Rhetoric matters: A social identity explanation for the anomaly of framing

By Daphne Chang, Roy Chen, and Erin L. Krupka[*]

In this paper, we show that a social identity model offers a way to capture how a frame evokes norms which then influence choice. In an experiment, we describe a series of dictator games varying whether the outcome is tax- or neutrally-framed. We find that subjects' political identities interact with these frames, causing changes in both norms and choices. Political framing makes Democrats prefer equalized outcomes, and Republicans reluctant to redistribute payments even when it leaves them disadvantaged. We test whether a social identity model fits the data and provide evidence that these choice differences are explained by frame-evoked norms. Keywords: norms, social identity, altruism

Framing matters. Though most people think that we have stable preferences

for how we approach choices, there is ample evidence that certain words or ways of phrasing things can cause us to change our preferences. The rhetorical technique of "framing" is defined as the act of describing a situation in such a way as to change the decision-maker's conception of the acts, outcomes and associated contingencies for that situation (Tversky and Kahneman, 1981).[1] Previous research has documented the existence of framing in a number of contexts. For example, Tversky and Kahneman (1981); Larrick and Blount (1997), and Dufwenberg et al. (2011) provide evidence that two versions of a decision problem that are transparently equivalent evoke different preferences when considered separately. Rugg (1941) demonstrates the effectiveness of framing in public opinion polling. In his study, 62% of respondents answered "no" to the question "Do you think the United States should allow public speeches against democracy?", but only 46% of respondents answered "yes" to the question "Do you think the United States should forbid public speeches against democracy?". Similarly, Nelson et al. (1997a) find that whether a rally by the Ku Klux Klan is framed as a free speech issue or a disruption of public order affects respondents' tolerance levels for the Klan.

Because frames impact choice, our understanding of the mechanisms by which they do can provide a way to make the consequences of framing more predictable. One explanation is that framing effects are driven by the asymmetry in how different information is encoded and processed (Tversky and Kahneman, 1981). An alternative explanation is that frames activate existing

---

[1]As noted by Kahneman (2000), there are several different ways to interpret "framing effect," including an experimental manipulation that changes the description of the situation and a characterization of how players in a game conceptualize strategies. In our experimental design, we adopt the former interpretation (see also Dufwenberg et al., 2011). Our design uses what Larrick and Blount (1997) define as "procedural framing," where actions are described in different ways for structurally equivalent allocation procedures. As an example, in Liberman et al. (2004) the same prisoner's dilemma game is framed as a "Wall Street Game" and a "Community Game." This difference in framing leads to a difference in participants' choices.

information in an individual's memory, and subsequently influence how that individual weighs her beliefs (Nelson et al., 1997b). In this paper, we propose an additional explanation: frames invite different interpretations of acts and outcomes because they evoke different norms.

The social identity model provides a window through which to observe a mechanism for the effect of framing (Akerlof and Kranton, 2000, 2005). Social identity describes the part of an individual's sense of self that stems from their perceived membership with a social group. The utility derived from social identity comes from a desire to comply with the norms for an individual's social identity (Akerlof and Kranton, 2000).[2]

In our experiment, we compare subject responses in a series of dictator games for those given a tax frame with those given a neutral frame. The difference in framing allows us to make a subject's social identity salient and to evoke the associated norms for that identity. We then collect data in a separate treatment to elicit identity-dependent norms. While we follow the work of Krupka and Weber (2013), our primary focus is on the impact of a tax frame on norms for the dictator games.

We show that these frames cause respondents to apply different norms to the situation and cause them to act differently. We document this effect in the context of U.S. political identity (Republicans and Democrats). We then test

[2]Each social group has a set of corresponding normative prescriptions (norms) for behavior that characterize how members of that group ought to behave in a particular situation. Social identity-dependent choice can explain a host of observed social phenomena such as ingroup bias (Terry and O'Brien, 2001; Wichardt, 2008; Goette et al., 2012), persistence of stereotypes (Steele and Aronson, 1995; Shih et al., 1999, 2006; Afridi et al., 2015), and labor dispute (Akerlof and Kranton, 2005). In addition, it has been shown to affect cooperation (Eckel and Grossman, 2005; Goette et al., 2006; Charness et al., 2007), coordination (Weber, 2006; Chen and Chen, 2011; McCarter and Sheremeta, 2013; Chen et al., 2014), and behavior in markets (Li et al., 2011; Gneezy et al., 2012). Both field and laboratory experiments show that inducing a social identity or making an existing identity salient can shift time, risk and other-regarding preferences (Chen and Li, 2009; Benjamin et al., 2010; Butler, 2014).

whether a social identity model can explain our results. Two tests provide evidence that a social identity model predicts behavior better than does a benchmarking model without norms.

Our main contribution is our experimental evidence on how frames evoke norms. The finding offers an additional mechanism, frame evoked norms, by which to predict how unstable preferences will be impacted by a frame. In addition, a novel application of the norm elicitation method developed by Krupka and Weber (2013), allows for sharper predictions regarding the likely impact of frames on behavior. In application to politics, this result raises the interesting question of how divided we really are?[3] The evidence suggests that Democrats and Republicans have different views on redistribution but that these differences seem to disappear when political identities are not made salient. It follows then that a key activity of political parties is to use rhetoric to frame choices for their members and pursue identity politics. These results can significantly advance the study of the post-neoclassical anomaly of "apparently" unstable preferences. It also furthers the study of rhetoric on behavior and political discourse.

Our second contribution is to advance how we can study social identity by eliciting identity-dependent norms. In our experiments, we use the frame treatment to evoke identity-dependent norms. In our experimental design, we rely on the same causality argument proposed by Krupka and Weber (2013): changes in norms predict changes in behavior in otherwise identical dictator

---

[3]One result that suggests that the impact of the frame depends on identity comes from Hardisty et al. (2010). In the study, the payments for an environmental cost are described as either "earmarked taxes" or "offsets." They find that the framing of the payment changes expressed preferences for it by Republicans and Independents, but not by Democrats. The authors interpret their findings as an indication that the frame-induced behavior changes stem from changes in the norms that subjects apply to the situation. See also Blount and Larrick (2000), Koch (1998) and Allison et al. (1996). In other words, one reason why frames invite different interpretations of acts and outcomes is because they evoke different norms.

games. However, unlike Krupka and Weber (2013), we use a framing treatment to evoke *identity-dependent* norms in order to show that these identity-dependent norms cause behavior changes that are consistent with the social identities. This novel approach introduces a new way to study a broad range of questions relating to the impact of social identity on behavior.

I. Theoretical Framework

The social identity model provides a theoretical framework to elucidate one mechanism, norms, through which frames can affect choice (Akerlof and Kranton, 2000, 2005). In their study, Akerlof and Kranton (2005) note that "...much of utility depends not only on what economists normally think of as *tastes*, but also on *norms* as to how people think that they and others *should* behave...views as to how people should behave depends upon the particular *situation...*" Moreover, norms for how one should behave vary with one's social identity. In their model, a person's identity is seen in the context of gains and losses in utility that result from behavior that conforms to or departs from the norms for that identity in that situation.

This utility is separated into a value placed on monetary payoffs (which are affected only by actions $\mathbf{a} = (a_i, \mathbf{a}_{-i})$) and on adhering to social norms (N). These norms are affected by an individual's actions, the situation, and the individual's social identity:

$$(1) \qquad U_i(\mathbf{a}, \mathbf{I}, s) = V_i(a_i|\mathbf{a}_{-i}) + \gamma_i N(a_i|\mathbf{a}_{-i}, I_i, s),$$

where V captures a subject's utility over her monetary payoff, and is not dependent on either social identity or the situation.[4]

[4]This formalization of the first term in the utility function follows Akerlof and Kranton

In the above specification, $N(\cdot)$ is the social norms function that maps utility over the appropriateness of an action in situation s undertaken by individual i (Krupka and Weber, 2013). In other words, when a person's social identity or situation changes, so does that individual's shared view of the appropriateness of the actions. This model assumes that identity-dependent social norms vary at the group level and, furthermore, are both exogenous and given at the individual level.[5]

Finally, the γ_i term reflects the degree to which person i cares about complying with the social norms for her identity. In this model, the degree to which a person cares about adhering to any social norm is fixed. Intuitively, if an individual is characterized as a strong "norm follower," then she will be a strong "norm follower" in any situation.

We follow Akerlof and Kranton (2005) in defining a situation as the context of "...when, where, how and between whom a transaction takes place."[6] We posit that framing changes this situation in at least two unique ways. First, it does so by changing an individual's perception of the associated acts and outcomes. For example, if we alter the framing of the standard dictator game by changing the placement of the initial endowment so that it rests with the non-active second player, then a dictator must take money from this player to achieve a positive payoff for himself. Essentially, a payoff obtained in a dictator game through giving (as in the standard dictator game) is perceived differently from the same payoff obtained through taking (as in the altered

(2005), who write "In a standard economic model, an individual's preferences are fixed, and utility depends only on pecuniary variables."

[5]The endogenous selection of social identity is sometimes possible, as with choosing one's profession, and sometimes not possible, as with race or gender (cf. Akerlof and Kranton, 2000). Endogenous norm formation is not treated here, but we note that norm formation is likely to take some time, and therefore at a particular point in time, it is reasonable to think of the norm as given.

[6]See also Ellingsen and Mohlin (2014) who define a situation as a "shared view of the set of participants and the relevant set of actions."

dictator game). Second, frames can also change our situation by evoking a social identity and its associated norms. For example, when a dictator game is described as a tax redistribution, it may evoke a person's political identity, making any transfer feel like a "handout." This framing may thus create negative utility. However, if a transfer is presented as "sharing," then it may create positive utility.

II. Experimental Design

Our experiment relies on a between-subjects design to elicit subject behavior and beliefs about norms. As mentioned, we conduct two different experiments - a *choice experiment* and a *norms elicitation experiment* - with two different sets of subjects. Subjects in the *choice experiment* do not participate in the *norms elicitation experiment*, and vice-versa.

A. Choice experiment

We first discuss our choice experiment. Following the idea that frames can change behavior by evoking a social identity and its associated norms, we vary whether subjects are shown neutrally-framed or tax-framed dictator games. This treatment is designed to evoke a U.S. political identity (Democratic or Republican) within our subjects.[7]

We deliberately select a frame on which the two political parties strongly differ: tax redistribution. This frame is chosen based on previous empirical

[7]We target these two political social identities because political identity is a "home-grown" identity (i.e., one that subjects bring with them to the laboratory) that U.S. subjects tend to have internalized by the time they reach adulthood. Kranton et al. (2013) review several different approaches to studying homegrown versus lab-created identities. Not only do most U.S. adults possess a political identity, but this identity also exerts high influence on their choices during the decision-making process. Iyengar and Westwood (2015) find that the impact of political identity on judgment and behavior exceeds even that of racial identity. In our study, we restrict our subjects to U.S. citizens and allow subjects to participate in only one of the treatments.

work examining the impact of frames on behavior that differs across political party platforms. For instance, the 2012 and 2016 Democratic National Platforms, in multiple separate instances, advocate for the "wealthiest taxpayers to pay their fair share." By contrast, the 2012 and 2016 Republican Platforms "reject the use of taxation to redistribute income." Similarly, a Pew Research Center/USA TODAY survey conducted in January of 2014 shows that, for the question "How much should the government do to reduce the gap between the rich and everyone else," 88% of liberal Democrats answer "A lot" or "Some," compared to only 40% of conservative Republicans.

These platform differences are what we use to construct the tax frame. In the tax-framed treatment, we characterize the dictator game as a wealth redistribution decision, the endowments as initial wealth, and the allocation as a government transfer initiated through the subject's choice. The wording of the tax-framed treatment is:

> *In this economy your wealth is X token(s) and your match's wealth is Y token(s). Use the slider to indicate whether you want the government involved and how large or small the redistribution should be.*

By contrast, the wording of the neutrally-framed treatment is:

> *For this decision you own X token(s) and the other person owns Y token(s). You have the opportunity to give any amount of your X token(s) to the other person or to take any amount of the Y token(s) from the other person for yourself.*[8]

---

[8]For the situation where the subject is endowed with all 10 tokens, the subject reads: "You have the opportunity to give any amount of your 10 tokens to the other person." For the situation where her receiver is endowed with all 10 tokens, she instead reads: "You have the opportunity to take any of the 10 tokens from the other person."

