Political Identity and Trust*

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Abstract

We explore how political identity affects the perception about others' trust-worthiness. Using an incentivized experimental survey, we vary information about partners' partisan identity to elicit trust behavior, beliefs about others' trustworthiness, and actual reciprocation. We find that beliefs depend on the partisan identity of the partner and that trust is sensitive to beliefs about in-group partners' trustworthiness only. However, we also find that people believe others are much less trustworthy than they actually prove to be. We then attempt to correct beliefs by disclosing historical trustworthiness. Subjects' beliefs are slightly shifted, suggesting that incorrect stereotypes are hard to change.

Keywords: *Trust, Beliefs, Political Identity*

1 Introduction

Political polarization of the American public has increased, and partisan antagonism is "deeper and more extensive than at any point in the last two decades" (Pew Research Center, 2014b). Since party identification is arguably one of the most stable and influential political predispositions of ordinary citizens, political identity cues activate latent partisan biases in the minds of citizens (Goren, Federico and Kittilson 2009; Mason, 2014). Such biases may ultimately hinder cross-partisan trust, creating sustained political and economic gridlocks (Carlin and Love 2013; Abramowitz 2007, 2010; Abramovitz and Saunders, 2005; Brewer and Pierce 2005).[1]

In this paper, we explore the effect of political identity and objective information on beliefs about others' trustworthiness ("trust beliefs").[2] We focus on trust beliefs because they are a key determinant of trust (Buchan, Croson and Solnick, 2008; Guiso, Sapienza and Zingales, 2008; Dohmen, Falk, Huffman and Sunde, 2012) and because trust is fundamental for economic organization (Arrow 1974; Knack and Keefer 1997; Alesina and La Ferrara 2002). The political identity of a partner may elicit trust beliefs based on stereotypes rather than objective information. Moreover, such beliefs may be hard to change by providing objective information as partisan antagonism reinforces the citizens' tendency to evaluate new information in light of their preexisting views (see, e.g., Taber and Lodge 2006).

In our experiment, we run a simplified version of the standard trust game in Berg,

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[1]Trust is fundamental in many economic environments, for example, the workplace. According to a survey run by Pew Research Center (2014a), managers are more likely to identify with the Republican Party while workers favor the Democrats. About 53% of managers say they are Republican compared to 37% of workers. In contrats, 44% of workers but 34% of managers identify with the Democratic party. Considering this, political polarization may also affect manager-worker trust and productivity.

[2]An interdisciplinary definition of trust comes from Rousseau et al. (1998):

"Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intention or behaviors of others."

In this paper we refer to "trust behavior" as the action of accepting vulnerability in an economic transaction. We label "beliefs about trustworthiness" the expectation about cooperative behavior of others. Finally, we label "trustworthiness" or "reciprocity" the action that honors trust. We use these labels because our set-up allows us to disentangle these three aspects of trust.

Dickhaut, and McCabe (1995) similar to the one used in Charness and Dufwenberg (2006). This simplified version is a two-player game in which Player A (the sender) chooses (\$5,\$5) for himself and the other player, respectively, or defers the decision between (\$10,\$10) and (\$0,\$14) to Player B (the receiver). Efficiency would require Player A to defer the decision to Player B. The subgame perfect equilibrium when players are selfish, however, implies Player B choosing (\$0,\$14). Thus, the potential gains from cooperation are not exploited. This game is labeled "trust game" because Player A choosing to defer the decision to Player B is an indication of her trust in Player B. We used this simplified version because it allowed us to elicit trust beliefs directly.

We conducted two experimental surveys across a sample of the general U.S. population. The first survey ("main treatments") varied the political identity (in terms of partisan identity) of Player A and Player B, but did not provide any other information regarding the identity of the matched partners. We measured a proxy for trust behavior, beliefs about trustworthiness, and actual trustworthiness. The second survey ("beliefs treatments") featured the exact same game as in the main treatments where partisan identity was manipulated, except now Player A also received information about the actual trustworthiness ("reciprocation rate") corresponding to previous Players B. For example, if Player A was a Democrat and Player B a Republican in one of the belief treatments, we disclosed to Player A the reciprocation rate of Republican Players B in the corresponding main treatment.

We address the following questions in this paper: 1) Does trust behavior vary with political identity of a partner? 2) Do trust beliefs depend on the partisan identity of the trustee? 3) Is trust sensitive to beliefs, between and within identity groups? 4) Are trust beliefs statistically correct? And 5) can beliefs be changed by revealing objective information?

In order to answer these questions, we guide our analysis using a simple framework of identity and social preferences along the lines of Chen and Li (2009), which incorporates Akerlof and Kranton's (2000) "prescribed behavior" according to identity.[3] Our data from the main treatments show that Democrats and Republicans

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[3] Williamson (1993) provides a similar view of trust. In his view there are two dimensions to

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trust around 60% of the time. In answering question 1, we do find that the frequency of trust decisions ("trust rates") depends on the partisan identity of Player B. Democrats and Republicans trust other Democrats more often, on average. However, only Democrat Player A types have such different trust levels as to be statistically significant. Beliefs about trustworthiness are significantly more optimistic when matched to an in-group partner, so the answer to question 2 is affirmative. In answering question 3, trust is sensitive to beliefs only when participants have the same political identity.

We also find that trust beliefs are not statistically correct—hence we answer question 4 in the negative. Regardless of partisan identity, participants reciprocate more often than expected. Player B chooses ($10,$10) 80% of the time if entrusted with making the decision while mean trust beliefs are roughly 63%. There are no statistical differences across partisan identity, but Republicans (who are thought to be less trustworthy by both Democrats and Republicans) reciprocate slightly more often than Democrats. One interpretation of this result is that beliefs are unlikely to be based on rational expectations.

Beliefs may be hard to change (see, e.g., Benabou 2013; McCarty, Poole, and Rosenthal 2006; Bordalo et al. forthcoming). Ordinary citizens do not seem to process information objectively, rather they behave as goal-directed information processors in that they assimilate new information according to their preexisting views (Taber and Lodge 2006). Partisanship should exacerbate this tendency (Kunda 1990). In order to test whether objective information has an effect on trust beliefs we use the data from the belief treatments (in which we revealed the relatively high reciprocation rates from the main treatments, before participants decided to trust). In answering question 5, we find that revealing actual reciprocation rates make Democrats more optimistic about a Democrat Player B's trustworthiness and slightly more optimistic about a Republican Player B's trustworthiness. Revealing

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trust: calculative and noncalculative. The former refers to trusting decisions based on calculations of expected monetary costs and benefits, while the latter refers to decisions based on sentiments and affection. Williamson's calculative trust encompasses stereotypes as beliefs that are fundamental in calculating the expected benefits and costs of trust. His noncalculative trust, on the other hand, refers to nonstandard other-regarding concerns.

the relatively high reciprocation rates, however, does not have a positive effect on Republicans' beliefs.

Our paper relates to the large literature on the drivers of trust in general and trust across partisan identity in particular. While providing a thorough account of this literature goes beyond the scope of this paper, it can be useful to sketch a brief note, primarily focused on the drivers of trust behavior. Early experimental studies have provided evidence that a non-negligible proportion of senders do actually decide to defer the decision to receivers, and receivers usually reciprocate (Camerer and Weigelt 1988; Berg et al. 1995; Bolle 1998; Dufwenberg and Gneezy 2000; Ortmann, Fitzgerald, and Boeing 2000). These robust findings have spurred a series of papers analyzing the mechanisms underlying trust behavior. Expectations about return and other-regarding preferences have been found to explain trust behavior to a large extent (Cox 2004; Ashraf, Bohnet, and Piankov 2006; Fehr 2009; Sapienza, Toldra-Simats, and Zingales 2013), and they have been shown to depend on the identity of the matching partners in the trust interaction.[4] Chen and Li (2009) find that individuals favor induced (according to taste and randomly) in-group members in trust games. Their evidence is consistent with individuals being more altruistic towards an in-group match. When it comes to identity based on pre-determined characteristics, Garbarino and Slonim (2009) show that expectations about partners' trustworthiness drive trust in experiments focused on the effect of gender and age on trust behavior. Similarly, Falk, and Zehnder (2013) explore trust decisions conditional on the district of the receiver. They also find that in-group trust is in part driven by positive beliefs about in-group trustworthiness. They also find evidence that senders differentiate their investments depending on the receiver's district (favoring senders

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[4]Other important studies have found that elements of psychological game theory (e.g., Geanako-plos, Pearce, and Stacchetti 1989 and Rabin 1993) also explain trustworthy behavior (see, e.g. Charness and Duwfenberg, 2006). In the same vein, Bohnet and Zeckhauser (2004) introduce the concept of betrayal aversion to explain why individuals are less optimistic about return rates when matched to a human than when matched to a person. Under the assumption that some receivers reciprocate trust, Eckel and Wilson (2004) study whether there is a relationship between risk aversion and trust. The authors conclude there is no relationship unless additional control variables are included; but even in this case, the relationship is weak, at best. A similar conclusion is reached by Houser, Schunk, and Winter (2010).

living in high-income districts). Along the same lines, but instead varying ethnic affiliation to Israeli Jewish society, Ferschtman and Gneezy (2001) find systematic mistrust towards men of Eastern origin to be driven by mistaken stereotypes and not by a preference-driven "taste for discrimination".[5] To our knowledge, there are two papers that experimentally link trust behavior and partisan identity in the U.S. Both papers use a design similar to Berg et al. (1995) and employ undergraduate students as participants. Carlin and Love (2013) find higher transfers among individuals from the same partisan identity. Anderson, Mellor, and Milyo (2005) find that self-described liberals transfer more often than self-described conservatives. These papers focus on trust behavior (amount sent by the trustor) and on reciprocation rates, but do not measure beliefs about trustworthiness. They also use small stakes in their experiments. Another important difference between this paper and the extant literature is that we focus on the determinants of trust beliefs by varying the political identity of the partner and by manipulating information about others' trustworthiness.

In sum, we see our contribution as follows. First, we assess the extent to which belief stereotypes depend on political identity. Second, at least to our knowledge, for the first time we determine the extent to which trust belief stereotypes can be changed by revealing objective information. Third, we obtain our findings through a sample of the general population of individuals living in the U.S. using a relatively well-paid survey experiment.

