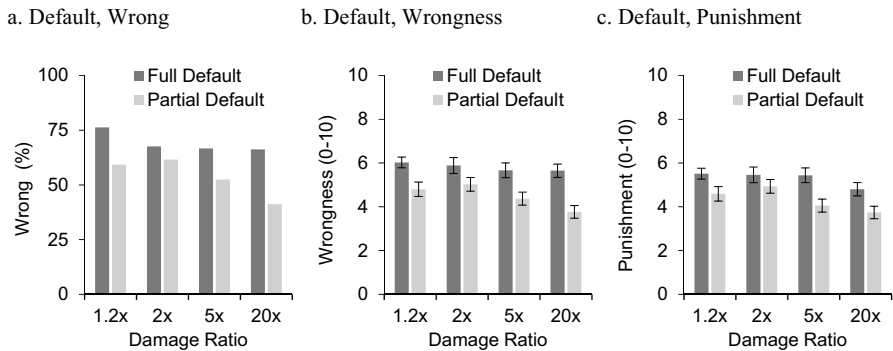
Fig. 2 Participants' moral judgments about defaulting on the debt. The panels show the percentage who judged that defaulting is wrong (panel **a**), mean (*SE*) ratings of moral wrongness (panel **b**), and mean (*SE*) ratings of how much punishment the government would deserve (panel **c**). Error bars indicate standard errors

Table 2 Regressions for moral judgments of defaulting on the debt

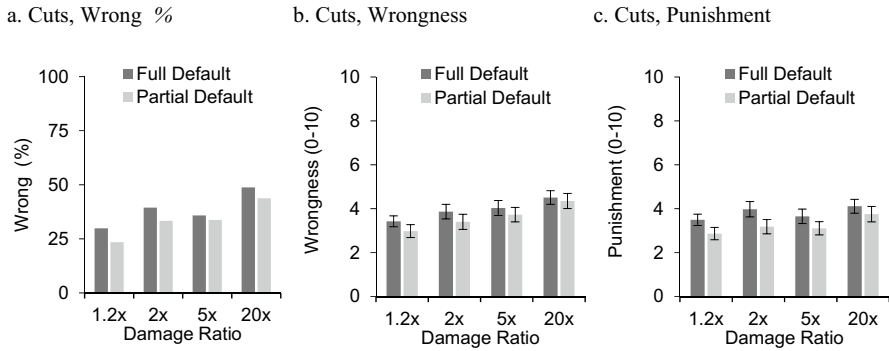|	Wrong %	Wrongness	Punishment
Constant	0.76 (0.04)***	6.07 (0.23)***	5.54 (0.23)***
2x ratio	−0.03 (0.05)	0.06 (0.31)	0.16 (0.30)
5x ratio	−0.08 (0.05)	−0.39 (0.30)	−0.30 (0.30)
20x ratio	−0.14 (0.05)**	−0.70 (0.30)*	−0.78 (0.30)**
Partial default	−0.16 (0.04)***	−1.32 (0.22)***	−0.98 (0.21)***

Linear regressions. The reference category is a 1.2x damage ratio and full default. Standard errors are in parentheses. $N = 648$

*$p < .05$, **$p < .01$, ***$p < .001$

wrong to default. Participants' judged defaulting to be moderately wrong and punishable across the full range of damage ratios, while they judged partial default somewhat less harshly than full default.

We further confirmed these patterns in regression models (Table 2). For all analyses, the damage ratio x partial default interactions were not significant so we removed them. The reference category is the 1.2x damage ratio for full default. For whether defaulting is wrong, the results show no effects of additional damage to the debtor country except at the greatest level of damage (20x) where they were less likely to judge defaulting as wrong. We also found that participants were less likely to judge partial default as wrong compared to full default. We found the same pattern of results for wrongness and punishment ratings.