Within each treatment, subjects make eleven dictator game decisions. For each dictator game, there are a total of 10 tokens to split between the dictator and a receiver. The eleven dictator games reflect the eleven possible ways to split the initial 10-token endowment, from a situation where the dictator starts with 10 tokens and the receiver starts with none (the standard dictator game), to a case where the dictator starts with no tokens and the receiver starts with all 10. Thus, our initial endowments vary within each subject. We vary the initial endowment because, based on the party platforms, we expect that the endowments will impact dictator choices differently for subjects who identify as Democrats or Republicans.[9] In order to achieve equal allocations, we assume that a Democrat will be *willing* to give or take wealth depending on the initial endowment, while a Republican will be *unwilling* to give or take wealth regardless of the initial endowment.

We first administer the games for each group. Then, after subjects complete the decision making rounds, we administer a 5-item demographic questionnaire which is the same regardless of treatment. The questionnaire elicits the degree to which each subject self-identifies as a Republican or a Democrat by asking the question "In politics, as of today, do you consider yourself:" with a response scale that includes the choices "A Republican," "Leaning more towards the Republican Party," "Leaning more towards the Democratic Party," and "A Democrat."[10] In our analysis, a subject's response to this question determines the subject's political identity. Thus, when we refer to a "tax-framed

---

[9]A separate stream of experimental work has shown that variation of the initial endowment changes behavior in the dictator game (List, 2007; Bardsley, 2008; Bosman and Van Winden, 2002; Eichenberger and Oberholzer-Gee, 1998; Swope et al., 2008). For related work in a VCM setting, see Andreoni (1995); Dufwenberg et al. (2006); Grossman and Eckel (2012). Because we know the party platforms, we can make predictions about how changes to initial endowments will affect behavior for Republicans and Democrats.

[10]This question is adapted from Gallup's standard party identification question, in use since 1944 (Gallup, 1991).

Republican," we are referring to a subject who both is in our tax-framed treatment and self-identifies as a Republican/leaning Republican.

Upon the completion of the questionnaire, each subject is randomly paired with another subject. A random dictator game is then selected for each pair, and a random subject in each pair is selected to be the dictator. That dictator's decision is then implemented.

B.   *Norms elicitation experiment*

In addition to our *choice experiment*, we conduct a *norms elicitation experiment* with a different set of subjects. In our *norms elicitation experiment*, these subjects are randomly assigned to treatments in which dictator games are described using either a neutral or tax frame. This experiment differs from the *choice experiment* in that it elicits subjects' beliefs about social norms rather than asking them to make redistribution choices.

To elicit social norms, we follow the procedures developed in Krupka and Weber (2013). That is, we describe a specific dictator game and a specific action and ask subjects to rate the "social appropriateness" of that action in that game. For example, we describe a scenario where a dictator is endowed with 10 tokens (the standard dictator game) and transfers 0 tokens to the recipient. In this case, the subject is asked to judge the appropriateness of this action using the following rating scale: "very socially appropriate," "socially appropriate," "somewhat socially appropriate," "somewhat socially inappropriate," "socially inappropriate," and "very socially inappropriate." The subject is asked to make these judgments as part of a coordination game in which she is paid if her rating of the appropriateness of the action matches that of another random subject.

Krupka and Weber (2013) provide evidence that collectively-recognized so-

cial norms create focal points in a matching game (see also Goerg and Walkowitz 2010; Schelling 1980; Mehta et al. 1994; Sugden 1995). Here, subjects have an incentive to anticipate and match how others will rate an action as socially appropriate or inappropriate.[11] If there is a social norm that some actions are more or less socially appropriate, respondents are expected to draw on this shared perception in their attempts to match others' ratings.

In our *norms elicitation experiment*, we only use the initial endowment scenarios where the dictator is endowed with 10 tokens, with 5 tokens, and with 0 tokens. For each scenario, subjects play the ratings coordination game for each of the eleven possible actions (dictator allocates from 0 to 10 tokens for herself). Thus, they play a total of 11 coordination games before moving on to the next dictator game.[12]

[11]Others have adapted the procedures in Krupka and Weber (2013) to elicit norms for a variety of games. For example, Kimbrough and Vostroknutov (2016), Gächter et al. (2013), Veselỳ (2015), Erkut et al. (2014), D'Adda et al. (2015), Gangadharan et al. (2015), and Banerjee (2016) examine norm compliance across a variety of games using the Krupka and Weber norm elicitation protocol. However none of these studies examines identity-dependent norms. Yet a different approach to eliciting norms is to use third party advisors (Schram and Charness, 2011); however, this approach is more challenging to adapt to the study of identity-dependent norms. Another similar alternative is used in Bicchieri and Chavez (2010), where norms are elicited by asking proposers and responders in an Ultimatum Game to guess how many responders perceive each of the proposers' options as a fair option. However, this approach would limit what we would be able to say about a "set" of appropriate actions.

[12]Subjects read about each of these three scenarios, but the order in which they read about them is randomized. In total, each subject in the *norms elicitation experiment* plays 33 coordination games.

C.   Experimental Procedure

Our subjects are workers from Amazon Mechanical Turk (MTurk).[13] Workers on MTurk perform small tasks set by requesters, who then pay the workers for completing the tasks. For economics experiments, workers are paid a standard flat rate plus a bonus which depends on their actions in the experiment. Requesters also pay Amazon a 20% commission for completed tasks. In this sense, the flat rate corresponds to a show-up fee, the bonus corresponds to incentives, and the commission corresponds to fees one might pay to use a lab in a traditional economics laboratory experiment.

In our *choice experiment*, subjects first complete an unincentivized 10-item questionnaire. They then proceed to the dictator games. Figure A1 in the Appendix presents a screenshot of a dictator decision that tax-framed subjects encounter. The depicted decision is one where the initial endowment for the dictator is 8 tokens and for the receiver is 2 tokens.[14] The dictator indicates her decision by moving the white box along the slider (in Figure A1, the slider has already been moved to indicate a transfer of 8 tokens to the receiver). The

[13]MTurk was started in 2005 as a spot market for labor. It is now commonly used for experimental research. The population of MTurk workers is at least as representative of the U.S. population as traditional subject pools and several classic experiments have been replicated online such as the prisoner's dilemma, priming, and framing experiments (Horton et al., 2011; Chandler and Kapelner, 2013; Paolacci et al., 2010). Further, Huff and Tingley (2015) compare individual and political characteristics of MTurkers against respondents of the Cooperative Congressional Election Survey and find that the groups are largely similar. Although MTurk workers take on many tasks (often working for two hours a day on such tasks), it is unlikely that they will have encountered the norms rating activity in previous tasks because the norms rating activity has not yet been used in an online setting. It is possible that they have encountered the dictator game before and may have "set" or "routine" responses to such games. However this is less concerning because our treatments vary the tax frame rather than the task. So, if we observe that tax-framed subjects behave differently from neutrally-framed subjects on the same task, we can still attribute this change in behavior as being due to the effect of the frame.

[14]The order in which subjects encounter the eleven situations is randomized according to four blocks. The four blocks have the following order: in block (1) the dictator's initial endowment varies from 0, 1, 2, . . . , 10 tokens; in block (2) it varies from 5, 0, . . . , 4, 6, . . . , 10 tokens; in block (3) it varies from 10, 9, 8, . . . , 0 tokens; and in block (4) it varies from 5, 10, . . . , 6, 4, . . . , 0 tokens.

subject cannot move on to the next screen until she actively moves the slider. The neutral position of the slider is left/right randomized for each decision. Once the dictator begins to move the white box along the slider, the other elements of the screen dynamically update to reflect the choice being made as well as the final allocation.

Figure A2 in the Appendix presents a screenshot from the *norms elicitation experiment* of a situation where the dictator's initial endowment is 5 tokens and the dictator's chosen action is "take 5 tokens." For example, a subject in the tax-framed treatment reads about this situation and guesses how appropriate another MTurker would rate the action "take a tax transfer of 5 tokens from worker B." Using the drop-down menu, the subject indicates her guess of how "socially appropriate" and "consistent with what someone who is like you would think worker A OUGHT to do."

Table 1 presents the number of Democratic and Republican subjects in each treatment. On average, subjects in the *choice experiment* and *norms elicitation experiment* receive $1.00 and $1.34, respectively, for their participation. We conduct the experiment between 2014 and 2016. [15]

TABLE 1—NUMBER OF DEMOCRATIC AND REPUBLICAN SUBJECTS IN EACH TREATMENT

	Neutrally-framed	Tax-framed
Norms elicitation experiment	Republicans: 65 Democrats: 114	Republicans: 68 Democrats: 132
Choice experiment	Republicans: 73 Democrats: 154	Republicans: 130 Democrats: 270

[15]The full experimental instructions are available at https://goo.gl/AMVi2r.

III. Results

We begin our discussion of the results by testing the effect of frames on norms and behavior using the data from our *norms elicitation experiment* and *choice experiment*, respectively. We then present evidence that the social identity model elucidates the mechanism, social norms, through which frames affect choice. Finally, we calibrate the model and validate it on a hold-out sample.

A. Testing the effect of frames on norms and behavior

Norms depend on frames

To study the effect of frames on norms, we follow Krupka and Weber (2013) and transform the appropriateness ratings from the *norms elicitation experiment* into an empirical measure of the norm by converting subjects' ratings into numerical scores (or norm ratings). Specifically, a rating of "very socially inappropriate" receives a score of -1, "socially inappropriate" receives a score of -0.6, "somewhat socially inappropriate" receives a score of -0.2, "somewhat socially appropriate" receives a score of 0.2, "socially appropriate" receives a score of 0.6, and "very socially appropriate" receives a score of 1.[16]

To empirically estimate Democratic (Republican) tax-framed norms when the dictator's initial endowment is 10 tokens, we restrict our analysis to responses from subjects in the tax-framed treatment who (1) self-report that they are Democrats (Republicans) and (2) rate the situation where a dictator

---

[16]Note that this transformation is also used in Kimbrough and Vostroknutov (2016), Gächter et al. (2013), Veselỳ (2015), Erkut et al. (2014), D'Adda et al. (2015), Gangadharan et al. (2015), Banerjee (2016), and Gächter et al. (2015). By giving the ratings a numerical value, we are imposing ratio scale characteristics on measurements that are, by design, ordinal. In some of what follows this is merely for convenience, such as when we use a rank-order test for the equality of distributions. However, in other situations, it implicitly adds extra assumptions upon which our analysis is then conditional, such as when we compare means.

has an initial endowment of 10 tokens. As in Krupka and Weber (2013), we take the average norm rating for each action. We repeat this process for initial endowments of 5 and 0 tokens to obtain empirical proxies for the Democratic (Republican) tax-framed norms for the respective endowments. Similarly, we construct neutrally-framed norm profiles for Democrats (Republicans) using the responses from subjects in the neutrally-framed treatment who self-report that they are Democrats (Republicans).

Frames change the situation by evoking a person's social identity and the associated identity-dependent norms. For this reason we anticipate that the social norms for the tax-framed treatment will differ from those for the neutrally-framed treatment. This leads to our first hypothesis.

