Moral Obstinacy in Political Negotiations

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Abstract: Research in behavioral economics finds that moral considerations bear on the offers that people make and accept in negotiations. This finding is relevant for *political* negotiations, wherein moral concerns are manifold. However, behavioral economics has yet to incorporate a major theme from moral psychology: people differ, sometimes immensely, in which issues they perceive to be a matter of morality. We review research about the measurement and characteristics of moral convictions. We hypothesize that moral conviction leads to uncompromising bargaining strategies and failed negotiations. We test this theory in three incentivized experiments in which participants bargain over political policies with real payoffs at stake. We find that participants' moral convictions are linked with aggressive bargaining strategies, which helps explain why it is harder to forge bargains on some political issues than others. We also find substantial asymmetries between liberals and conservatives in the intensity of their moral convictions about different issues.

"The key to understanding deal making in Congress," Representative Barney Frank once joked, "is to remember that the ankle bone is connected to the shoulder bone. Anything can be the basis of a deal" (quoted in Binder & Lee 2013, 58-59). A glance at legislative breakthroughs during Frank's time in office shows what he meant. Legislators secured enough committee votes for the Tax Reform Act of 1986 by tucking in tax breaks for a stadium in Cleveland, a convention center in Miami, and a parking garage in Memphis (Birnbaum and Murray 1987). The North American Free Trade Agreement passed with the help of favors for producers of sugar cane, tomatoes, and winter vegetables in Florida (Evans 2004). Naked favors like these became less common after John Boehner imposed a formal moratorium on earmarks in 2010, but lawmakers still find ways to trade. For instance, Senate Republicans secured a critical vote for the 2017 Tax Cuts and Jobs Act by granting Senator Murkowski's request for oil exploration in the Arctic National Wildlife Refuge.

These examples illustrate that in political negotiations different policies are often fungible: losses in one policy area can be offset by gains in another. Indeed, the notion of fungible policies is frequently integrated into theories of legislative bargaining. For instance, in one prominent model, legislators bargain over how to divide a single undifferentiated pot of rewards among their districts (Baron & Ferejohn 1989). In other models, actors have preferences over multiple policy dimensions which they can substitute and trade off, forming equivalent policy bundles along continuous indifference curves (e.g. Shepsle et al. 1987; Tsebelis 2002).

While often appropriate, the presumption of fungibility differs from the way people—at least sometimes—talk and think about their political preferences. In some cases, people describe their political views in absolute terms and claim that *no* gains whatsoever could make concessions acceptable. For instance, when the Obama Administration proposed a change to how the Social Security Administration calculates inflation, thirty Democrats in the House of Representatives signed a letter promising to vote against "any and every cut to Medicare, Medicaid, and Social

Security benefits" (Jan and Bender 2013). New Jersey governor Christie said about his opposition to same-sex marriage, "I would not compromise my principles for politics. . . It's my belief. It's my core belief" (Kurtz 2012). To be sure, some of these strong claims could be posturing to gain a bargaining advantage. But others seem sincere enough to preclude any chance of concessions and compromise on particular issues. Should we doubt the firm resolve of legislators like Congressman Roe who said, "I am committed to protecting the Second Amendment and will fight any attempts to weaken that fundamental right"? ("Second Amendment," 2018)

Here we examine a factor that may bear heavily on the bargaining conducted by elites and everyday citizens: moral psychology. As we review below, behavioral economics research has found that moral considerations shape the ways that people bargain and which compromises they will accept or reject (e.g., Levitt & List 2007). We suggest that these relationships are especially important to *political* negotiations. After all, political negotiations routinely concern policies with moral significance—rights and obligations of various groups in society, specific actions that are prohibited or required by religion, and the appropriate responses to external threats like terrorism. For reasons we discuss below, individuals' sense of morality could shape political actors' decisions about when to make concessions versus when to stand firm.

However, few experiments on bargaining have examined a key insight from moral psychology: much of morality is in the eye of the beholder, with perceptions about which issues are moral issues differing from person to person (Haidt 2012; Shweder 2012). These different perceptions add complexity to political bargaining, since different people might introduce a range of moral viewpoints into any particular negotiation. However, this variation across people also offers some advantages for studying how moral judgment affects political bargaining. Here we use methods from psychology to assess individual differences in which issues people view as connected to morality, and in turn how these differences in moral views predict how people bargain over

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political issues. In particular, we test the hypothesis that moral conviction on a political issue motivates tough bargaining strategies. If so, then moral psychology can help explain why compromises are often elusive for political negotiations, and why it is harder to forge compromises on some political issues than others.