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[5]Althouhg not part of the main goal of the paper, we explore in the Results section a potential preference channel through which identity could affect trust. It has been argued that sentiments of dislike, anger, and even loathe towards political opponents explain partisan bias (Iyengar et al. 2012; Haidt and Adams 2014; Mason 2014; Iyengar and Westwood 2014). Such sentiments may lead to a taste for discrimination based on identity. In our setting that could be represented as Player A trusting even when his/her trust beliefs are extremely pessimistic (as individuals may be willing to give away money to cater to their prejudice, Becker 1957, 1993). If in-group trust is more prevalent than out-group trust when beliefs are pessimistic, then political identity may also work through a (social) preference channel. Our data, however, suggest this channel may play a minor role explaining variation in trust behavior. When beliefs are pessimistic, neither Democrat nor Republican Player A's trust behavior differs across political identity of Player B.

2 Experimental Design

The main experiment ("main treatments"), described in this section, was designed to examine how trust behavior and beliefs change when we manipulate partners' partisan identity. The secondary experiment ("belief treatments") was run after the main experiment and it is described in section 5. Both of them used the Kellogg School of Management E-lab system, which maintains a pool of 7,045 participants from across the United States. E-lab staff pre-screens individuals in this subject pool through a survey instrument from which partisan identity and other demographic information are collected. We used this information regarding partisan identity to determine who received the experimental survey (the details are provided below). Subjects in this pool are then provided an opportunity to periodically participate in research surveys sponsored by faculty. The main treatments were run in December 2013 and the belief treatments in November 2014.

The questions were asked in order and once participants moved on to the next one, they were not able to go back to the previous question. Individuals did not receive any feedback regarding the results of their and their partner's decisions while they were answering the experimental survey. The procedure involved individual decision making, as in any other survey; the only difference was that they were told that their decision on each question will be matched to the decision of a matched partner to compute payoffs. The exact procedure was as follows.

Each potential participant received an invitation to participate in the experimental survey.[6] Balancing parsimony and the need to identify both trust behavior and beliefs about partners' trustworthiness, the survey consisted of 8 questions: the first 4 were incentivized and the last 4 were not.

From the incentivized questions, the first one was a standard dictator game, where subjects were told to allocate $5 anonymously between themselves and another participant.

The second question corresponded to the sender role in a trust game similar to

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[6]The survey was administered via Qualtrics. A copy of the survey instrument can be found in the appendix.

Player A

No trust   Trust

5, 5
                    Player B

        Reciprocate   Not reciprocate
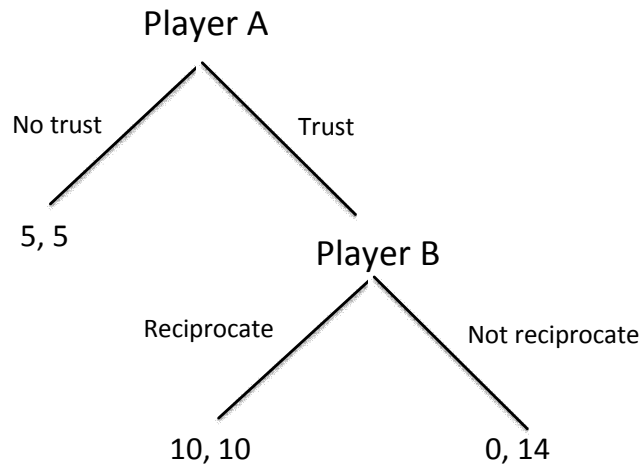
            10, 10   0, 14

Figure 1: Game tree.

that in Charness and Dufwenberg (2006) in Figure 1. Participants had a choice of trusting or not trusting a trustee (Player B), who would then make a final allocation decision. If the sender (Player A) decided not to trust, each participant received $5. If Player A decided to trust Player B, the decision left payoffs as a function of Player B's choice. Our first intervention took place in this second question.[7] We varied the identity of Player B by letting Player A know that the otherwise-anonymous Player B identified him or herself as a Democrat or a Republican.[8] We also ran a baseline treatment where there was no such mention of the political identity of the subject's partner.

The third question asked the participant to make an allocation choice if entrusted with that decision by Player A. The participant, now in the role of Player B, had to decide whether to allocate $10 to each player or to behave opportunistically and take $14 for him or herself and provide $0 for Player A. In this question, we also varied

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[7]We did not mention political affiliation to subjects until after the dictator game decision so as to obtain a measure of the Democrats' and Republicans' unconditional altruism and to avoid cueing on the subsequent trusting decision.

[8]Question Q2 in the Appendix "Survey instrument, treatment conditions: Revealing a partner's political identity."

the identity of Player A to be Democrat or Republican.[9] We also ran a baseline treatment where Player A's political identity was not revealed.

Crucial to our analysis is the fourth question in which we elicited the participant's belief about what proportion of those in the role of Player B (in the previous question) would prove to be trustworthy. A payment of $3 was awarded if the participant predicted the sample's actual trustworthiness rate decile of Player B (i.e., those who would choose the ($10,$10) option when given the role of Player B).[10] As in the previous two questions, we varied the information regarding the identity of those in the role of Player B by whether they identified themselves as Democrat or Republican in the pre-screen survey.[11] Consistent with the other questions, we also ran a no-identity baseline treatment.

Each participant received only one type of survey instrument: that is, we fixed the identity of the partner across questions. For example, when a participant was told in the second question she will be matched with a Democrat Player B, in the third question she was also told she will be matched with a Democrat Player A, and in the fourth question she had to state her beliefs about the proportion of Democrats in the role of Player B who would prove to be trustworthy. We followed the same pattern when the partner was a Republican and when his or her identity was not revealed. In this sense, we used the so-called "strategy method" to elicit behavior: participants made decisions individually, and those decisions were matched across subjects after everyone responded to the survey to compute payoffs (for comparisons between the strategy method and the direct-response method, see Cason and Casari, 2009; Brandts and Charness, 2011).

It is important to note that the outcomes of Player A's and Player B's decisions were paid in full. We decided to pay in full because we believe it made it easier for participants drawn from the general population to understand the procedure. This,

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[9]Question Q3 in the Appendix "Survey instrument, treatment conditions: Revealing a partner's political identity."

[10]When studied in isolation, this belief elicitation procedure is incentive compatible even when subjects are risk averse. See suplementary appendix for details.

[11]Question Q4 in the Appendix "Survey instrument, treatment conditions: Revealing a partner's political identity".

however, may have led to hedging. Although when answering the second question participants did not know about the fourth question, they may have faced incentives to under-report beliefs in order to hedge against Player B's opportunistic behavior if entrusted. In the supplementary appendix we argue that hedging motives are negligible in our setting, which is consistent with Blanco et al.'s (2010, p. 415). To the best of our knowledge, this is the first widely administered and relatively well-paid experimental survey incorporating political identity.

The next four non-incentivized questions presented the Cognitive Reflection Test from Frederick (2005) and asked for political orientation (from very liberal to very conservative), income range, and partisan identity (Republican, Democrat, Independent, or Other). Except for the Cognitive Reflection Test, these demographic questions used the exact same language as in E-lab's pre-screen survey.[12]

We used the partisan identity information from E-lab's pre-screen survey to identify participants. E-lab sent the experimental survey to 250 Democrats and 250 Republicans in total. The baseline treatment survey (no partner identification) was sent to 100 out of the 250 Democrats, the survey type identifying the partner as a Democrat was sent to 100 of the remaining 150 Democrats, and the survey type identifying the partner as Republican was sent to the remaining 50 Democrats. The response rate was 100/100, 100/100, and 47/50, respectively. An analogous procedure was conducted with the 250 identified Republicans with response rates 95/100, 99/100, and 44/50, respectively. In total, we had 485 participants. No subject was allowed to answer more than one incentivized survey. Table 1 shows the treatments.

After the surveys were completed, subjects were randomly matched so that payments could be calculated. The survey payments averaged $20 per participant, and

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[12]We use the information in the last four questions to control for intelligence and check for consistency with the E-lab prescreen survey. We find that subjects' answers to our questions are consistent with those given the E-lab, sometimes many months earlier. In particular, 221 out of 247 Democrats declared they were Democrat in the partisan question in our survey. Of the 26 remaining, 14 declared themselves Republican, 9 Independent, and 3 Other. In the case of Republicans, 182 out of 238 declared they were Republican in our survey. Of the 56 remaining, 39 declared themselves Democrat, 16 Independent and 1 Other. We find evidence, however, that declaring a different partisan identity may be driven by previous behavior and the partisan identity of the partner. We discuss this possibility in the Appendix.

Partner's ideology:	Participant's ideology	
	Democrat (D)	Republican (R)
Not revealed (NR)	D-NR (N=100)	R-NR (N=95)
Democrat (D)	D-D (N=100)	R-D (N=44)
Republican (R)	D-R (N=47)	R-R (N=99)

Table 1: Treatment conditions. Total number of participants: 485.

it took on average less than three minutes to complete the survey. The response rate was 97%, 485 out of 500 individuals. Payments were made via electronic Amazon gift cards within approximately a week of completing the experiment. Subjects were only allowed to participate in one treatment (i.e., only complete one experimental survey).

3   Hypotheses

We describe a simple framework that relates identity to beliefs and trust behavior. Our framework does not aim to provide a full account of all the determinants of trust that have been considered in the literature but rather to make explicit potential channels through which political identity may shape beliefs and behavior.

Player A's trust decision is inherently strategic for it depends on her beliefs about Player B's trustworthiness. These beliefs reflect a perception about the behavior of others, initially acquired through cultural transmission and subsequently updated through experience (Guiso et al., 2008; Butler et al., 2014). Revealing the political identity of Player B provides Player A with a cue to infer the likely behavior of Player B. We assume Player A's beliefs $p = p(I, \boldsymbol{x}) \in [0, 1]$ are a function of the information about Player B's political identity $I = s(ame), \ o(ther)$, and a vector of background characteristics related to belief formation, $\boldsymbol{x} \in \mathbb{R}^N$.