Hypothesis 1 (Norms: frames affect norm ratings). *For a particular identity, the tax-framed norm ratings will differ from the neutrally-framed norm ratings.*
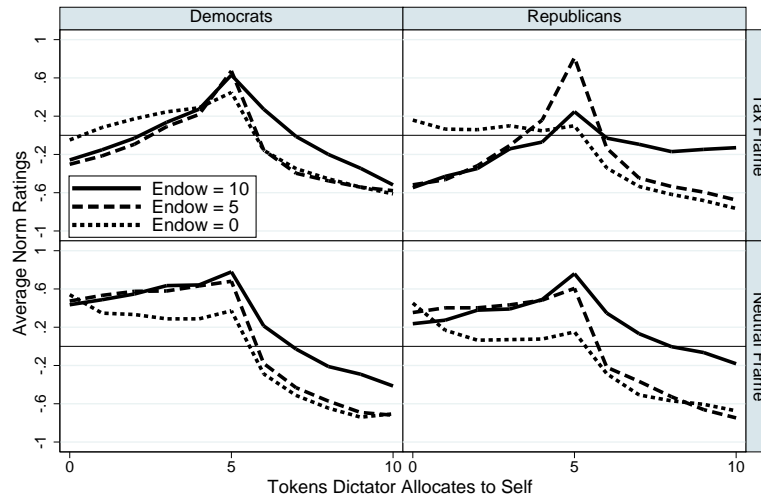

FIGURE 1. AVERAGE NORM RATINGS BY FRAME, INITIAL ENDOWMENT, IDENTITY, AND DICTATOR ACTION

Figure 1 displays the average norm ratings for the three initial endowments (0, 5, or 10 tokens) for each identity and frame combination. The x-axis reflects the number of tokens the dictator allocates to herself (e.g., the dictator choice to allocate 0 to herself and 10 to her match is depicted as "0" on the x-axis). Note that the choice that a dictator must make to achieve the same final allocation (e.g., "0 to self") differs by the initial endowment. The y-axis reflects the values that the average norm ratings may take, with -1 representing the rating for "very socially inappropriate" and 1 representing the rating for "very socially appropriate."

The norm ratings depicted in Figure 1 support Hypothesis 1 by showing that tax-framed norms differ from neutrally-framed norms for each identity. Examining these results further, we see that an equal split is always socially appropriate for Democrats, but that tax- and neutrally-framed norms differ on two features. First, we find that the average norm ratings have different signs for certain actions. That is, while tax-framed Democrats view allocating the entire endowment to the other person (i.e. keeping 0 tokens for herself) as socially *inappropriate* for all endowments, neutrally-framed Democrats do not. Instead, they view any allocation that leads to greater generosity as socially appropriate.

Second, we find that the slopes to the left of the equal split for each endowment differ across tax- and neutrally-framed Democrats. Specifically, a deviation from the equal split is viewed as more inappropriate by tax-framed Democrats when the dictator retains fewer than half the tokens. The impact of the tax frame is consistent with the Democratic party platform.

Examining the norm ratings for the tax- and neutrally-framed Republicans, we first find that neutrally-framed Republicans view any deviation from the equal split that involves allocating more than half of the tokens to the other

person as socially appropriate when the initial endowment is 5 or 10 tokens. By contrast, tax-framed Republicans view all allocations leaving the dictator with fewer than 5 tokens as inappropriate when the initial endowment is 10 tokens. They also view all allocations leaving the dictator with fewer than 4 tokens as inappropriate when the initial endowment is 5 tokens.

Second, we find that the status quo (i.e. not redistributing the initial endowment) is viewed as more appropriate by tax-framed Republicans than by neutrally-framed Republicans when the endowment is 5 or 10 tokens. The average norm ratings for the action of keeping the initial endowment of 5 (10) tokens are 0.81 (-0.13) for the tax-framed Republicans and 0.61 (-0.18) for the neutrally-framed Republicans. The impact of the tax frame in these cases is consistent with the Republican party platform. By contrast, this is not true for the action of keeping the initial endowment of 0 tokens, where the average norm ratings are 0.16 for tax-framed Republicans and 0.45 for neutrally-framed Republicans.

Tables 2 and 3 present the results from our nonparametric tests of whether the tax- and neutrally-framed norms are different from each other for the Democrats and Republicans, respectively. Panels A, B, and C present the results for when the endowments are 0, 5, and 10, respectively. For each action within each endowment, we report the average norm rating, the percentage of participants who give the norm rating for that action, and the result of a Wilcoxon rank-sum test comparing the two distributions of responses.

Table 4 presents piecewise OLS regressions that test for differences between the tax- and neutrally-framed norm ratings for Democrats (Panel A) and Republicans (Panel B). We regress subjects' norm ratings on "Keep" (the number of tokens kept by the dictator), a dummy for the tax frame, and an interaction

TABLE 2—ELICITED NORMS FOR TAX-FRAMED AND NEUTRALLY-FRAMED DEMOCRATS

Panel A: Endowment - 0 Tokens

Final allocation ("Keep")	Tax-framed Democrat — Action	Mean	- - -	- -	-	+	+ +	+ + +	Neutrally-framed Democrat — Action	Mean	- - -	- -	-	+	+ +	+ + +	rank-sum test z-score
0, 10	"Do not involve government"	-0.05	29.55%	12.88%	11.36%	7.58%	13.64%	25.00%	"Do nothing"	0.54	7.89%	7.02%	4.39%	8.77%	16.67%	55.26%	5.775***
1, 9	"Take tax transfer 1"	0.08	18.94%	14.39%	11.36%	12.88%	17.42%	25.00%	"Take 1"	0.35	9.65%	14.91%	15.79%	14.91%	16.67%	36.84%	2.811***
2, 8	"Take tax transfer 2"	0.17	6.82%	15.91%	16.67%	20.45%	18.18%	21.97%	"Take 2"	0.33	5.26%	9.65%	18.42%	13.16%	20.18%	33.33%	2.052**
3, 7	"Take tax transfer 3"	0.25	1.52%	9.85%	20.45%	25.76%	28.79%	13.64%	"Take 3"	0.29	6.14%	11.40%	14.91%	14.91%	27.19%	25.44%	1.09
4, 6	"Take tax transfer 4"	0.29	0.76%	5.30%	19.70%	33.33%	27.27%	13.64%	"Take 4"	0.29	11.40%	10.53%	19.30%	19.30%	35.96%	17.54%	0.773
5, 5	"Take tax transfer 5"	0.45	1.52%	4.55%	16.67%	18.18%	25.76%	33.33%	"Take 5"	0.37	6.14%	7.02%	12.28%	16.67%	28.07%	29.82%	-0.743
6, 4	"Take tax transfer 6"	-0.16	9.09%	23.48%	36.36%	13.64%	13.64%	3.79%	"Take 6"	-0.29	13.16%	24.56%	41.23%	14.91%	1.75%	3.79%	-1.806*
7, 3	"Take tax transfer 7"	-0.35	20.45%	37.88%	19.70%	8.33%	7.58%	6.06%	"Take 7"	-0.51	21.93%	47.37%	23.68%	2.63%	2.63%	1.75%	-1.908*
8, 2	"Take tax transfer 8"	-0.45	34.85%	33.33%	10.61%	7.58%	9.09%	4.55%	"Take 8"	-0.65	40.35%	43.86%	9.65%	0.88%	1.75%	1.75%	-2.194**
9, 1	"Take tax transfer 9"	-0.54	48.48%	24.24%	10.61%	3.79%	3.79%	3.03%	"Take 9"	-0.74	59.65%	28.95%	5.26%	2.63%	1.75%	2.63%	-2.459**
10, 0	"Take tax transfer 10"	-0.61	61.36%	16.67%	4.55%	3.79%	3.79%	5.30%	"Take 10"	-0.71	64.91%	21.05%	5.26%	0.00%	1.75%	7.02%	-0.867

Panel B: Endowment - 5 Tokens

Final allocation ("Keep")	Tax-framed Democrat — Action	Mean	- - -	- -	-	+	+ +	+ + +	Neutrally-framed Democrat — Action	Mean	- - -	- -	-	+	+ +	+ + +	rank-sum test z-score
0, 10	"Make tax transfer 5"	-0.30	40.91%	15.91%	9.85%	7.58%	12.88%	12.88%	"Give 5"	0.47	8.77%	3.51%	15.79%	15.79%	14.04%	50.00%	7.506***
1, 9	"Make tax transfer 4"	-0.22	31.06%	20.45%	9.09%	13.64%	12.12%	13.64%	"Give 4"	0.53	1.75%	7.89%	12.28%	17.54%	17.54%	50.00%	7.742***
2, 8	"Make tax transfer 3"	-0.09	15.91%	23.48%	18.94%	13.64%	15.91%	12.12%	"Give 3"	0.58	0.88%	6.14%	7.89%	14.91%	23.68%	46.49%	7.709***
3, 7	"Make tax transfer 2"	0.09	6.82%	16.67%	19.70%	22.73%	21.97%	12.12%	"Give 2"	0.58	0.88%	2.63%	6.14%	14.91%	35.09%	36.84%	6.681***
4, 6	"Make tax transfer 1"	0.22	4.55%	9.09%	16.67%	31.06%	24.24%	14.39%	"Give 1"	0.63	0.00%	0.88%	3.51%	16.67%	34.21%	44.74%	6.681***
5, 5	"Do not involve government"	0.67	2.27%	3.03%	6.82%	6.82%	24.24%	56.82%	"Do nothing"	0.68	1.75%	0.88%	3.51%	6.14%	42.98%	44.74%	6.471***
6, 4	"Take tax transfer 1"	-0.15	15.15%	17.42%	32.58%	17.42%	10.61%	6.82%	"Take 1"	-0.18	8.77%	18.42%	48.25%	11.40%	9.65%	3.51%	-1.191
7, 3	"Take tax transfer 2"	-0.40	21.21%	37.12%	23.48%	8.33%	7.58%	2.27%	"Take 2"	-0.43	16.67%	43.86%	27.19%	7.02%	3.51%	1.75%	-0.302
8, 2	"Take tax transfer 3"	-0.48	34.09%	35.61%	12.88%	5.30%	6.82%	5.30%	"Take 3"	-0.57	30.70%	46.49%	15.79%	1.75%	2.63%	2.63%	-0.189
9, 1	"Take tax transfer 4"	-0.54	52.27%	18.94%	9.85%	6.06%	6.82%	6.06%	"Take 4"	-0.69	49.12%	38.60%	5.26%	2.63%	1.75%	2.63%	-0.873
10, 0	"Take tax transfer 5"	-0.58	61.36%	12.88%	4.55%	4.55%	3.03%	13.64%	"Take 5"	-0.72	71.05%	15.79%	0.88%	1.75%	2.63%	5.26%	-1.755*

Panel C: Endowment - 10 Tokens

Final allocation ("Keep")	Tax-framed Democrat — Action	Mean	- - -	- -	-	+	+ +	+ + +	Neutrally-framed Democrat — Action	Mean	- - -	- -	-	+	+ +	+ + +	rank-sum test z-score
0, 10	"Make tax transfer 10"	-0.26	43.94%	11.36%	8.33%	7.58%	9.09%	19.70%	"Give 10"	0.44	11.40%	6.14%	7.89%	13.16%	7.89%	53.51%	6.5***
1, 9	"Make tax transfer 9"	-0.15	31.06%	18.18%	9.85%	7.58%	13.64%	20.45%	"Give 9"	0.49	10.53%	7.89%	10.53%	11.40%	11.40%	53.51%	6.352***
2, 8	"Make tax transfer 8"	-0.03	15.15%	27.27%	10.61%	13.64%	13.64%	19.70%	"Give 8"	0.55	7.02%	11.40%	11.40%	11.40%	17.54%	50.88%	6.343***
3, 7	"Make tax transfer 7"	0.14	6.82%	13.64%	27.27%	12.88%	19.70%	19.70%	"Give 7"	0.64	0.88%	5.26%	11.40%	14.04%	19.30%	54.39%	6.44***
4, 6	"Make tax transfer 6"	0.27	2.27%	7.58%	24.24%	20.45%	26.52%	18.94%	"Give 6"	0.64	0.88%	3.51%	6.14%	12.28%	35.09%	43.86%	5.679***
5, 5	"Make tax transfer 5"	0.63	0.76%	3.03%	6.82%	13.64%	28.79%	46.97%	"Give 5"	0.78	0.88%	0.00%	0.00%	6.14%	33.33%	57.89%	2.488**
6, 4	"Make tax transfer 4"	0.27	0.76%	5.30%	21.97%	21.97%	30.30%	11.36%	"Give 4"	0.21	7.02%	0.00%	7.02%	27.19%	29.82%	7.89%	-1.084
7, 3	"Make tax transfer 3"	-0.01	2.27%	26.52%	24.24%	18.94%	18.94%	6.06%	"Give 3"	-0.03	7.02%	21.05%	30.70%	27.19%	21.05%	5.26%	-0.154
8, 2	"Make tax transfer 2"	-0.20	13.64%	34.09%	15.15%	13.64%	13.64%	5.30%	"Give 2"	-0.21	8.77%	21.05%	40.35%	16.67%	16.67%	4.39%	-0.034
9, 1	"Make tax transfer 1"	-0.35	31.82%	25.76%	13.64%	9.09%	13.16%	7.58%	"Give 1"	-0.29	20.18%	28.07%	17.54%	15.79%	13.16%	4.39%	1.078
10, 0	"Do not involve government"	-0.52	48.48%	18.94%	12.12%	8.33%	9.09%	8.33%	"Do nothing"	-0.41	37.72%	35.09%	14.04%	13.16%	8.77%	7.89%	1.442

Notes: Significant at the *** 1 percent, ** 5 percent, and * 10 percent levels; all two-tailed. Responses are: "very socially inappropriate" (- - -), "somewhat socially inappropriate" (- -), "socially inappropriate" (-), "socially appropriate" (+), "somewhat socially appropriate" (+ +), "very socially appropriate" (+ + +). Modal responses are shaded in gray. To construct the mean ratings, we convert responses into numerical scores ("very socially inappropriate" = -1, "socially inappropriate" = -0.6, "somewhat socially inappropriate" = -0.2, "somewhat socially appropriate" = 0.2, "socially appropriate" = 0.6, and "very socially appropriate" = 1).