These results indicate that participants' moral judgments of default were insensitive to the amount of damage to the debtor across a wide range from 1.2 to 20 times more job losses than the lender. This is a characteristic of moral taboos, which focus more on the action (defaulting) than the consequences (total job losses). Moreover, the fact that moral judgments *were* sensitive to whether the default was partial

a. Cuts, Wrong %   b. Cuts, Wrongness   c. Cuts, Punishment

Fig. 3 Participants' moral judgments about cutting government programs. The panels show the percentage who judged that cuts are wrong (panel **a**), mean (*SE*) ratings of moral wrongness (panel **b**), and mean (*SE*) ratings of how much punishment the government would deserve (panel **c**). Error bars indicate standard errors

Table 3 Regressions for moral judgments of cutting government programs

	Wrong %	Wrongness	Punishment
Constant	0.29 (0.04)***	3.38 (0.24)***	3.47 (0.23)***
2x ratio	0.10 (0.05)	0.43 (0.32)	0.39 (0.31)
5x ratio	0.08 (0.05)	0.67 (0.31)*	0.20 (0.31)
20x ratio	0.20 (0.05)***	1.22 (0.31)***	0.75 (0.31)*
Partial default	−0.05 (0.04)	−0.34 (0.22)	−0.58 (0.22)**

Linear regressions. The reference category is a 1.2x damage ratio and full default. Standard errors are in parentheses. $N = 648$

*$p < .05$, **$p < .01$, ***$p < .001$

indicates that they were attuned to the nature of the action (partial or full default), even though the consequences were held constant across these conditions.

Is it Morally Wrong to Cut Government Programs?

Figure 3 shows participants' moral judgments for cutting government programs. Overall, most participants said it is not morally wrong to cut government programs in order to repay the debt, and judgments of wrongness and punishment tended toward the lower end of the scale.

We further analyzed these patterns with regression models (Table 3). The damage ratio X partial default interactions were not significant so we removed them. For whether defaulting is wrong, participants' judgments were insensitive to the amount of the damage, except when it reached the extreme of 20x where more participants judged cuts as wrong. There was no difference between full and partial default (as expected since they were judging the government's cuts rather than the alternative of partial or full default). Participants' ratings of wrongness and punishment followed a
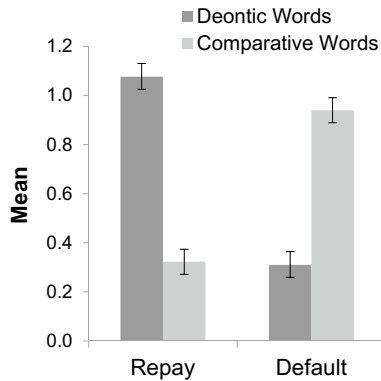
Fig. 4 Mean (*SE*) number of deontic words and comparative words in participants' comments depending on whether they said the government should repay or default. For deontic words, we counted in each comment the number of these words: *must, have to, need to, promise, commitment, contract, responsibility, agreement, obligation, fulfill, honor, owe,* and *duty* (see Jackendoff 1999 on the linguistics of obligation). For comparative words, we counted: *less, more, better, worse, than, least, few, many, greater, number,* and *amount* (see Kennedy 2005 on the linguistics of comparisons). We included plurals, different tenses, and other forms of these words. We excluded participants who did not make comments. Participants who said to repay used more deontic words than those who said to default, $t(627) = 10.01$, $p < .001$; participants who said to default used more comparative words than those who said to repay, $t(627) = 8.53$, $p < .001$

similar pattern, except that the wrongness of cuts was greater at 5x damage and punishment of cuts was reduced when the alternative was a partial default.

Thus, participants' moral judgments of cuts were insensitive to the amount of damage, except when it reached the extreme of 20x where cuts were considered more wrong.

Comments

We also looked for themes in participants' open-ended comments about how they made their judgments. (Participants' comments are available in Supporting Materials). Participants who opposed default typically emphasized the moral obligation to repay. They used deontic verbs such as *must*, *have to*, and *need to*, and they referred to deontic concepts such as promise, commitment, agreement, honor, and responsibility (Fig. 4). Examples include: "debts must be repaid," "a debt is a debt," "they need to repay as promised," "they have to honor the agreement," "it is their responsibility to repay," and "Avalon should have to repay its debt no matter what." Participants who supported default typically compared the consequences of each choice, and they emphasized minimizing the total losses. They used comparative words such as *less*, *more*, *than*, and *better,* and they referred to concepts such as the amount of harm and the greater good (Fig. 4). Examples include: "I tried to minimize the job loss," "Less people are losing jobs," "I based it on the concept of greater good," "Better for 5000 people to lose their jobs than 100,000," "it is kind of like choosing the lesser of two evils," and "I tried to get as few people affected as possible."