Beliefs are often thought of as priors updated by information coming from biased

sources (e.g., similar people). Individuals choose sources that reinforce their identity, which induce them to hold more optimistic beliefs about in-group members (see, e.g., Taber and Lodge, 2006; Mason 2014; Ortoleva and Snowberg 2015). We should expect therefore that $p(s, \boldsymbol{x}) > p(o, \boldsymbol{x})$ for all $\boldsymbol{x}$. In words:

Hypothesis 1. *Participants believe individuals with the same political identity are more likely to reciprocate trust than individuals with different political identity.*

Is trust sensitive to beliefs about others' trustworthiness? To address this question we guide our analysis using a standard framework to model trust behavior. We assume that Player A benefits from both players' monetary gains (e.g., Charness and Rabin 2002; Fehr and Schmidt 1999) and such benefit depends on whether political identities coincide. That is, Player A's utility is given by

$$u_A = u_A(\pi_A, \pi_B, I), \tag{1}$$

where $I = s, o$ denotes the identity of Player B, and π_A, $\pi_B \in \mathbb{R}$ represent monetary payoffs. $u_A \in \mathbb{R}$ is strictly monotonic in π_A and π_B and captures a "taste for discrimination" towards out-group members if an individual is better-off giving away money to an in-group ($I = s$) rather than an out-group ($I = o$) member. Since we are interested on how identity and information affect beliefs, we work with the simplifying (and perhaps strong) assumption that u_A does not depend on $\boldsymbol{x}$.

According to equation (1), the utility of not trusting is equal to $u_A(5, 5, I)$. We also adopt the standard conceptualization that Player A's decision to trust depends on her expected net benefit (Williamson's 1993 "calculative trust"). The expected utility of trusting is $p(I, \boldsymbol{x})u_A(10, 10, I) + (1 - p(I, \boldsymbol{x}))u_A(0, 14, I)$. Defining $\Delta(I) = u_A(10, 10, I) - u_A(0, 14, I)$ (the net benefit for Player A if Player B reciprocates) and $M(I) = u_A(0, 14, I) - u_A(5, 5, I)$ and assuming that there are other random elements that affect the benefits of trust and not-trust, ε_T and ε_{NT} respectively, Player A trusts if and only if

$$p(I, \boldsymbol{x})\Delta(I) + M(I) \geq \varepsilon_{NT} - \varepsilon_T.$$

Denoting F the cumulative distribution function of $\varepsilon_{NT} - \varepsilon_T$, the probability that

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we observe trust is given by

$$\Pr\{A\ trusts|I, \boldsymbol{x}\} = F(p(I, \boldsymbol{x})\Delta(I) + M(I)). \qquad (2)$$

Equation (2) reveals three channels through which political identity shapes trust in this simple framework.[13] On top of the effect of identity on beliefs, identity also determines how sensitive is trust to beliefs through $\Delta(I)$ and the baseline level of trust through $M(I)$. A positive relation between trust and beliefs has been found in laboratory experiments when identities are not revealed (see e.g., Charness and Dufwenberg 2006; Buchan, Croson and Solnick, 2008; Sapienza, Toldra-Simats and Zingales, 2013). In our setting this means that $\Delta(I) > 0$; Player A is better-off if Player B cooperates regardless of the latter's identity. This leads us to expect that $\Delta(s),\ \Delta(o) > 0$.

Hypothesis 2. *Player A's trust is positively associated to beliefs regardless of Player B's political identity.*

If Players A enjoy cooperation more when it comes from an in-group rather than an out-group Player B, then we should also expect that $\Delta(s) > \Delta(o)$. In other words, Player A's trust decision is more sensitive to beliefs when she shares Player B's political identity. Our next hypothesis is whether $\Delta(s) > \Delta(o)$—the net utility for Player A from a successful transaction is higher if both players have the same political identity.

Hypothesis 3. *Player A's decision to trust is more sensitive to her beliefs about Player B's trustworthiness when both have the same political identity.*

By analyzing trust beliefs and behavior, we attempt to show that political identity carries stereotyped views about others' trustworthiness and that those stereotypes matter for trust. Another important question that motivates our design is whether

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[13]Identity may affect trust through second-order beliefs as well, which are not included in the decision to trust in this model. The literature mainly focuses on the role of second order beliefs on the receiver's decision (see, e.g., Charness and Dewfenberg, 2006). In this case, however, Buttler et al, (2014) show that receiver's own beliefs about what is morally correct have more explanatory power than his second-order beliefs. We do not include second-order beliefs in our design because we focus on sender's behavior, and because we seek to assess the direct effect of political identity on first-order beliefs while keeping the experiment simple enough for a general U.S. subject pool.

Player A's beliefs are statistically correct. We elicit behavior in the role of Player B to compare Player A's beliefs to Player B's actual trustworthiness. Current theories on the defining aspects of political identity (see, e.g., Graham et al. 2009), posit reciprocation as a moral foundation and hence prescribed in-group behavior for Democrats. Likewise, in-group loyalty (a moral foundation by which Republicans abide) should encourage Republicans to reciprocate trust from a fellow Republican more often than trust from a Democrat. While predictions of aggregate trustworthiness may not be accurate, we should at least expect that cooperation by Player B is more likely if Player A has the same political identity.

Hypothesis 4. *The frequency with which Players B reciprocate trust is higher when Players A share their political identity than when Players A do not share their political identity.*

A key goal of this paper is to test whether others' political identity shapes own beliefs. But political identity only provides coarse information, if any, about the potential cooperation of Player B. Our final task is therefore to determine the extent to which beliefs respond to objective information and whether this response depends on players' political identities. Beliefs are largely characterized by self-deception and conformity to group values rather than by the incorporation of objective, sometimes disconfirming, information (see e.g., Bénabou, 2013; Friesen, Campbell, and Kay, 2014).[14] In our setting this means that political polarization may motivate individuals to under-respond to news that disconfirms their beliefs (Taber and Lodge, 2006). For example, a Democrat Player A may fail to update her beliefs about a Republican Player B's trustworthiness when she receives information that disconfirms her pessimistic priors. The same holds when Player A is Republican and Player B is Democrat. This "motivated reasoning" explains in part political polarization, hence it may as well limit belief updating in our setting. Whether individuals respond to information is arguably an important question because one would hope that positive and objective information leads to efficiency gains in transactions that involve trust, specially in polarized societies. Our final hypotheses can be stated as follows:

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[14]This "groupthink" has been argued to be a catalyst of important political and economic disasters in the US and elsewhere (see, e.g., Benabou 2014 p. 432 and the cases described therein).

Hypothesis 5a. *Democrat (Republican) Player A updates her beliefs about Democrat (Republican) Player B's trustworthiness in response to information about high frequency of cooperation by Democrats (Republicans) in previous experiments.*

Hypothesis 5b. *Democrat (Republican) Player A does not update her beliefs about Republican (Democrat) Player B's trustworthiness in response to information about high frequency of cooperation by Republicans (Democrats) in previous experiments.*

We test these hypotheses in the next two sections.

4   Results

Consistent with previous studies (see, e.g., Pew Research Center, 2015), Republicans and Democrats have different demographic characteristics in our sample. Table 2 shows the means of the most relevant ones in our study. Regarding demographics, we observe a greater proportion of individuals who are male, white, born between 1976-1985, conservative (and very conservative), or married with annual earnings between US$ 75k and US$ 150k among Republicans compared with Democrats. We observe no significant differences across partisanship in the proportion of black individuals, those who have at least a college education, those who are currently not working, those who earn between US$ 150k and US$ 250k a year, or those ones who were born before 1975. We also do not observe significant differences in the score of the Cognitive Reflection Test across partisan identity. Pew Research Center (2015) presents demographic breakdowns of party identification by gender, race, marital status, education, employment, family income and cohort (among others) which we use to compare with our sample. Overall, their sample demographics are consistent with ours: their sample also features more individuals that consider themselves or lean towards Republicans who are male, white or married with annual family earnings between US$75k and US$ 150k. One difference is that they document blacks are more often Democrats and those with at least college education are also more often Democrats, whereas we do not find significant differences in those categories in our sample. They also document slightly higher numbers of Republicans among older

	Republicans N=238	Democrats N=247			ttest p-value
	mean	mean	diff.	se	
Amount kept - dictator (range [0,5])	3.72	3.67	0.04	0.10	0.67
Female {0,1}	0.47	0.66	-0.19	0.04	0.00
White {0,1}	0.78	0.69	0.09	0.04	0.03
Black {0,1}	0.06	0.09	-0.03	0.02	0.16
Married {0,1}	0.62	0.43	0.19	0.04	0.00
At least college {0,1}	0.75	0.68	0.06	0.04	0.12
NotWorking {0,1}	0.20	0.25	-0.05	0.04	0.16
Income [75k,150k] {0,1}	0.42	0.24	0.18	0.04	0.00
Income (150k,350k] {0,1}	0.12	0.15	-0.03	0.03	0.37
Income more 350k {0,1}	0.01	0.05	-0.04	0.02	0.02
Year of birth 1931-1950 {0,1}	0.03	0.05	-0.02	0.02	0.20
Year of birth 1951-1965 {0,1}	0.20	0.17	0.03	0.04	0.44
Year of birth 1966-1975 {0,1}	0.24	0.25	-0.01	0.04	0.85
Year of birth 1976-1985 {0,1}	0.33	0.25	0.08	0.04	0.05
Year of birth 1986-1995 {0,1}	0.20	0.28	-0.08	0.04	0.05
Average CRT Score {0,1,2,3}	1.53	1.48	0.05	0.11	0.66
Conservative {0,1}	0.33	0.03	0.30	0.03	0.00
Very Conservative {0,1}	0.11	0.01	0.10	0.02	0.00

Table 2: This table shows the means for the most important demographics in the samples of Democrats and Republicans. It also shows a t-test of the difference in means between Democrats and Republicans for each characteristic. The interval "[0,5]" in the first row, first column shows the range of that variable, and the set {0, 1} indicates that the corresponding variable takes the values of 0 or 1 in the remaining rows. Cognitive Reflection Test (CRT) scores can take values {0, 1, 2, 3}.