TABLE 3—ELICITED NORMS FOR TAX-FRAMED AND NEUTRALLY-FRAMED REPUBLICANS

Panel A: Endowment - 0 Tokens

Final allocation ("Keep")	Action (Tax-framed)	Mean	- - -	- -	-	+	++	+++	Action (Neutrally-framed)	Mean	- - -	- -	-	+	++	+++	z-score
0, 10	"Do not involve government"	0.16	27.94%	7.35%	5.88%	5.88%	11.76%	41.18%	"Do nothing"	0.45	16.92%	3.08%	3.08%	7.69%	15.38%	53.85%	1.87*
1, 9	"Take tax transfer 1"	0.06	19.12%	16.18%	10.29%	16.18%	10.29%	27.94%	"Take 1"	0.17	10.77%	12.31%	18.46%	13.85%	21.54%	23.08%	0.716
2, 8	"Take tax transfer 2"	0.06	11.76%	25.00%	11.76%	5.88%	29.41%	16.18%	"Take 2"	0.06	13.85%	16.92%	15.38%	20.00%	10.77%	23.08%	0.087
3, 7	"Take tax transfer 3"	0.10	11.76%	13.24%	16.18%	20.59%	23.53%	14.71%	"Take 3"	0.07	12.31%	12.31%	23.08%	27.69%	16.92%	15.38%	-0.288
4, 6	"Take tax transfer 4"	0.05	13.24%	19.12%	13.24%	16.18%	23.53%	14.71%	"Take 4"	0.08	12.31%	15.38%	12.31%	9.23%	32.31%	10.77%	0.264
5, 5	"Take tax transfer 5"	0.10	16.18%	14.71%	14.71%	13.24%	14.71%	26.47%	"Take 5"	0.15	10.77%	16.92%	15.38%	12.31%	20.00%	24.62%	0.355
6, 4	"Take tax transfer 6"	-0.34	23.53%	25.00%	27.94%	11.76%	10.29%	1.47%	"Take 6"	-0.29	18.46%	29.23%	15.38%	10.77%	12.31%	3.08%	0.504
7, 3	"Take tax transfer 7"	-0.54	33.82%	38.24%	11.76%	2.94%	10.29%	1.47%	"Take 7"	-0.51	26.15%	47.69%	7.69%	13.85%	3.08%	0.00%	0.541
8, 2	"Take tax transfer 8"	-0.62	50.00%	27.94%	8.82%	4.41%	7.35%	1.47%	"Take 8"	-0.57	35.38%	44.62%	4.62%	9.23%	4.62%	1.54%	1.129
9, 1	"Take tax transfer 9"	-0.68	61.76%	20.59%	2.94%	8.82%	2.94%	2.94%	"Take 9"	-0.61	55.38%	21.54%	4.62%	9.23%	6.15%	3.08%	0.826
10, 0	"Take tax transfer 10"	-0.76	75.00%	11.76%	4.41%	0.00%	5.88%	2.94%	"Take 10"	-0.67	64.62%	18.46%	4.62%	1.54%	4.62%	6.15%	1.249

Panel B: Endowment - 5 Tokens

Final allocation ("Keep")	Action (Tax-framed)	Mean	- - -	- -	-	+	++	+++	Action (Neutrally-framed)	Mean	- - -	- -	-	+	++	+++	z-score
0, 10	"Make tax transfer 5"	-0.52	64.71%	7.35%	4.41%	4.41%	4.41%	14.71%	"Give 5"	0.35	15.38%	3.08%	12.31%	9.23%	16.92%	43.08%	5.733***
1, 9	"Make tax transfer 4"	-0.46	47.06%	22.06%	7.35%	7.35%	5.88%	10.29%	"Give 4"	0.40	7.69%	10.77%	9.23%	7.69%	24.62%	40.00%	6.16***
2, 8	"Make tax transfer 3"	-0.32	29.41%	27.94%	14.71%	8.82%	8.82%	10.29%	"Give 3"	0.40	1.54%	12.31%	12.31%	15.38%	24.62%	33.85%	5.74***
3, 7	"Make tax transfer 2"	-0.11	11.76%	27.94%	17.65%	17.65%	17.65%	7.35%	"Give 2"	0.43	1.54%	10.77%	13.85%	9.23%	30.77%	33.85%	4.881***
4, 6	"Make tax transfer 1"	0.16	5.88%	10.29%	25.00%	19.12%	26.47%	13.24%	"Give 1"	0.48	3.08%	3.08%	6.15%	21.54%	40.00%	26.15%	3.473***
5, 5	"Do not involve government"	0.81	2.94%	0.00%	2.94%	7.35%	8.82%	77.94%	"Do nothing"	0.61	4.62%	1.54%	3.08%	9.23%	41.54%	40.00%	-3.872***
6, 4	"Take tax transfer 1"	-0.14	11.76%	25.00%	30.88%	10.29%	11.76%	10.29%	"Take 1"	-0.22	12.31%	24.62%	33.85%	16.92%	9.23%	3.08%	-0.544
7, 3	"Take tax transfer 2"	-0.45	27.94%	36.76%	17.65%	5.88%	10.29%	1.47%	"Take 2"	-0.37	18.46%	38.46%	26.15%	3.08%	10.77%	3.08%	1.111
8, 2	"Take tax transfer 3"	-0.54	42.65%	32.35%	10.29%	1.47%	7.35%	5.88%	"Take 3"	-0.53	33.85%	38.46%	13.85%	4.62%	7.69%	1.54%	0.706
9, 1	"Take tax transfer 4"	-0.59	54.41%	25.00%	4.41%	4.41%	4.41%	7.35%	"Take 4"	-0.66	46.15%	38.46%	6.15%	3.08%	6.15%	0.00%	0.331
10, 0	"Take tax transfer 5"	-0.68	72.06%	7.35%	5.88%	5.88%	0.00%	8.82%	"Take 5"	-0.75	61.54%	27.69%	3.08%	3.08%	3.08%	1.54%	0.637

Panel C: Endowment - 10 Tokens

Final allocation ("Keep")	Action (Tax-framed)	Mean	- - -	- -	-	+	++	+++	Action (Neutrally-framed)	Mean	- - -	- -	-	+	++	+++	z-score
0, 10	"Make tax transfer 10"	-0.55	66.18%	8.82%	4.41%	2.94%	1.47%	16.18%	"Give 10"	0.24	13.85%	7.69%	18.46%	12.31%	10.77%	36.92%	5.646***
1, 9	"Make tax transfer 9"	-0.43	51.47%	17.65%	5.88%	2.94%	5.88%	16.18%	"Give 9"	0.27	10.77%	12.31%	9.23%	18.46%	13.85%	35.38%	5.049***
2, 8	"Make tax transfer 8"	-0.35	36.76%	26.47%	8.82%	7.35%	5.88%	14.71%	"Give 8"	0.38	3.08%	12.31%	15.38%	10.77%	23.08%	35.38%	5.487***
3, 7	"Make tax transfer 7"	-0.14	25.00%	20.59%	10.29%	19.12%	8.82%	16.18%	"Give 7"	0.39	3.08%	7.69%	18.46%	18.46%	18.46%	35.38%	4.241***
4, 6	"Make tax transfer 6"	-0.07	19.12%	13.24%	13.24%	11.76%	20.59%	22.06%	"Give 6"	0.49	3.08%	1.54%	12.31%	18.46%	32.31%	32.31%	4.595***
5, 5	"Make tax transfer 5"	0.25	16.18%	13.24%	13.24%	7.35%	8.82%	41.18%	"Give 5"	0.76	0.00%	1.54%	3.08%	9.23%	26.15%	60.00%	3.606***
6, 4	"Make tax transfer 4"	-0.03	7.35%	20.59%	25.00%	10.29%	19.12%	22.06%	"Give 4"	0.35	0.00%	7.69%	16.92%	23.08%	35.38%	16.92%	3.931***
7, 3	"Make tax transfer 3"	-0.09	8.82%	17.65%	29.41%	19.12%	8.82%	16.18%	"Give 3"	0.13	0.00%	16.92%	29.23%	16.92%	27.69%	9.23%	2.321**
8, 2	"Make tax transfer 2"	-0.17	13.24%	26.47%	22.06%	19.12%	16.18%	2.94%	"Give 2"	0.00	7.69%	26.15%	20.00%	12.31%	23.08%	10.77%	1.523
9, 1	"Make tax transfer 1"	-0.15	25.00%	23.53%	10.29%	11.76%	13.24%	16.18%	"Give 1"	-0.06	12.31%	29.23%	12.31%	13.85%	23.08%	9.23%	0.841
10, 0	"Do not involve government"	-0.13	36.76%	14.71%	5.88%	5.88%	10.29%	26.47%	"Do nothing"	-0.18	27.69%	20.00%	9.23%	13.85%	21.54%	7.69%	-0.268

Notes: Significant at the *** 1 percent, ** 5 percent, and * 10 percent levels; all two-tailed. Responses are: "very socially inappropriate" (- - -), "socially inappropriate" (- -), "somewhat socially inappropriate" (-), "somewhat socially appropriate" (+), "socially appropriate" (++), and "very socially appropriate" (+++). Modal responses are shaded in gray. To construct the mean ratings, we convert responses into numerical scores ("very socially inappropriate" = -1, "socially inappropriate" = -0.6, "somewhat socially inappropriate" = -0.2, "somewhat socially appropriate" = 0.2, "socially appropriate" = 0.6, and "very socially appropriate" = 1).