Discussion

We found that most participants judged that a government should pay its debt even when the costs to the debtor are greater than the benefits to the lender. As the costs to the debtor increased, most participants eventually supported default, but they still judged that defaulting is morally wrong. Even at the most extreme damage to the debtor—losing 100,000 jobs (20x ratio), many participants (~40%) judged that the government should repay the debt. Thus, we find that participants' policy judgments resisted cost–benefit tradeoffs while also bending toward the greater good when the harms became extreme. Meanwhile, participants' moral judgments were largely insensitive to the consequences.

These findings suggest that the moral taboo pushed against default while altruistic motives oppositely pulled toward the greater good. Consistent with this view, we also found in additional analyses that participants who judged that default is immoral were more likely to oppose default in their policy judgments (Online Appendix). Moreover, this interpretation is consistent with previous research on the trolley problem finding that people's altruistic motives for the greater good can oppose the moral taboo against killing one person to save five (Kurzban et al. 2012).

Finally, participants were more supportive of partial default than full default, and they also judged partial default as less morally wrong. Recall that this manipulation varied the action (partial or full default) while holding constant the consequences (job losses). Thus, this finding shows that varying the action affected policy judgments and moral judgments in tandem.

Experiment 2

Are American conservatives more opposed to defaulting on debts than liberals? In Experiment 2, we recruit a national sample of Americans to address this question. Participants judge the same dilemmas about international debt from Experiment 1, and we look at whether this broader sample also exhibits taboos against default. We also test whether political conservatives are more opposed to default than liberals. Previous research argues that compared to liberals, conservatives are relatively more concerned about reciprocity, such as dividing rewards according to effort (Mitchell et al. 1993, 2003). The obligation to repay a debt is essentially an obligation to reciprocate, while default is a form of defection. On the other hand, liberals are relatively more concerned about caring for people's welfare (Skitka and Tetlock 1993; Janoff-Bulman 2009), and so might focus more on the good that default could achieve in an economic crisis.

More broadly, surveys typically find that American conservatives are more concerned than liberals about debt in general. For example, in one survey 84% of Republicans said that reducing the national debt was a top priority, compared to 66% of Democrats (Pew Research Center 2012b), and a few years later Republicans were again more concerned with cutting the debt than Democrats (Pew Research 2019). Ideological differences also extend to individual debt. For instance, a recent national

survey found that 66% of Republicans opposed forgiving debts from student loans, whereas only 18% of Democrats were opposed (Quinnipiac University 2019). More generally, moral psychologists have argued that liberals tend to be relatively more concerned with harm whereas conservatives are relatively more concerned with reciprocity (Haidt 2012; Lakoff 1996). Taken together, these observations suggest that compared to liberals, conservatives might be more opposed to default.

Methods

We recruited a national sample from the United States in theSummer of 2018 using Survey Sampling International, an online survey company that recruits participants according to census-based targets (Berinsky et al. 2014).[2] We excluded participants with incomplete responses (missing 2 or more, $n = 51$) yielding a sample of 1046 participants (54.3% female; age: $M = 43.1$, SD 14.3).

Participants read the same basic scenario from Experiment 1 except with only two of the damage ratios: 2x (10,000 jobs) or 20x (100,000 jobs), which were randomly assigned between-subjects. We focused on these conditions to examine moderate and extreme damage with a large, national sample. As in Experiment 1, participants answered what the government should do, and they judged how wrong and punishable it would be to default or cut programs.

Participants also answered how they made their decisions (open-ended) and completed demographic questions including their political ideology and partisanship. Participants indicated their political ideology on a 7-point scale from *very liberal* (-3) to *moderate / middle of the road* (0) to *very conservative* ($+3$). Based on this scale, the sample was composed of 421 liberals (below 0 on the scale), 323 moderates (0 on the scale), and 302 conservatives (above 0 on the scale). For partisanship, participants answered the standard question, "Generally speaking, do you consider yourself as a Republican, a Democrat, an Independent, or what?", followed by whether they are a "Strong" or "Not very strong" Democrat or Republican. Participants who selected "Independent" or "Other" also answered whether they are closer to Republican, Democrat, or neither.

Results

What Should the Government Do?