cohorts, whereas we do not observe significant differences. It is important to note that although Republicans and Democrats are different in many aspects, they keep almost the same amount in the dictator game (US\$ 3.72 and US\$ 3.67 out of US\$ 5, respectively) and the difference is not statistically significant (t-test p-value = 0.67).[15]

4.1 Beliefs, trust and identity

Table 3 shows trust behavior and beliefs about partners' trustworthiness across the main treatments. Trust and beliefs are relatively high and fairly similar across political identities of Player A. Democrats trust 56% of the time and believe Player B will reciprocate 62% of the time. The same figures for Republicans are 60% and 63%, respectively (see column "Overall" in Table 3). The differences in trust rates are not

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[15]Note that average giving accounts for 26% of the endowment. This is remarkably similar to previous laboratory experiments that use student subjects. For example, both Forsythe et al. (1994) and Bonet and Frey (1999) document 25% average giving, Cason and Mui report 30% (1.5 out of 5) average giving, and Andreoni and Miller (2002) report 23% (when relative prices are 1).

statistically significant (chi-squared p-value = 0.4). The differences in beliefs are also not statistically different across partisan identities of Player A (Kolmogorov-Smirnov test for equality of distribution p-value = 1.0).[16]

When we analyze Player A's behavior according to the partisan identity of Player B in Table 3, Democrats trust Democrats more often than they do Republicans: 63% of the time, compared with 40% of the time (chi-squared p-value < 0.01). Relative to an anonymous Player B, Democrats trust other Democrats more (63% versus 57%, chi-squared p-value = 0.4) and trust a Republican Player B less (40% versus 57%, chi-squared p-value = 0.05), although only the latter difference is statistically significant at conventional levels. Regarding beliefs, a Democrat Player A believes a Democrat Player B is more trustworthy on average: the mean expected frequency of reciprocal behavior is 67% when Player B is a Democrat compared with 52% when Player B is Republican. We reject equality of distribution across identity of Player B: the sum of ranks of beliefs of Democrat Players A matched to Democrat Player B are higher than 99% of the ranks under the null of equality of distribution. In other words, the one-sided rank-sum test p-value < 0.01. When compared with an anonymous Player B, the mean belief about Player B's trustworthiness is 62%. The difference between the distributions of beliefs about a Democrat and an anonymous Player B is not statistically significant at conventional levels (one-sided rank-sum test p-value = 0.11), but this difference is significant when we compare a Republican and an anonymous Player B (two-sided rank-sum test p-value = 0.05).[17]

Perhaps surprisingly, Republicans trust a Democrat Player B more often (66% of the time) than a Republican Player B (58% of the time), although the difference is not statistically significant at conventional levels (chi-squared p-value = 0.3). Nor are there any statistical differences in trust for Republicans across other pair-wise comparisons.

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[16]Trust rates when matched to an anonymous are 57% when pooling Democrat and Republican Players A. This is consistent with previous student-subject experiments featuring similar binary trust decisions. For example, Charness and Dufwenberg (2006) report trust rates of 56%, Cason and Casari (2009) 63.5%, and Eckel and Wilson (2002) report 52.8% (Game 2).

[17]In this last test, we use a two-sided test because we have no prior as to whether Democrats should be more optimistic about the trustworthiness of a Republican than of an anonymous Player B.

17

Democrat's partner identity is...	Not revealed	Democrat	Republican	Overall
Fraction of Trust	0.57	0.63	0.4	0.56
# of Players A who Trust/Total	57/100	63/100	19/47	139/247
Mean beliefs about trustworthiness	0.62	0.67	0.52	0.62
s.d.	(0.22)	(0.21)	(0.28)	(0.24)
Republican's partner identity is...	Not revealed	Democrat	Republican	Overall
Trust	0.58	0.66	0.58	0.59
# of Players A who Trust/Total	55/95	29/44	57/99	141/238
Mean beliefs about trustworthiness	0.64	0.63	0.62	0.63
s.d.	(0.21)	(0.21)	(0.23)	(0.22)

Table 3: This table shows the fraction of Democrats and Republicans Player A who trust and their mean beliefs about about Player B's trustworthiness. The columns "Not revealed," "Democrat," and "Republican" refer to the treatments in which Player B (receiver) is of each one of those categories. The last column, "Overall," shows the trust rates and mean beliefs for each subpopulation of Democrat and Republican Player A (sender).

In sum, we find that political identity has an effect only for Democrat Players A. They believe that other Democrats are more trustworthy, and they act consistently with this belief by more often trusting fellow Democrats. Note that the significant differences in mean beliefs provides a first test of Hypothesis 1, which is borne out by the data only for Democrats.

To check whether this effect remains after controlling for demographic characteristics we estimate an empirical model of beliefs. Specifically, for each type of Player A separately we estimate variants of the empirical model

$$p_i = \gamma_0 + \gamma_s I_s^i + \Theta \prime X_i + \xi_i, \tag{3}$$

where the subscript i indexes a Player A, p_i represents the beliefs about Player B's trustworthiness, I_s^i denotes whether the political identity of Player B is the same (s) as that of Player A (the baseline corresponds to different political identity of Player B). X_i denotes controls, which serve as proxies for prior beliefs outside political identity of Player B (shaped by, say, cultural background) and ξ_i the error term. We

	Democrat Player A (Sender)		Republican Player A (Sender)	
Dependent variable:				
Beliefs	(1)	(2)	(3)	(4)
Same identity (Is)	0.15***	0.13***	0.00	-0.03
	(0.04)	(0.04)	(0.04)	(0.04)
_cons	0.52***	0.60***	0.63***	0.58***
	(0.03)	(0.09)	(0.03)	(0.15)
DEMOGRAPHIC CONTROLS	NO	YES	NO	YES
N	147	147	143	143
R-sq	0.08	0.37	0.00	0.16

Table 4: This table shows a linear model in which the dependent variable is the beliefs a given Player A (sender) holds about Players B's trustworthiness. The treatment variable variables consist of an indicator variable on whether Player B (receiver) is from the same, I_s partisan identity. Columns (1)-(2) show the results for Democrat Player A, and columns (3)-(4) the results for Republican Player A. *** represents p-value is less than 1%.

estimate a linear model first without controls, which replicates the results in Table 3. Then we include demographic controls.[18]

Table 4 columns (1)-(2) present the results for Democrat Players A, and columns (3)-(4) the results for Republican Players A. The first row shows the coefficient on the political identity indicator. Partisan identity affects beliefs for Democrat Players A, regardless of the controls. Democrat Players A believe a Democrat Player B is on average 13—15% more likely to reciprocate trust than a Republican Player B. Average beliefs go from 52% (60%) when Player B is Republican to 67% (73%) when Player B is Democrat in the specification without (with demographic) controls.

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[18]We include disaggregated versions of variables in Table 2, Gender, Marital Status (married, partnership, other), At Least College Education, Employment Status (full-time, part-time, unemployed, out of the labor force), and Political Orientation (very liberal or liberal, conservative, very conservative, don't know), and an indicator as to whether the participant is enrolled in full-time school. The results from this less parsimonious specification have to be interpreted with caution as the 24 explanatory variables significantly reduce degrees of freedom. The results are robust to probit and logit specifications.

For Republican Players A political identity of Player B does not significantly affect beliefs. These results remain qualitatively the same when we restrict the sample to Liberal or Very Liberal Democrats ($\widehat{\gamma}_s = 0.17$ s.e. $= 0.05$) and to Conservative or Very Conservative Republicans ($\widehat{\gamma}_s = 0.03$ s.e. $= 0.05$). Overall, the results summarized in Tables 3 and 4 are consistent with Hypothesis 1 only for Democrats.

Our data also allow us to include controls that are perhaps more closely related to belief formation. According to a growing literature in economics (e.g., Ortoleva and Snowberg, 2015; Guiso et al. 2008), behavior of similar people may affect own beliefs about overall trustworthiness in the population. We use trustworthiness of similar individuals (same cohort, race and income) from the corresponding treatment in which identities are not revealed (the "Not Revealed" treatments, see Table 1 for the classification) as a control. We compute this variable from the "Not-revealed" treatments (D-NR when Player A is Democrat and R-NR when Player A is Republican) in order to obtain an exogenous regressor associated to beliefs once political identity of Player B is accounted for (through I_s^i). The identity coefficients are roughly the same in magnitude and significance than the ones in Table 4: Democrat Player A $\widehat{\gamma}_s = 0.16$ s.e. $= 0.04$ and Republican Player A $\widehat{\gamma}_s = 0.00$ s.e. $= 0.04$.[19] The results are qualitatively the same when we use average beliefs of similar people from the corresponding "Not-revealed" treatment instead of trustworthiness of similar people (Democrat Player A $\widehat{\gamma}_s = 0.13$ s.e. $= 0.04$ and Republican Player A $\widehat{\gamma}_s = -0.01$ s.e. $= 0.04$). It is worth noting that the coefficient on average trustworthiness of similar people is positive and significant at conventional levels only for Democrats.

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[19]The inclusion of trustworthiness of similar people is motivated by evidence suggesting that individuals usually choose to get information from biased media outlets or from people similar to them. Exposure to behavior of people with, say, similar age, income or race shapes beliefs that may persist over time. When people fail to fully recognize that information about such cooperation comes from biased sources (what Snowberg and Ortoleva 2015, and other scholars call "correlational neglect"), beliefs may vary across groups defined by those variables. We exploit this variation by including in the regression the average trustworthiness by cohort, race and income from the corresponding "Not-revealed" treatment. We use these variables in our segmentation because they have been considered in the recent literature on the behavioral basis for ideology: cohort (e.g., Snowberg and Ortoleva 2015), race (as a proxy for ethnicity see e.g., Bisin et al. 2008) and household income (e.g., Gelman 2009) and because using more variables would create categories without observations.