TABLE 4—PIECEWISE OLS REGRESSIONS OF NORMS ON FRAME FOR EACH IDENTITY AND ENDOWMENT

Panel A: OLS regression of Democratic norm ratings on framing and actions					
	Dependent variable: Democratic norm ratings				
	Endowment $= 0$		Endowment $= 5$		Endowment $= 10$	
	(1)	(2)	(3)	(4)	(5)	(6)
	Keep ≤ 5	Keep ≥ 5	Keep ≤ 5	Keep ≥ 5	Keep ≤ 5	Keep ≥ 5
Tax-framed	-0.466***	0.075	-0.877***	-0.180	-0.745***	-0.011
	(0.095)	(0.133)	(0.098)	(0.114)	(0.106)	(0.115)
Keep	-0.030*	-0.196***	0.038***	-0.248***	0.065***	-0.219***
	(0.016)	(0.013)	(0.014)	(0.011)	(0.015)	(0.012)
Tax-framed $\times$ Keep	0.121***	(0.013)	0.144***	0.034*	0.103***	-0.003
	(0.025)	(0.018)	(0.022)	(0.018)	(0.021)	(0.018)
Constant	0.438***	1.054***	0.484***	1.541***	0.426***	1.650***
	(0.060)	(0.101)	(0.064)	(0.074)	(0.073)	(0.071)
Observations	1,476	1,476	1,476	1,476	1,476	1,476
R^2	0.051	0.266	0.265	0.326	0.224	0.326
Panel B: OLS regression Republican norm ratings on framing and actions					
	Dependent variable: Republican norm ratings				
	Endowment $= 0$		Endowment $= 5$		Endowment $= 10$	
	(1)	(2)	(3)	(4)	(5)	(6)
	Keep ≤ 5	Keep ≥ 5	Keep ≤ 5	Keep ≥ 5	Keep ≤ 5	Keep ≥ 5
Tax-framed	-0.181	0.003	-1.034***	0.195	-0.778***	-1.027***
	(0.134)	(0.207)	(0.142)	(0.155)	(0.140)	(0.276)
Keep	-0.051**	-0.147***	0.044**	-0.236***	0.094***	-0.174***
	(0.023)	(0.019)	(0.020)	(0.015)	(0.017)	(0.018)
Tax-framed $\times$ Keep	0.042	-0.008	0.206***	-0.018	0.057**	0.108***
	(0.040)	(0.026)	(0.029)	(0.023)	(0.028)	(0.039)
Constant	0.291***	0.687***	0.338***	1.451***	0.188*	1.468***
	(0.087)	(0.146)	(0.097)	(0.112)	(0.099)	(0.108)
Observations	798	798	798	798	798	798
R^2	0.010	0.173	0.297	0.348	0.245	0.137

Notes: Standard errors (in parentheses) are adjusted for clustering at the individual level. Significant at the *** 1 percent, ** 5 percent, and * 10 percent levels.
"Tax-framed" is 1 for tax-framed ratings and 0 for neutrally-framed ratings. And "Keep" is the allocation that is rated. "Tax-framed $\times$ Keep" is then the interaction term that captures the slopes of these norm profiles.

between the tax frame and the dictator's action.[17] For each identity and endowment, the first column is restricted to cases where the dictator keeps 5 or fewer tokens, while the second column is restricted to cases where the dictator keeps 5 or more tokens.

Tables 2-4 show that framing has an effect on norm ratings, leading to the following result:

Result 1 (Norms: frames affect norm ratings). *Republicans with an initial endowment of 0 display similar tax- and neutrally-framed norm ratings. For the other identity and endowment combinations, norm ratings differ between frames.*

Support*.* For the tax- and neutrally-framed Democrats (Table 2), we find that the signs of the average (bolded) and modal (shaded in gray) norm ratings agree.[18] Further, we find that at least 5 out of 11 norm ratings differ across frames for all three endowments. Similarly for the tax- and neutrally-framed Republicans, the signs of the average and modal norm ratings agree. Further, at least 6 of the 11 norm ratings for endowments 5 and 10 differ across frames. However, when the endowment is 0, there are no significant differences at the 5% level between the tax- and neutrally-framed norm ratings.

For the piecewise OLS regressions, the interaction terms, "Tax-framed $\times$ Keep," give the difference in the slopes of the norm profiles for the neutral and tax frames. For Democrats, the interaction terms for the endowments are significantly different from 0 when the dictator keeps fewer than 5 tokens, and not significantly different from 0 when the dictator keeps more than 5 tokens. For Republicans, the interaction terms are significantly different from

---

[17]In all specifications we cluster the standard errors at the individual level.

[18]The allocation "0, 10" in endowment 0 has a bimodal distribution with peaks at "very socially inappropriate" and "very socially appropriate." Note that this is not well reflected by the sign of the average norm rating.

0 when the dictator keeps fewer than 5 tokens for initial endowments of 5 and 10 tokens, and when the dictator keeps more than 5 tokens for an initial endowment of 10 tokens. We find that neither of the interaction terms is significant when the initial endowment is 0.

Choices depend on frames

We next examine the results from our *choice experiment*. We begin with the following hypothesis:

Hypothesis 2 (Choice: frames affect choice). *For a particular identity, the allocation choices of tax-framed dictators will differ from those of the neutrally-framed dictators.*
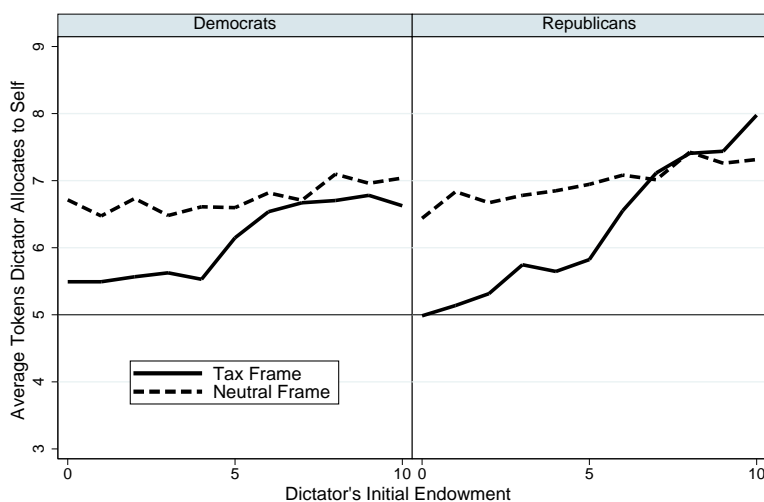
Figure 2. Average dictator choices by frame, initial endowment, and identity

In our analysis, we include only the responses of individuals from the *choice experiment*. Figure 2 displays the average dictator decision in the *choice experiment* for each endowment, separated by frame treatments and political

identity. In Figure 2, the average choices of tax-framed dictators are indicated by the solid lines while the average choices of neutrally-framed dictators are indicated by the dashed lines. From this figure, we can see that both Democratic and Republican dictators in the tax-framed treatment are more responsive (have steeper slopes) to their initial endowment, relative to dictators in the neutrally-framed treatment.

We next examine the results from our regressions. Specifically, Table 5 presents the results from OLS regressions to determine whether differences across frames are significant for either Democrats (column 1) or Republicans (column 2). In particular, we regress the number of tokens kept by the dictator on a dummy for the frame ("Tax-framed" is 1 for subjects in the tax-framed treatment and 0 for subjects in the neutrally-framed treatment), the dictator's initial endowment ("Endowment"), and their interaction term ("Tax-framed × Endowment"). For both Democrats and Republicans, we find that the coefficient on "Tax-framed × Endowment" is significant ($p < 0.01$).

TABLE 5—OLS REGRESSIONS OF DICTATOR CHOICE ON FRAME AND INITIAL ENDOWMENT FOR EACH IDENTITY

	Dependent variable: Tokens kept by dictator	
	(1) Democrats	(2) Republicans
Tax-framed	-1.187***	-1.817***
	(0.275)	(0.457)
Endowment	0.048***	0.082***
	(0.018)	(0.030)
Tax-framed × Endowment	0.109***	0.228***
	(0.027)	(0.049)
Constant	6.506***	6.554***
	(0.218)	(0.324)
Observations	4,664	2,233
R^2	0.035	0.084

Notes: Standard errors (in parentheses) are adjusted for clustering at the individual level.
Significant at the *** 1 percent, ** 5 percent, and * 10 percent levels.

Taking the visual and regression evidence together, we obtain the following result:

Result 2 (Choice: frames affect choice). *Subjects playing the tax-framed dictator game allocate their initial endowments differently than do subjects playing the neutrally-framed dictator game.*

Support. The results in Table 5 show that the coefficient for "Tax-framed" is significant ($p < 0.01$) for both Democrats (column 1) and Republicans (column 2).

B. Testing the social identity model

To test whether the social identity model can explain our results, we first show that the data from our *norms elicitation experiment* improves our ability to account for behavior in our *choice experiment*. Note that this exercise also calibrates the model. We then compare out-of-sample predictions with actual subject behavior in our experiment.

ECONOMETRIC MODEL AND IDENTIFICATION STRATEGY

In the model, we assume that individuals employ a logistic choice rule, where the likelihood of choosing any action, a, depends on the relative utility of that action compared to other actions:

$$(2) \qquad P(a = a_i) = \exp(U_i)/\sum_j \exp(U_j)$$

Our first specification assumes that utility depends on only the dictator's own payoff. This is equivalent to setting $\gamma_i = 0$ in Equation 2 (i.e. the person does not care about complying with the social norms for her identity). To estimate the weight placed on monetary payoffs, we then impose a linear

restriction on $V_i(\cdot)$, such that, for any final payoff, k, $V_i(k_i) = \beta_i k_i$. Thus, we estimate the weight, β_i, that an individual places on the money she receives from a particular choice as follows:

(Outcome Model) $$U_i(k_i) = \beta_i k_i$$

If changes in a subject's behavior are driven by changes in norms across initial endowment levels, e, then the weight that individuals place on complying with the norm, γ_i, should be significantly different from 0. Thus, in our second specification, we assume that an individual is motivated by both the monetary gain from the action as well as the social appropriateness of that action:

(Identity Model) $$U_i(k_i, I_i, e) = \beta_i k_i + \gamma_i N(k_i | I_i, e)$$

Note that in a conditional logistic regression (McFadden, 1974)[19] where the dependent variable is the selected action, the variation reflects variation across the characteristics of the possible actions. In our experiment, these characteristics are the payoffs and norms. When we change the initial endowment amount, we hold the monetary payoff constant. Thus, the source of variation is the variation in norms.

To test whether including norm ratings improves our ability to predict identity-dependent choice, we fit individual utility functions to our choice data. We anticipate that any improvement will be reflected by lower Akaike and Bayesian information criteria (AIC and BIC). This leads to the following prediction:

---

[19]Conditional logistic models are similar to multinomial logistic models. However, conditional logistic models emphasize the characteristics of the alternatives, while multinomial logistic models depend on the characteristics of the individual making the choice. See Hoffman and Duncan (1988) for a comparison of these models.

Hypothesis 3 (Choice and Norms: social identity model accounts for behavior). *A model including identity-dependent norms as an explanatory variable for the corresponding behavior should improve our ability to account for behavior (as measured through decreases in AIC and BIC) than would a model excluding those norms as an explanatory variable.*

THE IDENTITY MODEL IMPROVES OUR ABILITY TO ACCOUNT FOR

BEHAVIOR

Table 6 reports the results from several conditional logistic regressions for Democrats (panel A) and Republicans (panel B) using the norms and behavior obtained from our tax-framed subjects in columns 1 and 2 and neutrally-framed subjects in columns 3 and 4.[20] The reported coefficients reflect the relative weight of each component in the utility function. Specifically, the coefficient for payoffs, β, is an estimate of the average weight subjects place on their monetary payoff. The coefficient for norm ratings, γ, provides an estimate of the average weight subjects place on social appropriateness.[21]

For the *identity model*, we can take advantage of the estimation structure and use the ratio of γ and β to estimate how much money an individual is willing to give up for a one unit increase in the norm rating. This can be seen as the equivalent of choosing an action that is deemed very socially appropriate over an action that is neutral.

---

[20]For these conditional logistic regressions, we do not distinguish whether the decision is made when the initial endowment is 0, 5, or 10 tokens, as this is captured by the different average norm ratings attached to each action for each endowment.

[21]Because the average norm ratings are a measured quantity which may include sampling error, we use bootstrapped standard errors for the model containing norm ratings. To construct the bootstrapped standard errors, we conduct 1000 replications. In each replication, we resample (with replacement) from the appropriateness ratings data (generated from the *norm elicitation experiment*) and construct an average norm function $N(\cdot)$. We then re-estimate the choice model based on the sampled norm function. The distribution of the coefficients across replications generates the standard errors.