Figure 5 (panel A) reports the percentage of participants who said the government should not default. When the debtor's potential job losses were two times the damage to the lender, most participants (58%) opposed default, comprising a statistically significant majority ($p < .001$, binomial test). When the damage to the debtor was twenty times greater than the lender, participants were evenly split without a majority preference ($p = .43$, binomial test). Comparing across

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[2] The data are unweighted in all analyses.

a. Full national sample   b. By political ideology
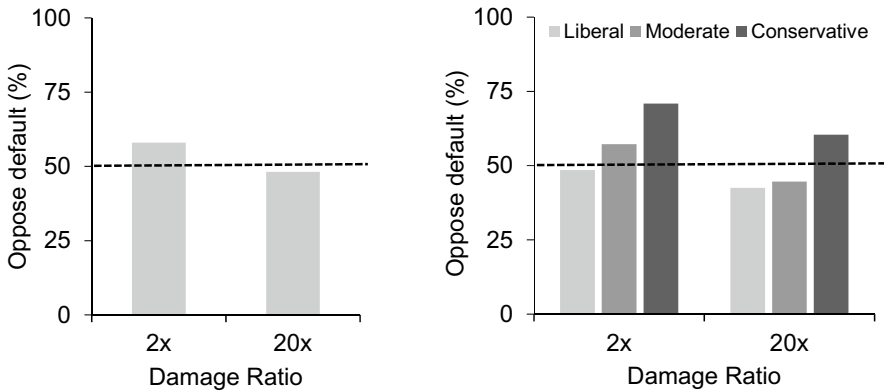
Fig. 5 The percentage of participants who opposed default for the full national sample (panel **a**) and by political ideology (panel **b**). Judgments are shown by the ratio of potential damage to the debtor relative to the lender. The line at 50% indicates the majority tendency

Table 4 Linear regression of participants' opposition to default

	Coefficient (*SE*)
Constant	0.59 (0.02)***
20x ratio	− 0.09 (0.03)**
Ideology	0.05 (0.01)***

The reference category is the 2x damage ratio. The ideology scale ranges from − 3 *very liberal* to + 3 *very conservative*. $N = 1046$

**p < .01, ***p < .001

conditions, participants were less likely to oppose default when the debtor would lose 20x more jobs compared to when the debtor would lose $2 \times$ more jobs, χ^2 (1, $N = 1046) = 10.18$, $p = .001$.

Next, we examine opposition to default by political ideology (Fig. 5, panel B). Conservatives were more likely than liberals to oppose default in both the 2x condition, χ^2 (1, $N = 358) = 18.21$, $p < .001$, and the $20 \times$ condition, χ^2 (1, $N = 365) = 11.15$, $p < .001$.

We further analyzed opposition to default with a linear regression[3] with predictors for the damage ratio and political ideology as a continuous scale (from − 3 *very liberal* to + 3 *very conservative*). The 20x ratio X ideology interaction was not significant so we removed it from the model. Table 4 shows the results. More conservative participants were more opposed to default. Compared to the reference category of 2x damage, participants became less opposed to default when the damage increased to 20x.

These results show that conservatives were more likely to oppose default than liberals. Both liberals and conservatives became less opposed to default as the debtor's

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[3] The results are the same using logistic regression.

a. Default, Wrong %   b. Default, Wrongness   c. Default, Punishment
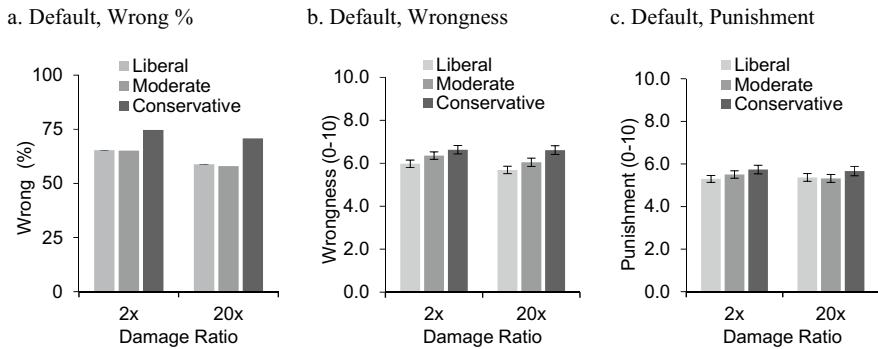
Fig. 6 Participants' moral judgments about defaulting on the debt. The panels show the percentage who judged that defaulting is wrong (panel **a**), mean (*SE*) ratings of moral wrongness (panel **b**), and mean (*SE*) ratings of how much punishment the government would deserve (panel **c**). Error bars indicate standard errors

job losses increased. Still, a sizable proportion of participants (~50% overall) continued to oppose default even when the debtor had 20x more jobs at stake than the lender.