Of course, moral psychological considerations are not the only reasons that negotiations might fail. Another cause of negotiation failure, especially in the current polarized climate, is citizens' propensity to make political judgments on the basis of gains and losses for partisan opponents (Iyengar, Sood, & Lelkes 2012; Mason 2018). We do not see our argument here as in competition with this other research tradition. Rather, our goal is to draw attention to another factor that we suspect is also important for political bargaining, the nuances of people's moral concerns. As we elaborate below, our theoretical framework orients us to examine a different source of variation in political judgments: within-individual differences in how a particular person change their thinking as they shift focus from one political issue to another, rather than between-individual differences in feelings about opponents due to, for example, partisanship.

To study bargaining, we turn to experimental economic games (on the use of economic games in political science, see Morton & Williams 2010; Wilson 2011). However, we build on the standard approaches to games by adapting them to use moral and political content.

Moral Psychology in Bargaining

In the simplest economic models, rational actors bargain to try to maximize their earnings from a deal. However, bargainers also care about other factors, such as fairness, precedents from previous deals, others' approval, obeying the law, and more (see Levitt & List 2007 for a discussion). Indeed, in Schelling's (1960) classic game theory analysis, he argued that because bargaining is a coordination game with multiple equilibria, players' choices cannot be understood only in terms of the material payoffs; they are also shaped by a variety of conventions, principles, perceptions, and

other potential focal points for compromise.

Behavioral economists have found that a person's sense of morality can bear heavily on social decision making (Ashraf et al. 2005; Gazzaniga 2005). Players in economic games regularly make choices that exhibit generosity, reciprocity, or punitiveness, even when this reduces their immediate earnings (Camerer & Fehr 2004). For instance, in the dictator game, people often share money with anonymous others (Kahneman et al 1986). In the trust game, people often reciprocate by returning money to anonymous others who previously trusted them with an investment of money (Berg et al 1995). In the ultimatum game, people sometimes reject divisions of a stake made by another player if they deem the division unfair, even though this rejection causes both players to earn nothing (Güth et al 1982). These and related studies do not always invoke the word "morality" explicitly, but are dissecting what amount to moral concepts (cf. Levitt & List 2007).

In one respect, these economic experiments resonate with research in moral psychology. Just as people will sacrifice earnings to punish others in the ultimatum game, people's moral attitudes are less responsive to short-term costs and benefits. This means that people are often unwilling to trade them off against other values (e.g. Cushman 2013; Tetlock et al. 2000). These patterns fit with theories about the evolutionary functions of moral judgment, which explain why humans have mental systems for learning and enforcing rules for social conduct (DeScioli & Kurzban 2009; 2013; Tooby & Cosmides 2010). Stated in philosophical terms, psychologists argue that people sometimes see moral rules in a way that is similar to Kantian categorical imperatives—strict prohibitions that one should abide by, with decreased attention to consequences (cf. Greene 2007). In this sense, moral psychology and behavioral economics are in sync. Both literatures argue that people resist beneficial compromises that cross moral lines.

However, the behavioral economics literature is missing another key insight from moral psychology. Bargaining experiments have focused on concepts (e.g., sharing, reciprocity) for which

there is widespread agreement across individuals and many cultures. This focus misses a marquee result in the psychological literature: for many issues, morality is highly particularistic, and people disagree about what is right and wrong, and which issues are moral issues at all. Peoples' views about right and wrong differ in many areas of social life including fairness, sexual behavior, attitudes toward authority, supernatural beliefs, whether it is permissible to charge interest on loans, and so on; these differences occur across cultures, across time, and even across individuals within a culture (Haidt 1993; 2012; Rozin 1999; Shweder 2012). Consider that in some societies, people morally condemn behaviors such as a man eating in the same room as a woman, dancing, or owning a dog—actions that people view as entirely innocuous elsewhere (Shweder 2012). Likewise, some people in the US view behaviors such as smoking or eating meat as morally wrong while others see them as a matter of personal choice, and these views have changed over the decades (Rozin 1999).

People's moral commitments could be critical for understanding political bargaining. Political actors commonly point to moral sticking points in negotiations—points on which they will not compromise even in the face of immense gains. Some cases pertain to obvious moral or religious issues such as President George W. Bush's rigid stance on stem cell research. But moral commitments also apply to policies commonly viewed as purely economic issues. Consider, for instance, the Taxpayer Protection Pledge, a vow signed by most Republican members of Congress to vote against any tax increase whatsoever. Alternatively, consider the above-mentioned vow by Democrats to vote against any policy that results in a decrease to Social Security benefits. These commitments also draw on people's sense of morality, blurring the distinction between moral and economic issues (Ryan 2014 for additional discussion on the lack of utility of this distinction).

In sum, there is reason to think that moral commitments play an important role in political bargaining. However, to see how moralization affects bargaining, we need an approach that is attentive to individual-level (and within-individual) variation in what is and is not considered moral.