TABLE 6—CONDITIONAL LOGISTIC ESTIMATION FOR DEMOCRATS AND REPUBLICANS USING AVERAGE NORM RATINGS

	Panel A: Conditional logit for Democrats			
	Tax Frame		Neutral Frame	
	(1) Outcome Model	(2) Identity Model	(3) Outcome Model	(4) Identity Model
Payoff for action (β)	0.112***	0.419***	0.191***	1.043***
	(0.013)	[0.039]	(0.024)	[0.089]
Norms (γ)		2.833***		4.602***
		[0.180]		[0.361]
$0.1 \cdot \frac{\gamma}{\beta}$		0.676***		0.441***
		[0.033]		[0.010]
Observations	8,910	8,910	5,082	5,082
Log likelihood	-1894	-1590	-1032	-795.5
AIC	3789	3183	2066	1595
BIC	3796	3197	2072	1608
	Panel B: Conditional logit for Republicans			
	Tax Frame		Neutral Frame	
	(1) Outcome Model	(2) Identity Model	(3) Outcome Model	(4) Identity Model
Payoff for action (β)	0.130***	0.346***	0.206***	0.714***
	(0.022)	[0.044]	(0.034)	[0.087]
Norms (γ)		2.688***		3.631***
		[0.236]		[0.451]
$0.1 \cdot \frac{\gamma}{\beta}$		0.777***		0.508***
		[0.067]		[0.027]
Observations	4,290	4,290	2,409	2,409
Log likelihood	-903.6	-745.9	-484.1	-420.5
AIC	1809	1496	970.1	844.9
BIC	1816	1509	975.9	856.5

Notes: Standard errors (in parentheses) and robust errors [in brackets], both are adjusted for clustering at the individual level

Significant at the *** 1 percent, ** 5 percent, and * 10 percent level.

We then multiply this ratio by 0.1 to get the dollar value of the trade-off, since each token in our experiment is worth $0.10.[22]

We report the results of the *outcome model* for our tax-framed treatments in column 1 of Table 6. For both Democrats ($\beta = 0.112$, $p < 0.01$) and Republicans ($\beta = 0.130$, $p < 0.01$), we find that the coefficient on the monetary payoff is positive and significant. That is, subjects are more likely to choose an action that has higher payoffs.

Next, we report the results of the *identity model* in column 2. Here, we find the coefficient on the payoff is positive and statistically significant for both identities ($\beta = 0.419$, $p < 0.01$ for Democrats and $\beta = 0.346$, $p < 0.01$ for Republicans). Further, we find that the coefficient on the tax-framed norm ratings is also positive and significant ($\gamma = 2.833$, $p < 0.01$ for Democrats and $\gamma = 2.688$, $p < 0.01$ for Republicans). The latter result suggests that subjects are more likely to choose actions associated with higher norm ratings.

For both Democrats and Republicans, we find that the magnitude of the coefficient on tax-framed norm ratings (γ) is larger than that on a subject's monetary payoff (β). That is, a subject's concern for the social appropriateness of an action outweighs her concern about the payoff of that action. Calculating $0.1 \cdot \gamma/\beta$, we see that tax-framed Democrats are willing to sacrifice $0.68 for a one unit increase in appropriateness, while tax-framed Republicans are willing to sacrifice $0.78 for the same increase in the appropriateness level.[23]

We next present the results of the outcome model for our neutrally-framed treatment in column 3 of Table 6. Our results show that both Democrats and

---

[22]Similar analyses using these ratios are also reported in Davies et al. (2001) and Boskin (1974).

[23]If Democrats and Republicans exhibit similar identity attachment, then these results suggest that Republican behavior is more strongly influenced by their identity norm. We leave this up to the reader to decide, and instead focus on using this ratio to compare model performance within an identity and across specifications.

Republicans are more likely to choose actions that result in a higher payoff ($\beta = 0.191$, $p < 0.01$ for Democrats; $\beta = 0.206$, $p < 0.01$ for Republicans). The results are similar under the *identity model* (column 4) ($\beta = 1.043$ and 0.714, $p < 0.01$ for Democrats and Republicans, respectively). In addition, we find that individuals place more weight on the appropriateness of an action ($\gamma = 4.602$ and 3.631, $p < 0.01$ for Democrats and Republicans, respectively). Finally, calculating $0.1 \cdot \gamma/\beta$ as above, we find that Democrats and Republicans are willing to pay approximately \$0.44 and \$0.51, respectively, for a marginal improvement in the appropriateness of their actions.

Recall that Hypothesis 3 predicts that the *identity model* should outperform the *outcome model* in explaining subject behavior across endowments. To formally test this hypothesis, we use the AIC and BIC to compare the likelihood that each model fits the observed data. Specifically, smaller AIC and BIC values indicate a better fit of the model to the data.[24] Furthermore, since both the AIC and BIC penalize models for the number of parameters, we expect to find larger AIC and BIC values for our *identity model* if norms have no influence on behavior.

Consistent with Hypothesis 3, we find that augmenting the *outcome model* with the tax-framed norm ratings improves the model's predictive fit for both Democrats and Republicans. For Democrats, we find that both the AIC and BIC are smaller for the *identity model* (3,183 and 3,197, respectively) than for the *outcome model* (3,789 and 3,796, respectively). For Republicans, we find a similar pattern (AIC $= 1,496$ vs. $1,809$ and BIC $= 1,509$ vs. $1,816$). Thus, we conclude that the *identity model* better fits the data for the tax-framed treatment.

Looking at the neutrally-framed results (columns 3 and 4), we find smaller

[24]A more in-depth discussion of these two estimators can be found in Aho et al. (2014).

AIC and BIC values under the *identity model* (1,595 and 1,608 for Democrats, 844.9 and 856.5 for the Republicans, respectively) relative to those obtained for the *outcome model* (2,066 and 2,072 for Democrats, and 970.1 and 975.9 for Republicans, respectively).

Taken together, we obtain the following result:

Result 3 (**Choice and Norms: the social identity model accounts for subject behavior**). *For each combination of frame and identity, including the corresponding norm ratings in the model significantly improves our ability to account for variation in behavior.*

Support. The results in Table 6 show that the AICs and BICs of the specifications including norms ratings are smaller than those that do not include norm ratings.

Identity-dependent norms improve out-of-sample prediction

As a second test of the social identity model's ability to capture how frames alter norms and choice, we examine its performance in out-of-sample prediction. To do so, we first calibrate the model using only a fraction of our data. We then validate the model using the derived estimates to predict behavior in the remaining data. Specifically, we perform out-of-sample forecasting by estimating the models' parameters using the choices of only 70% of our subjects (the calibration sample) in the *choice experiment* in order to use those parameters to predict the choices of the other 30% of our subjects (the validation sample).

In Figure 3, we plot the actual vs. predicted behavior of dictators in our tax-framed treatment with an initial endowment of 10 tokens. The dashed lines represent the predictions obtained from the calibration sample while the
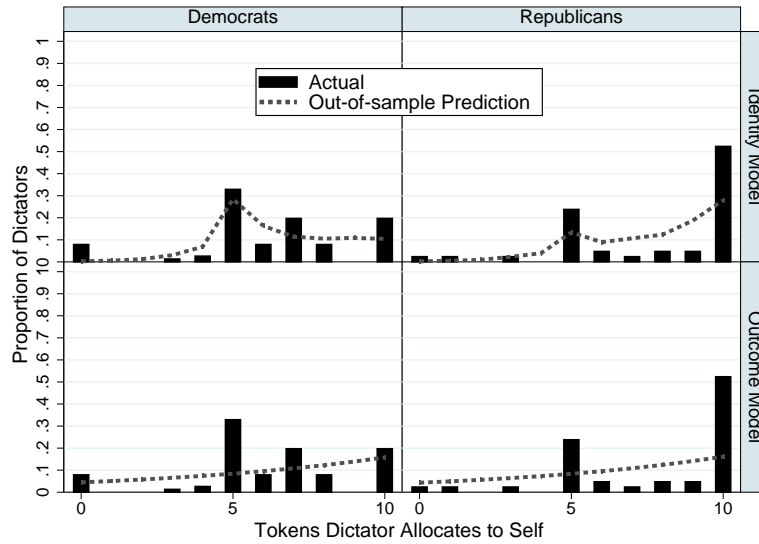
FIGURE 3. ACTUAL BEHAVIOR AND OUT-OF-SAMPLE PREDICTIONS FOR THE TAX-FRAMED TREATMENT, WITH DICTATOR ENDOWMENT = 10.

histograms indicate the actual behavior obtained from the validation sample. The top row shows the results of the *identity model* while the bottom row shows the results of the *outcome model*. Finally, the left column shows the results for Democrats while the right column shows the results for Republicans.

As with the conditional logistic regressions, Figure 3 visually depicts the better fit of the *identity model* to actual behavior. Using the *outcome model*, we see that dictators are predicted to be more likely to choose actions with higher payoffs and are most likely to keep all 10 tokens. However, using the *identity model*, we see that Democratic dictators are correctly predicted to favor an equal split of the tokens, and that keeping more than five tokens is more likely than keeping fewer than five tokens. For Republicans, we see that the *identity model* correctly predicts that most will choose to keep all ten tokens, but that an equal split of the tokens is also likely. Figures A3 and A4 in the Appendix show the comparisons between the two models in all cases

(all three endowments, both frames, and both identities). Similar to the case shown in Figure 3, these additional scenario depictions show that the *identity model* predicts actual behavior more accurately than does the *outcome model.*

In Table 7, we first present the mean-squared deviations of our validation sample's actual behavior from the model predictions. Sign rank tests confirm the the identity model yields lower mean-squared deviations than the outcome model in all cases ($p < 0.01$ for all comparisons). This confirms that the *identity model* predicts actual behavior more accurately than does the *outcome model.*

TABLE 7—ESTIMATES FOR FULL AND OUT-OF-SAMPLE ESTIMATION AND MEAN SQUARED DEVIATIONS

		Validation Sample MSD		$0.1 \cdot \frac{\gamma}{\beta}$ estimates		Wald test
Identity	Frame	Outcome Model	Identity Model	Full Sample	Calibration Sample	p-value
Democrats	Neutral	0.079	0.066	0.441	0.449	0.41
				(0.015)	(0.019)	
	Tax	0.081	0.070	0.676	0.756	0.05
				(0.041)	(0.065)	
Republicans	Neutral	0.079	0.069	0.508	0.503	0.84
				(0.038)	(0.045)	
	Tax	0.082	0.068	0.777	0.715	0.16
				(0.085)	(0.087)	

In a final set of tests, we conduct our out-of-sample estimation exercise for the full, calibration and validation samples and present the results in Table 7. Using Wald tests, we find that the estimates of our calibration sample are not significantly different from those of our full sample. This shows that the *identity model* is able to predict out-of-sample behavior approximately as well as it accounts for in-sample behavior.

IV. Conclusion

Prior research shows that rhetorical framing impacts a decision maker's conception of the acts, outcomes and associated contingencies for a particular

decision. In this study, we provide insight into how framing works through two experiments. Using the context of Democratic and Republican identities in the U.S., we first find that framing affects norms, which in turn impact behavior. We also find that a model of social identity provides a tractable explanation for this effect. Specifically, we find that the identity model yields lower AICs and BICs in the conditional logistic regressions when compared to an outcome-based model, as well as better out-of-sample prediction accuracy.

Our study makes several important contributions to the literature. The first contribution is an improved understanding of framing. Though framing has a well-documented effect on behavior, we do not really understand why it works. This paper presents one mechanism for how framing impacts choice: frames evoke norms, which in turn influence choice. This offers one mechanism by which unstable preferences will be impacted by a frame.

Our study presents a novel method that allows sharper predictions for the likely impact of frames on behavior. That is, we directly measure the effect of frames on norms. Previous research on how framing affects behavior often relies on more general intuitions, such as "we dislike losses." By contrast, we show that there are interactions between idiosyncratic characteristics (such as a person's social identity) and a frame that can be anticipated. This insight allows us to formulate a richer model of how frames affect decision making.