Is it Morally Wrong to Default on the Debt?

Similar to Experiment 1, participants judged that default is moderately wrong and deserving of punishment in both conditions; also, participants' moral judgments correlated with their policy judgments (Online Appendix).

Figure 6 shows moral judgments by political ideology. Conservatives showed more moral condemnation of default for both damage ratios; 2x condition: wrong (%), χ^2 (1, $N = 357$) = 3.63, $p = .057$ (marginally significant), and wrongness ratings, $t(354) = 2.49$, $p < .05$; 20x condition: wrong (%), χ^2 (1, $N = 365$) = 5.43, $p < .05$, and wrongness ratings, $t(361) = 3.40$, $p < .001$. For punishment judgments, liberals and conservatives did not significantly differ in either the 2x condition, $t(352) = 1.69$, $p = .09$, or the 20x condition, $t(361) = 1.04$, $p = .30$. In sum, both liberals and conservatives judged that it is wrong for the government to default, while conservatives were slightly more harsh than liberals.

Is it Morally Wrong to Cut Government Programs?

As in Experiment 1, participants judged that cutting programs was moderately wrong and punishable for both damage ratios, and their moral judgments became only slightly harsher when the consequences were more severe (Online Appendix).

Broken down by political ideology, liberals showed greater moral condemnation of cutting programs than conservatives (Fig. 7). This occurred both for the
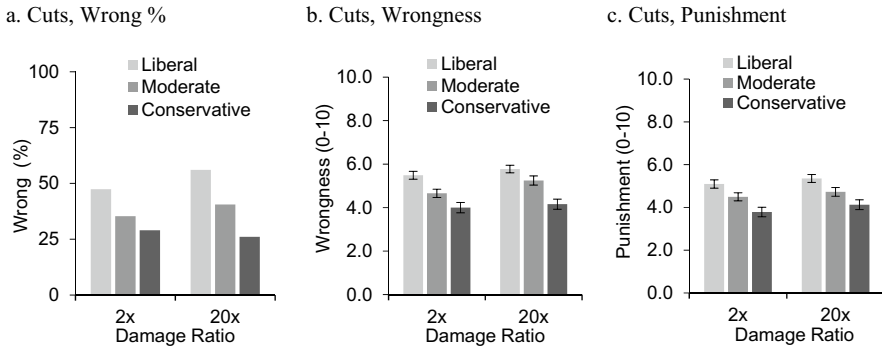
Fig. 7 Participants' moral judgments about cutting government programs. The panels show the percentage who judged that cuts are wrong (panel **a**), mean (*SE*) ratings of moral wrongness (panel **b**), and mean (*SE*) ratings of how much punishment the government would deserve (panel **c**). Error bars indicate standard errors

2x damage ratio: wrong (%), χ^2 (1, $N = 349) = 12.22$, $p < .001$; wrongness ratings, $t(354) = 5.06$, $p < .001$; punishment, $t(354) = 4.46$, $p < .001$; and the 20x damage ratio: wrong (%), χ^2 (1, $N = 349) = 30.75$, $p < .001$; wrongness ratings, $t(362) = 5.66$, $p < .001$; punishment, $t(361) = 4.18$, $p < .001$. Thus, compared to conservatives, liberals judged the government more harshly for cutting government programs.

Partisanship and Default

We also examined whether Republicans were more opposed to default than Democrats (Online Appendix). Similar to political ideology, Republicans were more likely to oppose default than Democrats, and Independents fell in the middle. Also, Republicans judged default as more morally wrong compared to Democrats, whereas Democrats judged cutting programs as more morally wrong compared to Republicans.