The coefficient on beliefs of similar people, however, is not significantly different from zero across identities of Players A.[20]

Is trust sensitive to beliefs? Although the literature documents that beliefs are associated with trust when identity is not revealed, political identity may generate nuanced results. Sentiments of dislike or loathe towards out-group members may completely determine the decision to trust, regardless of whether beliefs about trustworthiness are optimistic or not. To analyze the correlation between trust and beliefs, we estimate the decision to trust according to equation (2) for each different pair of identities separately. That is, using the notation above, we estimate four specifications of

$$Trust_i = \mu_I + \delta_I p_i + \varepsilon_i, \tag{4}$$

one for each type of Player A matched to each type of Player B (i.e., $I = s, o$). We opted for this parsimonious model because it directly represents equation (2) and because the number of observations in the D-R and R-D treatments (N=47 and N=44, respectively) precludes us from using several controls.[21] A test for Hypothesis 2 is whether the estimates of δ_s and δ_o (proxies for $\Delta(s)$ and $\Delta(o)$ respectively, in equation 2) are positive. Similarly, a test for Hypothesis 3 is whether the estimate of δ_s is greater than the estimate of δ_o for each type of Player A.

Table 5 presents the results. The first two columns show the coefficients for

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[20]Another way of incorporating behavior and beliefs of similar people is to use the projected trustworthiness from the "Not-revealed" treatments on all the demographics in Table 2. The results are qualitatively the same as those described in the text. Also, the coefficients associated to any one of these projections are not significantly different from zero.

[21]It is worth noting that even though here we estimate this equation separately for each treatment, one could have also estimated a simultaneous equation model in which trust and beliefs are part of the same system of equations. In such an empirical model, one would estimate a different equation for each type of Player A hence pooling observations on the two treatments in which Player B has the same and different political identity of Player A. This approach would require finding exogenous shifters of beliefs (to identify the parameters in the trust equation) and of trust (to identify the parameters in the belief equation) since both trust and beliefs depend on whether the identity of Player B matches that of Player A. We opted for the parsimonious model explained in the text because the many aspects that remain unknown about the decision to trust, let alone beliefs, prevent us from providing an instrument that convincingly satisfies the exclusion restriction for each equation.

	Democrat Player A (Sender)		Republican Player A (Sender)	
Player B (Receiver):	Democrat	Republican	Democrat	Republican
	(1)	(2)	(3)	(4)
	Trust	Trust	Trust	Trust
Beleifs (p)	0.85***	0.3	0.08	0.49**
	(0.22)	(0.26)	(0.35)	(0.21)
_cons	0.06	0.25	0.61**	0.27*
	(0.15)	(0.15)	(0.23)	(0.14)
N	100	47	44	99
R-sq	0.14	0.03	0.00	0.05

Table 5: All the results in this tablecome from the linear probability model. The dependent variable is whether Player A (sender) trusts Player B (receiver). The explanatory variables are Player A's beliefs about Player B's trustworthiness and the constant. Standard errors in parentheses.* represents p-value is less than 10%, ** represents p-value is less than 5%, *** represents p-value is less than 1%.

Democrat Players A and the last two for Republican Players A. Column (1) shows the coefficient on beliefs and the constant when Player B is also Democrat. Beliefs are positively and significantly correlated with trust. When Player B is Republican (column 2), beliefs are not significantly correlated with trust. We also run the same specification over the sample of Democrat Players A that were not informed about the political identity of Player B. Beliefs have a positive, though marginally significant relationship with trust (point estimate 0.37, s.e. 0.22) in that case.

A similar relation towards in-group members can be inferred for Republican Players A. When matched to a Republican Player B (column 4), beliefs and trust are positively and significantly correlated (although the point estimate is smaller than the estimate between Democrats). Trust and beliefs are not correlated when Player B is a Democrat (column 3). When we run the regression over Republican Players A that were not informed about the political identity of Player B, the point estimate is not significantly different from zero. These results are robust to including unconditional giving (as a proxy for a tendency to cooperate regardless of identity) in the regressions. In estimations not reported here, we also control for cohort, race and income. Results also remain qualitatively the same. This supports Hypothesis

2 only when players' political identities coincide.

The results in Table 5 also suggest that the correlation between Player A's trust and beliefs is higher when Player B has the same political identity. In order to provide a statistical comparison of coefficients across regressions, we stack specifications (1), (2), (3) and (4) together in a seemingly unrelated regression model (which assumes the error terms ε_i are correlated across individuals and across treatments) and test for equality of the coefficients on beliefs. This exercise yields a significant difference between the coefficients on beliefs across types of Player B for Democrat Players A (one-sided standard normal test p-value = 0.03). This difference is not significant, however, when Player A is Republican (one-sided standard normal test p-value = 0.14).

Consistent with Hypothesis 3, all these results suggest that beliefs matter for the decision to trust only when matched with a co-partisan, but the relationship is stronger for Democrats. Recall, that δ_I represents $\Delta(I)$, which is a measure of the net benefit for Player A if Player B happens to reciprocate trust. One interpretation of these results therefore is that both Democrats and Republicans benefit more when a co-partisan honors trust, but such benefit seems to be larger for Democrat than for Republican Players A.

The estimates of the constant coefficient (μ_I) in Table 5 also provide information about the baseline trust, $M(I)$, for different treatments. Although not part of the main hypotheses in this paper, it is instructive to check for differences in the constant across regressions (1) and (2) and across regressions (3) and (4). Also using the aforementioned seemingly unrelated regression model, we fail to reject the hypothesis of equality of the constant for Democrats (one-sided standard normal test p-value is 0.16) and marginally reject equality for Republicans (one-sided standard normal test p-value is 0.1). It is worth noting, as Kranton et al. (2013) suggest, that if there is any effect of political identity on preferences favoring in-group members it may be concentrated in those with strong party identification. Using the political orientation information in the pre-screen survey, we classify members as strongly Democrats (Liberal or Very Liberal Democrats) and strongly Republicans (Conservative or Very Conservative Republicans). When repeating the same procedure but now over this

subsample, the qualitative results remain the same. Another test would be to compare the frequency of trust when beliefs are pessimistic. If there is a baseline level of trust favoring in-group partners, then this effect should be present even when $p = 0$. From equation (2), $p = 0$ implies that trust is determined by its baseline trust $M(I)$. Unfortunately, there are very few extremely pessimistic individuals (four participants in the D-D and D-R conditions and one in the R-D and R-R conditions stated beliefs between 0-9%). We compare therefore the frequency counts Democrat Players A trust Democrat Players B and the frequency counts they trust Republican Players B, when Players A beliefs are relatively pessimistic: 1) 0-19%, 2) 0-29%, and 3) 0-39%. In each of these three cases we compute the Pearson's chi-squared for the hypothesis that Player A's trust and Player B's identity are independent of each other. We fail to reject independence in each of these three cases and the p-values are: 1) 0.49, 2) 0.24, and 3) 0.61. We repeat the exercise for Republican Players A. The corresponding p-values are: 1) 0.51, 2) 0.33, and 3) 0.07. That is, we reject independence of Player A's baseline trust and Player B's identity at 10% level only when beliefs are in the 0-39% range. The significance goes away when we restrict the sample to strongly Republican Players A (from 28 to 15 participants, p-value = 0.14). All the other results presented in this paragraph are robust to restricting the sample to strongly Democrat and strongly Republican Players A.

In sum, only Democrats believe others with the same political identity are more likely to reciprocate trust. Beliefs are positively correlated with trust only when Player B shares the political identity of Player A, otherwise, they are not correlated. Although a positive correlation between trust and beliefs has been documented (e.g., Butler, 2015), the finding that such correlation is significant only when players share the same political identity is a novel result. Finally, baseline trust does not seem to respond to the identity of Player B.

4.2 Beliefs and actual trustworthiness

We now proceed to test Hypothesis 4. Table 6 shows that beliefs about Player B's trustworthiness are not statistically correct—they are more pessimistic. Overall,

Democrat Player A			
Player B identity is...	Democrat	Republican	Overall
Mean Player A's beliefs about Player B's trustworthiness	0.67	0.52	0.62
s.d.	(0.21)	(0.28)	(0.24)
Player B's actual trustworthiness	0.85	0.93	0.8
# of participants / Total	85/100	41/44	389/485
Republican Player A			
Player B identity is...	Democrat	Republican	Overall
Mean Player A's beliefs about Player B's trustworthiness	0.63	0.62	0.63
s.d.	(0.21)	(0.23)	(0.22)
Player B's actual trustworthiness	0.81	0.87	0.8
# of participants / Total	38/47	86/99	389/485

Table 6: This table shows the average beliefs about Player B's trustworthiness and the actual rate of Player B's reciprocation. The "Anonymous" column corresponds to the treatment in which neither player's indentiy is revealed. The "Democrat" ("Republican") column shows the beliefs Player A holds about a Democrat (Republican) Player B's trustworthiness and the actual fraction of Players B who chose to reciprocate, [10,10]. The "Overall" column shows the average beliefs for all Democrats and Republican Players A and the rate of reciprocation overall in the sample.

Democrat Players A believe on average that 62% of Players B will reciprocate, but 80% end up doing so. Not all, of course, are excessively pessimistic: 53 out of 247 Democrat Players A state that at least 80% of Players B will reciprocate. Similarly, Republican Players A believe on average that 63% of Players B will cooperate. Sixty out of 238 Republican Players A state that at least 80% of Players B will reciprocate.

These differences are more pronounced when we separate them by the partisan identity of Player B. Republican Players B reciprocate trust to a Democrat Player A 93% of the time, which is notably higher than the mean belief a Democrat Player A holds about a Republican Player B: 52%. Only 8% (4 out of 47) of Democrat Players A were correct in their guesses: these 4 Democrats believed at least 90% of Republican Players B would reciprocate trust. The difference is less pronounced when Player B is Democrat and Player A is Republican: mean beliefs are 63% and the actual reciprocation rate is 81%. Twenty-five percent (11 out of 44) of Republican Players A believed at least 80% of Democrat Players B would reciprocate trust.