Our second contribution is to advance how we study social identity (Akerlof and Kranton, 2000; Chen and Li, 2009). Despite the central role of norms in identity-based choice models, previous work often relies on assumptions about these norms (see Roy, 1952; Benjamin et al., 2010).[25] As a consequence, choice data alone cannot separately identify identity-dependent norms and behavior

---

[25]These assumptions may have been necessitated by the fact that such identities are fluid, multiple, and socially-constructed (Turkle, 1997; Shih et al., 1999). Also, research has shown that norms can vary from situation to situation (Krupka and Weber, 2013; Bicchieri, 2005).

as the observed choice is a consequence of both an individual's utility over outcomes as well as her utility derived from norm compliance.[26]

By contrast, in our study, we separately and independently identify identity-dependent norms, thus overcoming several challenges associated with work on social identity. Our approach makes it possible to construct tests of the social identity model for those identities or situations where we do not have *ex-ante* strong intuitions regarding the norms. It also allows us to make specific predictions about the behavior we expect.

The broader implications of this study for policy makers regarding the use of framing language are both intuitive and striking: we may not be as politically divided as we appear to be. Two examples provide stark evidence that frames make us seem more divided than we are. At the time that the Affordable Care Act was receiving wide news coverage, Democratic strategists noted that re-naming the ACA to Obamacare would have a polarizing effect: "When the GOP turned the ACA into Obamacare they turned a bill that many GOP voters would like because it provided them affordable health care into a referendum on a president whom their voters hated" (Pathe, 2017). A similar impact of framing is well documented with respect to climate change. As Leiserowitz et al. (2014) note in their report from the Yale project on climate change communication, "...global warming and climate change are often not synonymous—they mean different things to different people—and activate different sets of beliefs, feelings, and behaviors, as well as different degrees of urgency about the need to respond." Our work offers both a path forward to study and predict the impact of framing on choice, but also an identity-based

---

[26]Charness et al. (2014) identify the trade-off between identity and potential monetary considerations by varying whether people participate in a group activity as well as the size of the endowment received. However, their focus is on which sense of identity becomes salient in which circumstance rather than on how identity shapes norms.

approach to ameliorate its negative effects.

REFERENCES

Afridi, Farzana, Sherry Xin Li, and Yufei Ren, "Social identity and inequality: The impact of China's *hukou* system," *Journal of Public Economics*, March 2015, *123*, 17–29.

Aho, Ken, DeWayne Derryberry, and Teri Peterson, "Model selection for ecologists: the worldviews of AIC and BIC," *Ecology*, 2014, *95* (3), 631–636.

Akerlof, George A. and Rachel E. Kranton, "Economics and Identity," *The Quarterly Journal of Economics*, August 2000, *115* (3), 715–753.

__ **and** __ , "Identity and the Economics of Organizations," *Journal of Economic Perspectives*, Winter 2005, *19* (1), 9–32.

Allison, Scott T., James K. Beggan, and Elizabeth H. Midgley, "The quest for" similar instances" and" simultaneous possibilities": Metaphors in social dilemma research.," *Journal of Personality and Social Psychology*, 1996, *71* (3), 479.

Andreoni, James, "Warm-Glow Versus Cold-Prickle: The Effects of Positive and Negative Framing on Cooperation in Experiments," *The Quarterly Journal of Economics*, February 1995, *110* (1), 1–21.

Banerjee, Ritwik, "On the interpretation of bribery in a laboratory corruption game: moral frames and social norms," *Experimental Economics*, 2016, *19* (1), 240–267.

Bardsley, Nicholas, "Dictator game giving: altruism or artefact?," *Experimental Economics*, June 2008, *11* (2), 122–133.

Benjamin, Daniel J., James J. Choi, and A. Joshua Strickland, "Social Identity and Preferences," *American Economic Review*, September 2010, *100* (4), 1913–1928.

Bicchieri, Cristina, *The grammar of society: The nature and dynamics of social norms*, Cambridge: Cambridge University Press, 2005.

__ **and Alex Chavez**, "Behaving as expected: Public information and fairness norms," *Journal of Behavioral Decision Making*, 2010, *23* (2), 161–178.

Blount, Sally and Richard P. Larrick, "Framing the game: Examining frame choice in bargaining," *Organizational Behavior and Human Decision Processes*, 2000, *81* (1), 43–71.

Boskin, Michael J, "A Conditional Logit Model of Occupational Choice," *Journal of Political Economy*, 1974, *82* (2), 389–398.

Bosman, Ronald and Frans Van Winden, "Emotional Hazard in a Power-to-Take Experiment," *The Economic Journal*, January 2002, *112*, 147–169.

Butler, Jeffrey V, "Trust, Truth, Status and Identity: An Experimental Inquiry," *The BE Journal of Theoretical Economics*, 2014, *14* (1), 293–338.

Chandler, Dana and Adam Kapelner, "Breaking monotony with meaning: Motivation in crowdsourcing markets," *Journal of Economic Behavior & Organization*, 2013, *90*, 123–133.

Charness, Gary, Luca Rigotti, and Aldo Rustichini, "Individual Behavior and Group Membership," *American Economic Review*, September 2007, *97* (4), 1340–1352.

＿ , Ramón Cobo-Reyes, and Natalia Jiménez, "Identities, selection, and contributions in a public-goods game," *Games and Economic Behavior*, 2014, *87*, 322–338.

Chen, Roy and Yan Chen, "The Potential of Social Identity for Equilibrium Selection," *American Economic Review*, October 2011, *101* (6), 2562–2589.

Chen, Yan and Sherry Xin Li, "Group Identity and Social Preferences," *American Economic Review*, March 2009, *99* (1), 431–457.

＿ , ＿ , Tracy Xiao Liu, and Margaret Shih, "Which hat to wear? Impact of natural identities on coordination and cooperation," *Games and Economic Behavior*, March 2014, *84*, 58–86.

D'Adda, Giovanna, Michalis Drouvelis, and Daniele Nosenzo, "Norm Eliciation in Within-Subject Designs: Testing for Order Effects," 2015. CeDEx Discussion Paper Series ISSN 1749-3293.

Davies, Paul S., Michael J. Greenwood, and Haizheng Li, "A Conditional Logit Approach to U.S. State-to-State Migration," *Journal of Regional Science*, 2001, *41* (2), 337–360.

Dufwenberg, Martin, Simon Gächter, and Heike Hennig-Schmidt, "The framing of games and the psychology of play," *Games and Economic Behavior*, 2011, *73* (2), 459–478.

＿ , ＿ , and Heike Henning-Schmidt, "The framing of games and the psychology of strategic choice," Technical Report, Bonn econ discussion papers 2006.

Eckel, Catherine C. and Philip J. Grossman, "Managing Diversity by Creating Team Identity," *Journal of Economic Behavior & Organization*, November 2005, *58* (3), 371–392.

Eichenberger, Reiner and Felix Oberholzer-Gee, "Rational moralists: The role of fairness in democratic economic politics," *Public Choice*, 1998, *94* (1-2), 191–210.

Ellingsen, Tore and Erik Mohlin, "Situations and Norms," 2014. manuscript in preparation.

Erkut, Hande, Daniele Nosenzo, and Martin Sefton, "Identifying Social Norms Using Coordination Games: Spectators vs. Stakeholders," 2014. CeDEx Discussion Paper Series ISSN 1749-3293.

Gächter, Simon, Daniele Nosenzo, and Martin Sefton, "Peer effects in pro-social behavior: social norms or social preferences?," *Journal of the European Economic Association*, 2013, *11* (3), 548–573.

__ , **Leonie Gerhards, and Daniele Nosenzo**, "The importance of peers for compliance with norms of fair sharing," 2015. IZA Discussion Paper.

Gallup, Alec, "Gallup And Party ID: Birth Of A Question," *Public Perspective*, July/August 1991, *2* (5), 23–24. Interview.

Gangadharan, Lata, Tarun Jain, Pushkar Maitra, and Joseph Vecci, "Social Identity and Governance: The Behavioral Response to Female Leaders," 2015. Monash Business School Discussion Paper.

Gneezy, Ayelet, Uri Gneezy, Gerhard Riener, and Leif D. Nelson, "Pay-what-you-want, identity, and self-signaling in markets," *Proceedings of the National Academy of Sciences of the United States of America*, May 2012, *109* (19), 7236–7240.

Goerg, Sebastian J. and Gari Walkowitz, "On the prevalence of framing effects across subject-pools in a two-person cooperation game," *Journal of Economic Psychology*, December 2010, *31* (6), 849–859.

Goette, Lorenz, David Huffman, and Stephan Meier, "The Impact of Group Membership on Cooperation and Norm Enforcement: Evidence Using Random Assignment to Real Social Groups," *American Economic Review*, May 2006, *96* (2), 212–216.

__ , __ , **and** __ , "The Impact of Social Ties on Group Interactions: Evidence from Minimal Groups and Randomly Assigned Real Groups," *American Economic Journal: Microeconomics*, February 2012, *4* (1), 101–115.

Grossman, Philip J and Catherine C Eckel, "Giving versus Taking: A "Real Donation" Comparison of Warm Glow and Cold Prickle," Technical Report, Monash University, Department of Economics 2012.

Hardisty, David J., Eric J. Johnson, and Elke U. Weber, "A dirty word or a dirty world? Attribute framing, political affiliation, and query theory," *Psychological Science*, 2010, *21* (1), 86–92.

Hoffman, Saul D. and Greg J. Duncan, "Multinomial and conditional logit discrete-choice models in demography," *Demography*, August 1988, *25* (3), 415–427.

Horton, John J, David G Rand, and Richard J Zeckhauser, "The online laboratory: Conducting experiments in a real labor market," *Experimental Economics*, 2011, *14* (3), 399–425.

Huff, Connor and Dustin Tingley, ""Who are These People?": Evaluating the Demographic Characteristics and Political Preferences of MTurk Survey Respondents," *Research and Politics*, 2015, *July-September* (1), 1–12.

Iyengar, Shanto and Sean J. Westwood, "Fear and Loathing across Party Lines: New Evidence on Group Polarization," *American Journal of Political Science*, 2015, *59* (3), 690–707.

Kahneman, Daniel, "Preface," in Daniel Kahneman and Amos Tversky, eds., *Choices, values, and frames*, Cambridge: Cambridge University Press, 2000.

Kimbrough, Erik O and Alexander Vostroknutov, "Norms make preferences social," *Journal of the European Economic Association*, 2016, *14* (3), 608–638.

Koch, Jeffrey W, "Political rhetoric and political persuasion: the changing structure of citizens' preferences on health insurance during policy debate," *Public Opinion Quarterly*, 1998, *62* (2), 209–229.

Kranton, Rachel, Matthew Pease, Seth Sanders, and Scott Huettel, "Identity, Groups, and Social Preferences," 2013. Duke University, mimeo. Working paper.

Krupka, Erin L. and Roberto A. Weber, "Identifying Social Norms Using Coordination Games: Why Does Dictator Game Sharing Vary?," *Journal of the European Economic Association*, June 2013, *11* (3), 495–524.

Larrick, Richard P. and Sally Blount, "The claiming effect: Why players are more generous in social dilemmas than in ultimatum games.," *Journal of Personality and Social Psychology*, 1997, *72* (4), 810.

Leiserowitz, Anthony, Geoff Feinberg, Seth Rosenthal, Nicholas Smith, Ashley Anderson, Connie Roser-Renouf, and Edward Maibach, "Whats in a name? Global warming vs. climate change," *Yale Project on Climate Change Communication, New Haven: CT*, 2014.

Li, Sherry Xin, Kutsal Dogan, and Ernan Haruvy, "Group identity in markets," *International Journal of Industrial Organization*, January 2011, *29* (1), 104–115.

Liberman, Varda, Steven M Samuels, and Lee Ross, "The name of the game: Predictive power of reputations versus situational labels in determining prisoners dilemma game moves," *Personality and social psychology bulletin*, 2004, *30* (9), 1175–1185.

List, John A., "On the Interpretation of Giving in Dictator Games," *Journal of Political Economy*, June 2007, *115* (3), 482–493.

McCarter, Matthew W. and Roman M. Sheremeta, "You Can't Put Old Wine in New Bottles: The Effect of Newcomers on Coordination in Groups," *PLOS ONE*, January 2013, *8* (1).