Comments

In the open-ended comments, participants who opposed default emphasized obligations, and they used more deontic words than those who supported default (Fig. 8). Examples include: "it's a contract and no matter what you need to pay it back," "They are bound to repay the loan... No exceptions," and "you should adhere to the agreement even if it means tough decisions." Participants who supported default emphasized minimizing total losses, and they used more comparative words (Fig. 8). Examples include: "decisions should be made for the greater good. Losing 100,000 jobs seems far worse than losing 5000," "It's a tough decision but I went with the least amount of jobs lost," and "The choice that creates the least amount of damage to people's livelihoods should prevail."
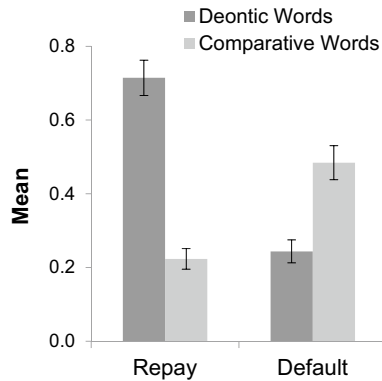
Fig. 8 Mean (*SE*) number of deontic words and comparative words in participants' comments depending on whether they said the government should repay or default. We used the same deontic and comparative words as in Experiment 1, and we excluded participants without comments. Participants who said to repay used more deontic words than those who said to default, $t(721) = 7.78$, $p < .001$; participants who said to default used more comparative words than those who said to repay, $t(721) = 5.05$, $p < .001$

Discussion

In a national sample of Americans, we found the same pattern of moral judgments about debt that we saw in Experiment 1. Participants' policy judgments resisted the benefits of default (saving more jobs), while bending the obligation to repay when the harm to the debtor became severe. Meanwhile, participants continued to morally condemn default to a similar degree even as the benefits increased. Moreover, we found the predicted differences by political ideology: Compared to liberals, conservatives were more likely to oppose default. They also showed similar but slightly greater moral condemnation of default and less condemnation for cutting government programs.

General Discussion

Overall, participants' support for default depended on how damaging it would be for the debtor to repay. When the damage to the debtor was slightly more than the benefit to the lender (damage ratio of 1.2x), most participants said the government should pay its debt. However, as the damage to the debtor increased, participants became more likely to support default. Across the full range of damage in Experiment 1, participants' opposition to default swung from roughly 70% to 40%. Still, even at the greatest damage to the debtor (20x ratio, 100,000 jobs), many participants judged that the government should repay the debt (~40% in Experiment 1 and ~50% in Experiment 2). These findings show how much participants' policy choices depended on their opposition to default relative to the consequences in job losses.

Meanwhile, participants' moral judgments of default were more steadfast: Most participants judged that defaulting is morally wrong and punishable with little sensitivity to the consequences in job losses. This finding suggests that participants moral condemnation opposed default while their altruistic motives for the greater good favored default, swaying policy judgments as the benefits increased. This interpretation follows theories from moral psychology about how moral taboos and altruism are distinct psychological processes that work in opposition to shape our judgments about dilemmas (e.g., De Freitas et al. 2017; DeScioli and Kurzban 2009, 2013; Kurzban et al. 2012).

In Experiment 1, we also found that participants supported partial default more than full default (holding constant the consequences in job losses), and they judged partial default as less morally wrong and punishable. This finding reveals how the action of default affects both policy judgments and moral judgments (because the manipulation varies the nature of the action while holding constant the jobs losses). Particularly, this result supports the hypothesis that the debtor's partial repayment shows their intention to repay. With a good faith effort to repay, the debtor's underpayment becomes a less flagrant violation of the moral rule. This interpretation fits with previous research about how moral judgments depend on perceptions of intentions (e.g., Darley and Pittman 2003; De Freitas et al. 2017; Young and Saxe 2011).

Importantly, participants' opposition to default could have other interpretations. Although consistent with a moral taboo, participants could have also considered additional consequences that weren't stated in the scenario. For instance, participants could oppose default to preserve the debtor's credit which if undermined could cause long-term harm. However, there are several points suggesting that this was not the main motive. First, participants' explanations of their decisions did not generally refer to additional consequences. Instead, participants who opposed default emphasized the obligation to repay, mirrored by their greater use of deontic words, whereas participants who supported default used more comparative words to weigh the consequences. Second, just like default, cutting jobs has additional consequences in the long-term, so considering the future would not necessarily favor default. Last, the fact that participants judged partial default less harshly than full default (holding constant the consequences) shows they focused on the nature of the action, as expected for moral taboos.

In Experiment 2, we found the same pattern of judgments about debt in a national U.S. sample. We also found that conservatives were more opposed to default than liberals, even though they both agree that defaulting is morally wrong. Liberals also showed greater condemnation of cutting government programs compared to conservatives.