As we saw in the previous section, Player B's partisan identity has a significant effect on beliefs (see Table 4 only for Democrat Players A. In this case, the actual reciprocation rate by Democrats is 85% (85 out of 100) compared with 93% (41 out of 44) by Republican Players B. Although this difference is not statistically significant (chi-squared p-value = 0.17), if anything, it points in the other direction: Republicans are more trustworthy than Democrats, when matched with a Democrat Player A. In contrast, Republicans do not show a statistically different perception about Player B's trustworthiness across partisan identity (mean beliefs are 63% when matched with a Democrat Player B versus 62% when matched with a Republican Player B), and there is also no significant differences in terms of actual behavior: 81% versus 87%, chi-squared p-value =0.34. Although not statistically significant, Republican Players B tend to reciprocate more often than Democrat Players B when matched with a Republican Player A.

Overall, Player A's beliefs about Player B's trustworthiness are lower than actual reciprocation rates. For Democrat Players A, beliefs turn out to be incorrect, which does not support Hypothesis 4. For Republican Players A, there is no statistical difference in Player B reciprocation rates between Democrats and Republicans, which is consistent with Republican Player A's beliefs. Taken together, these results do not support Hypothesis 4.

Although the main task of this paper is to study sender's beliefs and behavior, our data can still be used to briefly investigate receiver's behavior. For example, Hypothesis 4 assumes that a Player B prefers a higher monetary outcome for Player A when both share the same political identity. For Democrat Players B the frequency counts of reciprocation are not statistically different across political identity of Player A (Pearson's chi-squared for the hypothesis that trust and identity are independent of each other p-value = 0.53; one-sided t-test p-value = 0.26). For Republican Players B, the p-values are 0.27 and 0.86, respectively. Preferences favoring in-group members therefore do not seem to affect trustworthiness.[22]

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[22]In addition to preferences, a now important literature focusing on the behavior of the receiver has documented that Player B's cooperation depends on his own beliefs (a prominent paper is Charness and Dufwenberg 2006 in which reciprocation depends on own beliefs about Player A's beliefs about Player B's trustworthiness). More recently, this body of work has also explored a

Our results show Players A's beliefs depend on the pair of political identities and they are overall pessimistic. Moreover, even though both Democrats and Republican believe Democrats are more trustworthy, our data shows that they are also wrong in that dimension and if anything, Republicans reciprocate slightly more often. If we assume this result hinges upon beliefs formed from biased information then one should expect beliefs about the behavior of others should get closer to actual behavior when objective information is revealed. In the next section we report the effect of revealing actual reciprocation on beliefs.

5 Manipulating beliefs

We explore whether pessimistic and incorrect beliefs can be manipulated. We run four additional experimental surveys in which we reveal the frequency of reciprocation by Players B from the main treatments. No other change is introduced to the format or content of the survey relative to the survey in the main treatments.[23] The four experimental surveys in this "beliefs treatment" were sent to a total of 200

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relationship between own beliefs about others' trustworthiness and own trustworthiness. Such a relationship has been explained by a tendency to form beliefs about trustworthiness by asking how one would behave in similar circumstances (the so-called "false consensus" effect, see Butler et al., 2015; Blanco et al., 2014). Our data from treatments D-NR, D-D, R-NR, and R-R can be used to explore the extent to which beliefs about trustworthiness are correlated with own trustworthiness. Using a one-sided Wilcoxon rank-sum test of the null hypothesis that the distribution of beliefs is the same for those who reciprocate and for those who do not, against the alternative that those who reciprocate tend to exhibit more optimistic beliefs. We reject the null for Democrat Players B matched to an unknown Player A (D-NR treatment, p-value < 0.01), for Democrat Players B matched to a Democrat Player A (D-D treatment, p-value < 0.01), for Republican Players B matched to an unknown Player A (R-NR treatment, p-value = 0.03), and for Republican Players B matched to a Republican Player A (R-R treatment, p-value = 0.05). Similar, although weaker, results are obtained when running a regression within treatment of trustworthiness on beliefs. Investigating these results further goes beyond the scope of this paper, yet they emphasize the importance of beliefs not only for trust decisions but also for trustworthiness.

[23]The only variation in Q3 with respect to the main treatments is the information about reciprocation rates. The question reads as follows: "You will receive a payment based on your decision in the following scenario: You will be matched to another survey participant who considered him or herself to be a [DEMOCRAT/REPUBLICAN]. You need to decide between the following two options: 1) You and the other participant each receive $5 OR You let the other participant choose. He/she will decide between one of two options: i) You receive $0 and he/she receives $14 or ii) Each of you receives $10.

participants: 100 Democrats and 100 Republicans. Out of the 100 Democrats, 50 received the survey that revealed the identity of the matching partner to be Democrat and the proportion of Democrat Players B who reciprocated trust in the main treatments to be 85%. The remaining 50 Democrats received the survey that stated the partner was a Republican and Republican Players B reciprocated 91% of the time in past surveys. Similarly, each of the 50 (out of 100) Republicans who received the experimental survey was matched to a Democrat and was informed Democrats reciprocated trust 79% of the time when they were matched with a Republican Player A. Each of the 50 remaining Republicans was matched to a Republican and was informed that Republicans reciprocated trust 88% of the time when matched with another Republican.

The response rate was 46/50 for a Democrat Player A matched with a Democrat Player B, 48/50 for a Democrat Player A matched with a Republican Player B, 47/50 for a Republican Player A matched with a Democrat Player B, and 50/50 for a Republican Player A matched with a Republican Player B.

5.1 Effect of revealing previous reciprocation rates on beliefs about trustworthiness

Does revealing actual reciprocation frequencies change beliefs? Figure 2 shows the distribution of beliefs declared by Democrats for the baseline condition in which no information about actual reciprocation rates is revealed and the treatment condition in which participants are informed about this. Panel 1 shows the distribution of beliefs by Democrat Players A facing a Democrat Player B. The red line represents the revealed reciprocation rate from the corresponding treatment in the previously run main treatments. Many participants, 46% (21 out of 46), reported that Democrat Players B reciprocate trust at the same rate as that previously revealed (85%). In addition, the declared beliefs in this beliefs treatment are statistically larger than

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In previous surveys, when the other Democrat participant was designated to choose, he/she chose alternative ii) "Each of you receives $10" X% of the time. Please enter your decision:

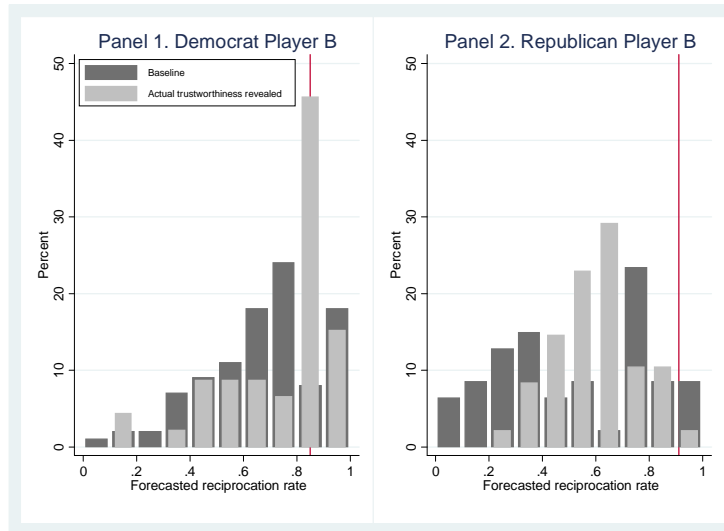■   I choose option 1) (1)
■   I choose option 2) (2)"

Figure 2: This figure shows the empirical distribution of beliefs declared in the main treatments (dark gray) and the beliefs treatments (light gray) when Player A is Democrat and Player B is Democrat (Panel 1) and Republican (Panel 2). In both figures, we reject the hypothesis that the baseline (main treatments) contains more optimistic beliefs than the beliefs treatment (Kolomogorv-Smirnov test p-value < 0.01 in each case). The red line represents the revealed reciprocation rate from the corresponding treatment in the previously run main treatments.

the corresponding beliefs in the main treatments (one-sided Wilcoxon rank-sum test p-value = 0.01). Panel 2 shows the distribution of beliefs by Democrat Players A facing a Republican Player B. Although we marginally reject equality of distributions in favor of the alternative that beliefs are larger in the belief treatment (one-sided Wilcoxon rank-sum test p-value = 0.09), Democrat Players A seldom declare the rate of cooperation by Republican Players B to coincide with the one revealed (91%). In other words, it seems Democrats become more optimistic about Republicans' cooperation rate, but their beliefs are still pessimistic.

Figure 3 shows the distribution of beliefs reported by Republicans for the baseline condition in which no information about actual reciprocation is revealed and the treatment condition in which participants are informed about the actual rates. Panel 1 shows the distribution of beliefs by Republican Player A facing a Democrat Player B. The red line represents the revealed reciprocation rate from the corresponding
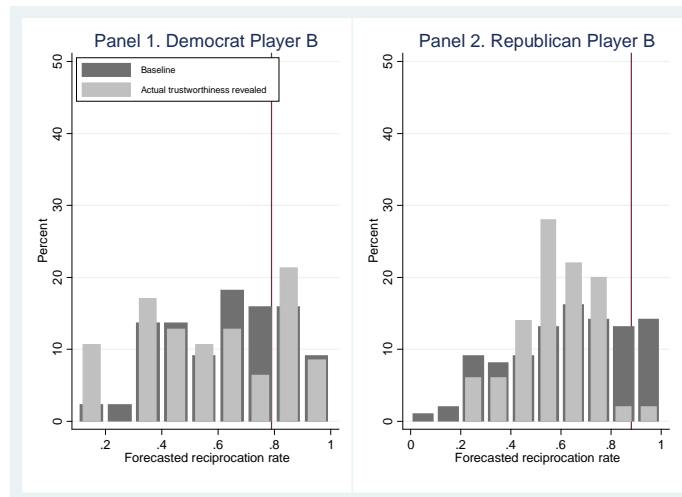
Figure 3: This figure shows the empirical distribution of beliefs declared in the main treatments (dark gray) and the beliefs treatments (light gray) when Player A is Republican and Player B is Democrat (Panel 1) and Republican (Panel 2). In Panel 1, the distributions are not statiscally different (Kolmogorov-Smirnov test for equality of distributions = 0.96). In Panel 2, the beliefs are more skewed in the belief treatment compared with the main treatment; and if anything, Players A become more pessimistic about a Republican Player B's reciprocation rate (Kolmogorov-Smirnov test p-value < 0.05). The red line represents the revealed reciprocation rate from the corresponding treatment in the previously run main treatments.

treatment in the previously run main treatments. At conventional levels, we fail to reject equality against larger beliefs after revelation (one-sided Wilcoxon rank-sum test p-value = 0.93). Panel 2 shows the distribution of beliefs by a Republican Player A facing a Republican Player B. We fail to reject the null of equality against larger beliefs in the belief treatment (one-sided Wilcoxon rank-sum test p-value = 0.77).