McFadden, Daniel, "Conditional logit analysis of qualitative choice behavior," in Paul Zarembka, ed., *Frontiers in Econometrics*, New York, NY: Academic Press, 1974.

Mehta, Judith, Chris Starmer, and Robert Sugden, "The nature of salience: An experimental investigation of pure coordination games," *The American Economic Review*, 1994, *84* (3), 658–673.

Nelson, Thomas E., Rosalee A. Clawson, and Zoe M. Oxley, "Media Framing of a Civil Liberties Conflict and Its Effect on Tolerance," *American Political Science Review*, 1997, *91* (3), 567583.

Nelson, Thomas E, Zoe M Oxley, and Rosalee A Clawson, "Toward a psychology of framing effects," *Political behavior*, 1997, *19* (3), 221–246.

Paolacci, Gabriele, Jesse Chandler, and Panagiotis G Ipeirotis, "Running experiments on amazon mechanical turk," *Judgment and Decision making*, 2010, *5* (5), 411–419.

Pathe, Simone, "What's in a Name? 'Obamacare' vs. 'Trumpcare' vs. 'Ryancare'," *Roll Call*, March 2017. `http://www.rollcall.com/news/politics/trumpcare-obamacare-ryancare`.

Roy, Donald, "Quota Restriction and Goldbricking in a Machine Shop," *American Journal of Sociology*, March 1952, *57* (5), 427–442.

Rugg, Donald, "Experiments in wording questions: II," *Public Opinion Quarterly*, 1941, *5* (1), 91.

Schelling, Thomas C, *The strategy of conflict*, Cambridge: Harvard university press, 1980.

Schram, Arthur and Gary Charness, "Social and moral norms in the laboratory," *UCSB manuscript*, 2011.

Shih, Margaret, Todd L. Pittinsky, and Amy Trahan, "Domain-specific effects of stereotypes on performance," *Self and Identity*, January 2006, *5* (1), 1–14.

— , — , **and Nalini Ambady**, "Stereotype Susceptibility: Identity Salience and Shifts in Quantitative Performance," *Psychological Science*, January 1999, *10* (1), 81–84.

Steele, Claude M. and Joshua Aronson, "Stereotype threat and the intellectual test performance of African Americans," *Journal of Personality and Social Psychology*, November 1995, *69* (5), 797–811.

Sugden, Robert, "A theory of focal points," *The Economic Journal*, 1995, *105* (430), 533–550.

Swope, Kurtis, John Cadigan, Pamela Schmitt, and Robert Shupp, "Social Position and Distributive Justice: Experimental Evidence," *Southern Economic Journal*, January 2008, *74* (3), 811–818.

Terry, Deborah J. and Anne T. O'Brien, "Status, Legitimacy, and Ingroup Bias in the Context of an Organizational Merger," *Group Processes & Intergroup Relations*, July 2001, *4* (3), 271–289.

Turkle, Sherry, "Multiple subjectivity and virtual community at the end of the Freudian century," *Sociological inquiry*, 1997, *67* (1), 72–84.

Tversky, Amos and Daniel Kahneman, "The Framing of Decisions and the Psychology of Choice," *Science*, January 1981, *211*, 453–458.

Veselỳ, Štepán, "Elicitation of normative and fairness judgments: Do incentives matter?," *Judgment and Decision Making*, 2015, *10* (2), 191–197.

Weber, Roberto A., "Managing Growth to Achieve Efficient Coordination in Large Groups," *American Economic Review*, March 2006, *96* (1), 114–126.

Wichardt, Philipp C., "Identity and why we cooperate with those we do," *Journal of Economic Psychology*, April 2008, *29* (2), 127–139.
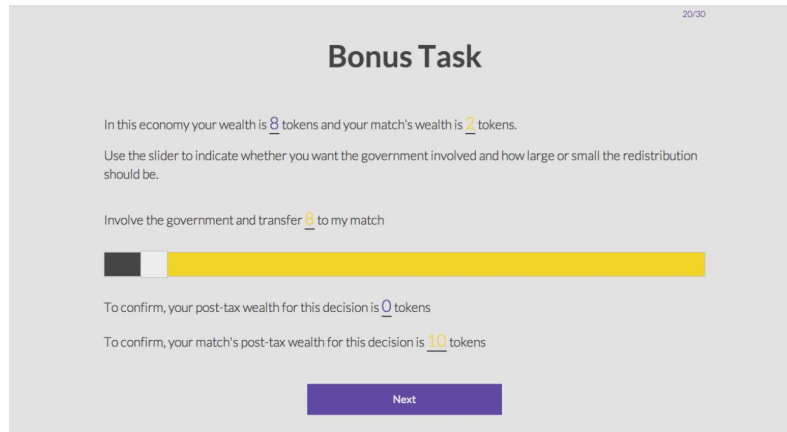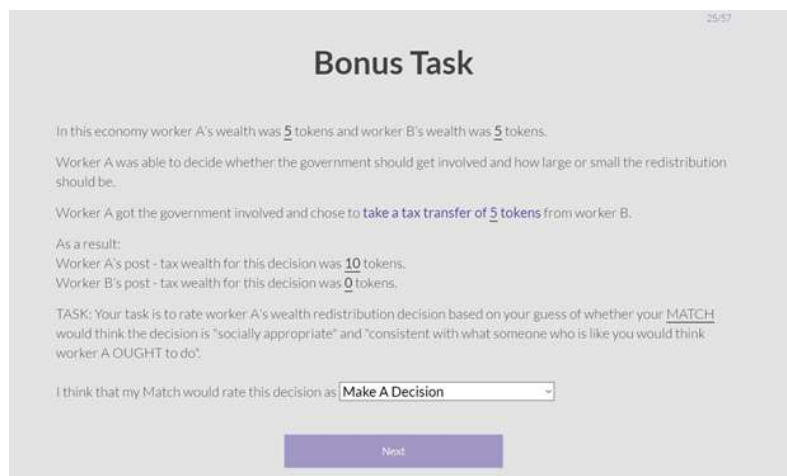
Appendix

A1.   Experimental procedure

Figure A1. Screenshot of the *choice experiment* redistribution task for tax-framed subjects.

Note: The white slider element starts in the "neutral" position which is located either to the left or to the right of the slider. The slider must be moved off of the neutral position for the subject to indicate her choice (the slider depicted here has already been moved). The numbers on the screen also dynamically update as the slider is moved to reflect the action being taken and the outcome of that action.

FIGURE A2. SCREENSHOT OF THE *norms elicitation experiment* RATINGS TASK FOR TAX-FRAMED SUBJECTS

A2.   Predicting behavior

Figure A3 depicts the actual versus predicted behavior of dictators in the tax-framed and neutrally-framed treatments using the *outcome model*. The top row shows the results for an initial endowment of 0, the middle row shows the results for an initial endowment of 5, and the bottom row shows the results for an initial endowment of 10. The first two columns show the results for Democrats and the last two columns show the results for Republicans. The the histograms represent the validation sample and the dashed lines represent the predicted sample. Figure A4 presents the same exercise using the *identity model*. Overall, we see that the *identity model* make predictions closer to actual behavior relative to the *outcome model* for both Democrats and Republicans.
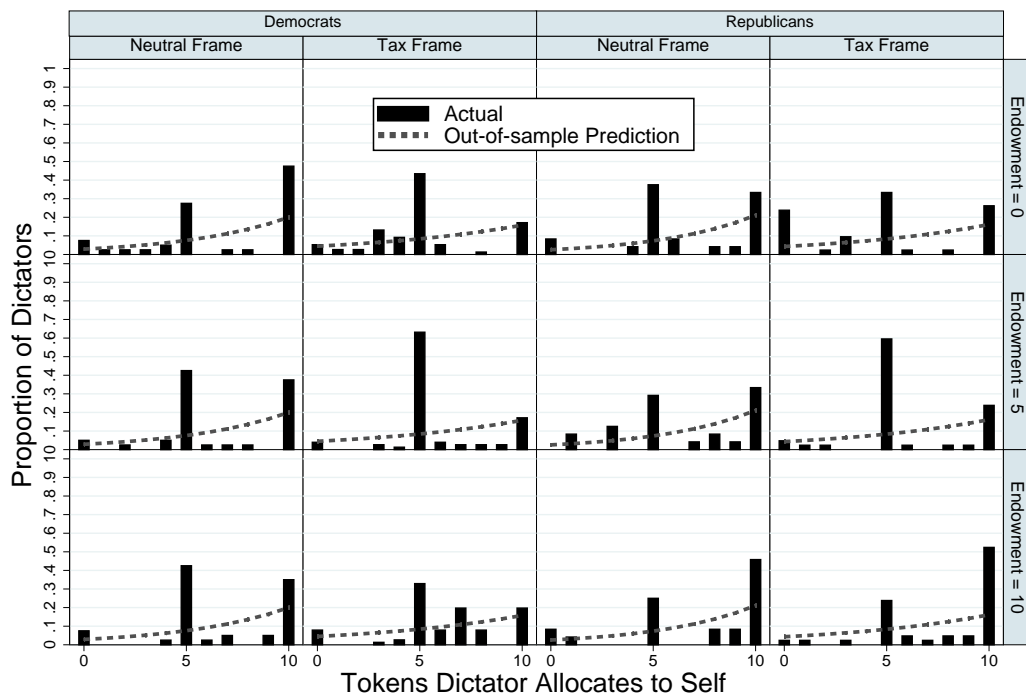
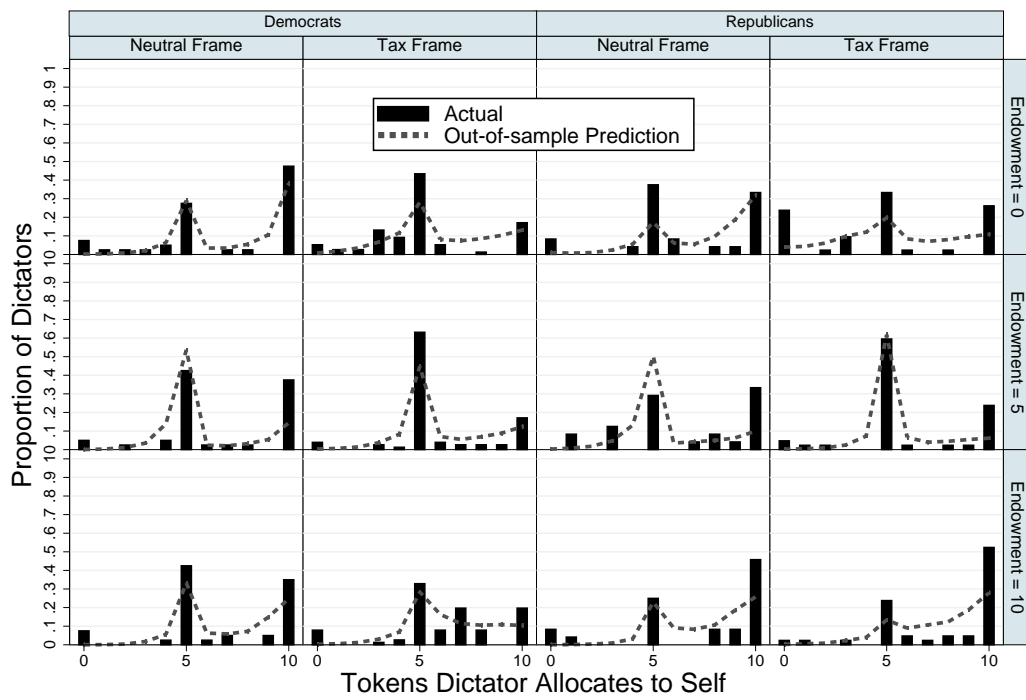FIGURE A3. ACTUAL BEHAVIOR AND OUT-OF-SAMPLE PREDICTIONS USING THE OUTCOME MODEL

FIGURE A4. ACTUAL BEHAVIOR AND OUT-OF-SAMPLE PREDICTIONS USING THE IDENTITY MODEL