Despite their differences, the finding that both conservatives and liberals taboo defaulting on debts suggests that Americans across the ideological spectrum share a moral code on this issue, even if they adhere to it in different degrees. In some cases, this basic agreement could help bridge the divide across political ideology to find common ground. On the other hand, the connection between ideology and partisanship is likely to make dilemmas of debt more difficult to resolve. As expected, Republicans were more opposed to default than Democrats, mirroring their ideological differences. In times of partisan polarization (Ehret et al. 2018; Iyengar and

Westwood 2015), even small differences in moral judgments could be magnified by partisan animosity.

Both conservatives and liberals adjusted their policy stance to the amount of damage, which also suggests some potential for compromise. When the consequences of an economic policy are severe enough and apparent to both sides, liberals and conservatives should be more likely to agree. For example, during the coronavirus pandemic, the U.S. Congress passed with bipartisan support the CARES Act which includes provisions that forgive debts from student loans (Whistle 2020).

More generally, the present results may be surprising given that citizens often judge policies without considering their costs and benefits (whether to themselves or others). However, a growing literature finds that citizens do weigh costs and benefits once they are sufficiently clear. For example, when the effects of trade policies were made explicit, voters weighed the consequences to themselves and others (Rho and Tomz 2017). Similarly, when the consequences were clarified, participants used them to evaluate policies about health care and economics (Bechtel and Liesch 2020). Likewise, participants in the present experiments weighed the job losses when deciding whether to support the government's default.

As citizens weigh the consequences, they will tend to disagree when the policies affect them differently. Even in hypothetical scenarios, some people may be more sympathetic to debtors based on their own economic vulnerability. Researchers could begin to examine this by comparing subgroups that vary in vulnerability and related characteristics. The present experiments were not designed to look at subgroups but future work could do so by adding the relevant measures and focusing on fewer conditions. Similarly, researchers could examine this issue in experiments by reminding participants of vulnerabilities to manipulate their perceived interests.

The observation that people's support for default can be swayed also has implications for public opinion and political rhetoric. The present experiments point to damage and partial repayment as key factors. When perceptions of these factors change due to prominent events, persuasion from elites, or biased news, public opinion may follow suit (Arceneaux et al. 2013). Of course, we suspect that many more factors shape these judgments, such as the debtor's history of defaults, their spending decisions, the lender's predatory motives, the implications for the global economy, and so on. These additional factors can also be studied using scenario methods in future research.

The present findings also illustrate a major theme from moral psychology that applies to political disputes: People's moral judgments reflect not only static values but also dynamic strategies. Research on morality in politics has emphasized individual differences in moral values, such as Schwartz's basic values (Schwartz et al. 2010) or moral foundations (Haidt 2012). However, an individual's moral judgments are not necessarily stable; they can change over time (Smith et al. 2017) and even within a few minutes when the individual's incentives shift (DeScioli et al. 2014).

Indeed, the broader literature in moral psychology examines how individuals change their moral judgments and tailor them to the situation. This research examines how moral judgments adjust to details about actions and intentions, such as precisely how one person was killed to save five in the trolley problem

(see "Introduction" sect.). Moreover, some factors influence moral judgments in a wide diversity of people across cultures, despite their differences in moral beliefs (Mikhail 2007).

Rather than static values, people use their moral judgments as dynamic strategies to negotiate the politics of everyday life, such as to bargain for better deals, protect against aggression, resolve conflicts, and advocate policies that serve their interests (DeScioli and Kurzban 2013). Moreover, people's strategic use of moral judgments points to the potency of political rhetoric for shaping moral debates (e.g., Arceneaux 2012; Clifford et al. 2015). If people's moral judgments closely track the details of a dilemma, then this creates room for political rhetoric to influence citizens' perceptions and policy stances on moral issues.

People's moral judgments about debt are likely to influence the politics of international debt. Generally, people's intuitions and folk beliefs about economics shape their opinions about different policies (Boyer and Petersen 2018). Recall that moral taboos are insensitive to the consequences for people's welfare, since they emphasize forbidden actions. This means that moral taboos pose a threat to public welfare whenever they are at odds with the common good. For example, demands for austerity and repayment in Europe could reflect taboos against default that are blind to the harmful consequences for debtors. Indeed, political rhetoric in Europe shows themes of taboo that depict debtors as sinners (Dyson 2014). More generally, a government in a debt crisis faces moral dilemmas with staggering consequences at stake, both for its own citizens and for cooperation in the international community. We hope the present experiments underscore how moral psychology can help understand dilemmas of international debt.

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