These results remain qualitatively the same when controlling for demographics. Table 7 shows the results of a simple regression model of beliefs on a dummy variable that takes the value of 1 for the belief treatment and 0 for the corresponding treatment in which beliefs are not revealed, with and without demographic controls from Table 2. Columns (1)-(4) show the results for Democrat Players A and columns (5)-(8) for Republican Players A. Without controls (columns 1 and 3), the coefficient on the belief treatment dummy is weakly positive, but increases its magnitude and be-

	Democrat Player A (Sender)				Republican Player A (Sender)			
	Democrat Player B (Receiver)		Republican Player B (Receiver)		Democrat Player B (Receiver)		Republican Player B (Receiver)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Beliefs	Beliefs	Beliefs	Beliefs	Beliefs	Beliefs	Beliefs	Beliefs
Dummy Belief Treatment	0.07*	0.11**	0.08*	0.19**	-0.04	0.02	-0.04	-0.18***
	(0.04)	(0.04)	(0.05)	(0.08)	(0.05)	(0.06)	(0.04)	(0.06)
_cons	0.67***	0.53***	0.52***	0.73***	0.63***	0.42*	0.62***	0.47***
	(0.02)	(0.11)	(0.03)	(0.16)	(0.03)	(0.24)	(0.02)	(0.16)
DEMOGRAPHIC CONTROLS	NO	YES	NO	YES	NO	YES	NO	YES
N	146	146	95	95	149	149	91	91
R-sq	0.02	0.31	0.03	0.24	0.01	0.18	0.01	0.18

Table 7: This table shows a linear model in which the dependent variable is the belief a given Player A (sender) holds about Players B's trustworthiness. The treatment variable variable is an indicator variable that takes on value of 1 if the observation belongs to the beliefs treatment and 0 if it belongs to the corresponding treatment where beliefs were not revealed. Columns (1)-(2) show the results for Democrat Player A matched to a Democrat Player B, columns (3)-(4) the results for Democrat Player A matched to a Republican Player B, columns (5)-(6) the results for Republican Player A matched to a Democrat Player B, and columns (7)-(8) the results for Republican Player A matched to a Republican Player B. *** represents p-value is less than 1%.

comes slightly stronger when adding controls (columns 2 and 4)—for both Democrat and Republican Players B.

A more nuanced result appears when looking at Republican Players A (columns (5)-(8)). Consistent with the result in Figure 3 panel 1, there is no significant effect of revealing reciprocation rates when Player B is Democrat (with and without controls, columns (5) and (6)). This is also the case when Player B is Republican without controls (column (7)). When including demographic controls, however, the coefficient on the treatment dummy is negative and significant. That is, when Republican Players A in our sample receive news that Republican Players B reciprocate quite frequently, they become on average more pessimistic about their counterpart's trustworthiness. No other coefficient is significant except for the constant in the results in column (8).[24] This result is not driven by some Republicans in the pre-screen survey

[24]The point estimates of each control are not shown. This result should be interpreted carefully,

changing their political identification, and now, as Democrats believing Republicans seldom reciprocate. We find that 78% remains Republican in the corresponding main treatment and 92% in the belief treatment. Participants' political orientation may hint a reason behind this odd result. The literature on motivated scepticism in political science (see, e.g., Taber and Lodge, 2006) posits that it may be the case that conservatives are proner to evaluate new objective information in light of their own traditional views than liberals, which in this context means to not respond to new information. And if this information disconfirms deeply rooted beliefs, it may lead people to react in opposition to what the new information would prescribe (e.g., Bénabou, 2013). When we focus only on Conservative or Very Conservative Republicans (strongly Republicans), average beliefs go down from 65% in the main treatment to 58% in the beliefs treatment in the R-R case (one-sided t-test p-value = 0.04) and they go down from 62% to 55% in the D-R case, although not significantly so (one-sided t-test p-value = 0.11). In contrast, Liberal or Very Liberal (strongly) Democrats seem to respond positively to the new information regardless of whether Player B has the same political identity. That is, in D-D treatments average beliefs go from 67% in the main treatment to 70% in the belief treatment (one-sided t-test p-value = 0.29); and in D-R treatments average beliefs go from 50% in the main treatment to 60% in the belief treatment (one-sided t-test p-value = 0.03).[25] At any rate, revealing relatively high cooperation rates does not have a positive effect on Republicans' beliefs.

Overall, we conclude that revealing high previous cooperation rates has a positive effect on Democrat Players A beliefs about Democrat Players B trustworthiness, which is consistent with Hypothesis 5a. We also find some evidence that Democrat Players A slightly update beliefs about Republican Players B, which is not consistent with Hypothesis 5b. When Player A is Republican, on the other hand, revealing relatively high cooperation rates has no positive effect on beliefs about Republican Players B trustworthiness, which is not consistent with hypothesis 5a. The null reaction to information when Player B is Democrat, however, is consistent with

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however, as there are relatively few observations compared to the number of controls, 24.

[25]We find also a similar effect when looking at trust behavior in the appendix.

Hypothesis 5b. One conjecture from this exercise is that manipulating incorrect beliefs by revealing actual behavior is not as straightforward. Thus, beliefs about reciprocity across partisanship may not be malleable.

5.2 Conclusion

Political polarization is an important phenomenon that motivates many recent popular and academic articles in economics and has yielded to surprising political results (see, e.g., Fisman, Jakiela, and Kariv 2014). The emergence of polarization is often explained as being driven by those with different political identities having dislike or even hatred for one other. We, however, offer another possibility: people have different beliefs about how trustworthy people of different ideologies are.

To explore what could drive different beliefs, we explicitly studied the relationship between political ideology and trust among a sample of the US population. In particular, we had paired subjects play a simple trust game with either the same or opposite political identity partner. We found that there are partisan identity-based differences in trust and, importantly, on trust beliefs. Whereas Republicans do not exhibit different beliefs between partners of different partisan identities, Democrats believe partners of their own partisan identity are more trustworthy than Republicans. We also found that although there was no difference in trustworthiness as a function of partisan identity, overall, individuals held beliefs that were much more pessimistic than actual trustworthiness, regardless of the partisan identity of both the trustee and trustor.

It is encouraging that polarization is more likely driven by incorrect beliefs than distaste for others. However, these incorrect beliefs are apparently not easy to change; we were only able to modestly nudge beliefs towards reality. We leave this challenge to future research: discovering the most effective means by which to correct welfare-destroying beliefs. Both theory-building and empirical analysis on this issue should prove helpful.

We also note that we only explored the two primary political ideologies in the United States. It would be interesting to explore additional ideologies, as well as

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those in different countries. We leave this exploration to future research.

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6   FOR ONLINE PUBLICATION: Appendix

6.1   Survey instrument, baseline condition: Without revealing partner's political identity

Political Ideology

* For the following questions, you will be paid in Amazon gift certificates according to how you choose to answer them.

Q1 You will receive a payment according to your decision in the following scenario: You have a total of $5 to divide between yourself and another survey participant in any way you want (in increments of $1).

_____ Decide how many dollars you hold (1)
_____ Decide how many dollars you pass (2)

Q2 You will receive a payment based on your decision in the following scenario: You will be matched to another survey participant. You need to decide between the following two options: 1) You and the other participant each receive $5 2) You let the other participant choose. He/she will decide between one of two options: i) You

receive $0 and he/she receives $14 or ii) Each of you receives $10. Please enter your decision:

- ■   I choose option 1) (1)
- ■   I choose option 2) (2)

Q3 You will receive a payment based on your decision in the following scenario: You will be matched to another survey participant. The other participant can choose for each of you to receive $5 or instead he/she can let you decide between one of two options: 1) You and the other participant each receive $10 2) You receive $14 and the other participant receives $0 In case the other participant lets you choose, please enter your decision:

- ■   I choose option 1) (1)
- ■   I choose option 2) (2)

Q4 You will receive an additional $3 if you guess the correct percentage range of participants that choose option 1) for the above question: Between:

- ■   0 and 9% (1)
- ■   10 and 19% (2)
- ■   20 and 29% (3)
- ■   30 and 39% (4)
- ■   40 and 49% (5)
- ■   50 and 59% (6)
- ■   60 and 69% (7)
- ■   70 and 79% (8)
- ■   80 and 89% (9)
- ■   90 and 100% (10)

Q5 Please answer the following questions:

A bat and a ball cost $1.10 in total. The bat costs $1.00 more than the ball. How much does the ball cost? (1)

If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets? (2)

In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake? (3)

Q6 What is your political orientation?

- ■ Very Liberal (1)
- ■ Liberal (2)
- ■ Moderate (3)
- ■ Conservative (4)
- ■ Very Conservative (5)
- ■ Don't know (6)

Q7 What is your annual household income?

- ■ less than $10,000 (1)
- ■ $10,001 to $20,000 (2)
- ■ $20,001 to $50,000 (3)
- ■ $50,001 to $75,000 (4)
- ■ $75,001 to $100,000 (5)
- ■ $100,001 to $150,000 (6)
- ■ $150,001 to $250,000 (7)
- ■ $250,001 to $350,000 (8)
- ■ more than $350,000 (9)

Q8 Based on your political views, would you consider yourself to be:

- ■ A Democrat (1)
- ■ A Republican (2)
- ■ An Independent (3)
- ■ Other (4)

* Click continue to finish your survey.You will receive your total final payment in the coming week. Thank you for participating!

6.2 Survey instrument, treatment conditions: Revealing partner's political identity

Political Ideology

* For the following questions, you will be paid in Amazon gift certificates according to how you choose to answer them.

Q1 You will receive a payment according to your decision in the following scenario: You have a total of $5 to divide between yourself and another survey participant in any way you want (in increments of $1).

_____ Decide how many dollars you hold (1)
_____ Decide how many dollars you pass (2)

Q2 You will receive a payment based on your decision in the following scenario: You will be matched to another survey participant **who considered him or herself to be [POLITICAL IDENTITY]**. You need to decide between the following two options: 1) You and the other participant each receive $5 2) You let the other participant choose. He/she will decide between one of two options: i) You receive $0 and he/she receives $14 or ii) Each of you receives $10. Please enter your decision:

■   I choose option 1) (1)
■   I choose option 2) (2)

Q3 You will receive a payment based on your decision in the following scenario: You will be matched to another survey participant **who considered him or herself to be [POLITICAL IDENTITY]**. The other participant can choose for each of you to receive $5 or instead he/she can let you decide between one of two options: 1) You and the other participant each receive $10 2) You receive $14 and the other participant receives $0 In case the other participant lets you choose, please enter your decision:

■   I choose option 1) (1)
■   I choose option 2) (2)

Q4 You will receive an additional $3 if you guess the correct percentage range of [**POLITICAL IDENTITY**] participants that choose option 1) for the above question: Between:

- 0 and 9% (1)
- 10 and 19% (2)
- 20 and 29% (3)
- 30 and 39% (4)
- 40 and 49% (5)
- 50 and 59% (6)
- 60 and 69% (7)
- 70 and 79% (8)
- 80 and 89% (9)
- 90 and 100% (10)

Q5 Please answer the following questions:

A bat and a ball cost $1.10 in total. The bat costs $1.00 more than the ball. How much does the ball cost? (1)

If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets? (2)

In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake? (3)

Q6 What is your political orientation?

- Very Liberal (1)
- Liberal (2)
- Moderate (3)
- Conservative (4)
- Very Conservative (5)
- Don't know (6)

Q7 What is your annual household income?

- less than $10,000 (1)
- $10,001 to $20,000 (2)
- $20,001 to $50,000 (3)
- $50,001 to $75,000 (4)
- $75,001 to $100,000 (5)
- $100,001 to $150,000 (6)
- $150,001 to $250,000 (7)
- $250,001 to $350,000 (8)
- more than $350,000 (9)

Q8 Based on your political views, would you consider yourself to be:
- A Democrat (1)
- A Republican (2)
- An Independent (3)
- Other (4)

* Click continue to finish your survey. You will receive your total final payment in the coming week. Thank you for participating!

Pre-screen Survey	Experimental Survey				Total
	Democrat	Republican	Independent	Other	
Republican	39	182	16	1	238
% of pre-screen	16.4	76.5	6.7	0.4	100.0
Democrat	221	14	9	3	247
% of pre-screen	89.5	5.7	3.6	1.2	100.0

Table 8: Differences in partisanship between Elab pre-screen survey and experimental survey.

6.3 Switchers

This section analyses the behavior of those who declared different partisanship in the E-lab pre-screen survey compared to the experimental survey. This analysis is important because the E-lab pre-screen survey was not part of any experiment. Everybody answered the same set of questions in the same order and no payoffs were derived from doing so. In our experimental survey, on the other hand, we asked for partisanship after participants decided whether to trust and reciprocate conditional on their partner's partisan identity. Table 8 shows the numbers of those who switched. In general, the majority stuck to their pre-screen partisanship: 89% of Democrats (221 out of 247) and 76% of Republicans (182 out of 238).

Depending on the identity of the matching partner, individuals may feign partisanship affiliation following reprobate behavior. Table 9 shows the number of individuals who switched partisanship per treatment. Overall, participants who switch to the opposite party tend to do it when they are not matched with someone with the same partisan identity, although the difference is only significant for (pre-screened) Democrats. Precisely, none of the 100 Democrats switched to Republican, and only 4 did to either Independent or Other (those who switch account for 4% in this treatment, chi-squared p-value = 0.029) when matched with a Democrat. From the 99 Republicans matched with a Republican, 16 switched to Democrat and 6 to Independent or Other (those who switched account for 22% in this treatment, chi-squared p-value = 0.785).

	Democrats (Pre-screen survey)					Republicans (Pre-screen survey)			
			Independent/					Independent/	
Treatment	Democrat	Republican	Other	Total		Democrat	Republican	Other	Total
matched anyone	85	10	5	100		17	72	6	95
% of total per treatment	85	10	5	100		17.9	75.8	6.3	100
matched Democrat	96	0	4	100		6	33	5	44
% of total per treatment	96	0	4	100		13.6	75	11.4	100
matched Republican	40	4	3	47		16	77	6	99
% of total per treatment	85.1	8.5	6.4	100		16.2	77.8	6.1	100
Total	221	14	12	247		39	182	17	238

Table 9: Differences in partisanship per treatment between Elab pre-screen survey and experimental survey.

One important concern that arises is whether declaring different partisan identity is in part caused by their previous behavior and the partisan identity of the partner. For example, Republicans may want to deliver a statement that even Democrats trust Republicans. Our data is consistent with this: 16 of the 39 Republicans who switched to Democrats after the experiment were matched with Republicans. 81% of them (13 out of 16) trusted a Republican Player B, which is significantly larger than the 53% of the 77 who did not switch to Democrat (41 out of 77, chi-squared p-value = 0.039).[26] Another reason for the switch may be to feign partisanship when the participant did not trust. Consistent with this, we observe Republicans who switched to Democrat and were matched with an anonymous Player B (17 out of 95) trusted the anonymous partner significantly less often than those who did not switch (72 out of 95): 35% compared to 61%, chi-squared p-value = 0.054.[27] This seemingly strategic behavior is not particular to Republicans. Democrats may also feign partisan identity to make Republicans "look bad." Democrats who were matched with a Republican, for example, who switched to Republican (4 out of 47)

[26]Note that there were 6 Republicans who switched to either Independent or Other and were matched with a Republican. With these, we account for the 99 individuals who were matched with Republicans in the experimental survey (16+77+6=99).

[27]The remaining 6 (17+72+6=95) switched from declaring being Republican in the E-lab pre-screen survey to declaring that they were either Independent or Other in the experimental survey.

never trusted a Republican Player B, while those who did not switch (40 out of 47, the remaining 3 switched to either Independent or Other) did so 42% of the time. Although this difference is marginally significant at conventional levels (chi-squared p-value = 0.096), we cannot completely rule out that a few individuals may be trying to feign partisan identity to undermine the other party's image in the eyes of the experimenter.

6.4 Effect of revealing previous reciprocation rates on trust

We have seen beliefs positively change only for Democrats. Does this increase trust behavior? Table 10 summarizes the results. Focusing first on Democrat Players A, revealing reciprocation rates induces higher trust in Democrat Players B, from 63% (63 out of 100) to 76% (35 out of 46), although the difference is not statistically significant at conventional levels (chi-squared test p-value = 0.12). Revealing actual reciprocation rates does not affect trust when Player B is Republican. Trust rates go from 40% (19 out of 47) to 35% (17 out of 48, chi-squared p-value = 0.62).

For Republican Players A who face Democrat Players B, even though trust rates decrease across treatments, they are not statistically different (66%, 29 out of 100 in the main treatment; and 51%, 24 out of 47, in the beliefs treatment, chi-squared test p-value = 0.15). Finally, for Republican Players A facing Republican Players B, the trust rate decreases by a significant amount: 58% (57 out of 99) in the main treatment to 16% (8 out of 50) in the beliefs treatment (chi-squared test p-value < 0.01).

As noted in the paper, the low trust among Republicans is not due to prescreen Republicans declaring to be Democrats after the survey. Although there is not enough data to address this drop in trust appropriately, one worth noting difference is the proportion of Conservative or Very Conservative (we label these participannts "strongly") Republicans across treatments. In the R-R main treatment, 44 out of 99 (44%) declare to be strongly Republican and 37 out of 99 (37%) to be moderate Republicans. In the R-R belief treatment in contrast, 47 out of 50 (94%) declare to be strongly Republican and no one to be moderate Republican (the remaining 3 participants declare to be: 1 Very Liberal, 1 Liberal and 1 Don't Know). We do not observe such difference in terms of political orientation across the other treatments (i.e. across D-D main treatment and D-D belief treatment, across D-R main treatment and D-R belief treatment, and across R-D main treatment and R-D belief treatment).

The difference in political orientation across R-R samples may give rise to an

a.

Democrat's partner identity is...	Democrat	Republican
Fraction of Trust (main treatment)	0.63	0.40
# of Players A who Trust/Total	63/100	19/47
Fraction of Trust (beliefs treatment)	0.76	0.35
# of Players A who Trust/Total	35/46	17/48
Difference	0.13	-0.05

***: significant at 1% level

b.

Republican's partner identity is...	Democrat	Republican
Fraction of Trust (main treatment)	0.66	0.58
# of Players A who Trust/Total	29/44	57/99
Fraction of Trust (beliefs treatment)	0.51	0.16
# of Players A who Trust/Total	24/47	8/50
Difference	-0.15	-0.42***

***: significant at 1% level

Table 10: This table shows trust for Democrat (panel a) and Republican (panel b) Players A in the main and belief treatments.

interesting interaction between strong party affiliation and information. When we look at the trust frequencies by political orientation, most strongly Republicans do trust (26 out of 44, 59%) in the main treatment, but they seldom trust (7 out of 47, 15%) in the belief treatment. Conditional on being a strongly Republican, this difference is significant across treatments (chi-squared p-value < 0.01). A similar pattern can be observed from the comparison of R-D treatments. Most strongly Republicans trust (23 out of 31, 74%) in the main treatment, but less than half do so (12 out of 32, 38%) in the belief treatment. Although not as strong as across the R-R treatments, this difference is also significant (chi-square p-value < 0.01) conditional on being strongly Republican. This latter result may be interpreted as consistent with the documented evidence on motivated scepticism (Taber and Lodge, 2006). The former result, however, may imply that this type of information could undermine within-party trust, which is a novel and perhaps interesting hypothesis to test in further research.