Measuring Morality

To measure person- and issue- specific moral concerns, we draw on research by Skitka and colleagues on *moral conviction* (see review in Skitka et al., 2015). Moral conviction is the degree to which a person perceives something to be associated with his or her sense of morality. Researchers measure moral conviction with two items that ask people to what extent their opinion on a topic (e.g., whether the government should use the death penalty) is "a reflection of your core moral beliefs and convictions" and "connected to your beliefs about fundamental right and wrong."

The moral conviction framework is a bottom-up approach to measuring morality. In other work, researchers hypothesize that people have larger moral principles that organize their more specific moral views, for instance perceptions of harm (Schein & Gray 2015; Turiel 1998), moral metaphors (Lakoff 1996), values (Rokeach 1973), or foundations (Graham et al. 2009). In contrast, the moral conviction approach views moral considerations as a matter of measurement, and it allows participants to hold moral convictions on any basis rather than applying an overarching framework to everyone. Participants are free to organize their moral values around central themes, or they can hold moral views about a specific topic in isolation. This approach is consistent with a long-running theme in public opinion research that characterizes attitudes as highly fragmented or "morselized" (Kinder & Kalmoe 2017, 125-126, for one discussion).

In our research, we conceptualize moral conviction as one dimension among several that characterize a person's attitude about a particular political issue, a common approach in psychology and more recently in political science (Krosnick et al. 1993; Miller & Peterson 2004; Petty & Krosnick 1995; Visser et al. 2006). We construe moral conviction as distinct from—and not reducible to—other facets of attitude intensity, such as caring about an issue or perceiving a stake in its outcome. For moral judgment in particular, previous research finds that perceptions of moral relevance change the qualitative character of a person's attitudes, rather than only contributing to a

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single dimension of support or opposition (Ryan 2017).

When researchers measure moral conviction alongside other facets of attitude intensity, they find that opinions that are equally intense in other ways still vary substantially in terms of moral conviction and that this is particularly true as concerns political issues (Bauman & Skitka 2009; Skitka et al. 2005). Research also finds that, even controlling for other facets of attitude intensity, moral conviction is associated with intolerance of attitude dissimilarity, perception that one's preference is objective and universal, and endorsement of political violence (Tagar et al. 2014; Wright et al. 2008; see review in Skitka et al 2015).

Overview of Research

The Studies. As outlined above, we use economic games to observe bargaining behavior. In our games, participants make strategic decisions where real money is at stake and for which rewards depend on their decisions as well as the decisions of other players in the game. An advantage of this approach is that bargaining in economic games *without* explicit moral content has already been studied in many previous experiments, providing a basis for comparisons. Additionally, we can study participants in a context where their behavior will depend on what they expect a political opponent to do. This is a key advance of our approach. Past research on morality and political intransigence asked people to make decisions in isolation (Ryan 2017, Study 3). Although an important first step, this previous approach cannot directly answer an important question: How will moral concerns affect political bargaining when the decisions of a strategic opponent must be considered?

In our studies, participant makes decisions in six different negotiations. Monetary incentives are held constant across these six negotiations, but we describe a different (fictional) context for each interaction. Specifically, we ask participants to imagine that they are legislators bargaining with political opponents over several different policies. We examine how participants' strategies and outcomes depend on the issue that is used to describe the negotiation. In particular, because moral

convictions are associated with strong commitments and an unwillingness to make tradeoffs (like Kantian categorical imperatives), we hypothesize that moral conviction about an issue motivates tougher bargaining strategies. In our games, the issues frames are fictional, but the money is real and constant throughout. Thus, any differences in bargaining can be attributed to the frames. This creates a particularly clear test of the hypothesis that moral conviction predicts tougher bargaining. Finally, we want to emphasize one key feature: Participants are always better off monetarily if they come to *any* agreed upon bargain, no matter how lopsided, than if they fail to agree. Compromise pays, but can people with strong moral convictions reach a deal?

Understanding the Psychology of Political Bargaining. Although we ask participants to imagine themselves as legislators, our goal is not to directly extrapolate from our participants' behavior to the behavior of elites in real legislative bargaining. Instead, we use a legislative bargaining game as a *model system* that recreates—as much as possible in a stylized experimental game—some of the distinctive challenges posed by political bargaining. Our approach is best understood in relation to the large experimental literature on bargaining, which has not previously incorporated political issues into the bargaining task. Thus, we seek to understand, in a relatively abstract way, how people make tradeoffs between material benefits and moral convictions in a political context.

Within-Person Versus Between-Person Effects. In all three studies, each participant plays six different versions of the same bargaining game, each time framed with a different political issue. Our primary analyses are *within-person*, especially within-person analyses of whether someone's moral conviction about a political issue predicts their willingness to compromise on that issue. Therefore, if we find relationships between moral conviction and bargaining, this cannot be attributed to individual differences such as partisan strength, a competitive mindset, general intolerance of disagreement, etc.—all of these potential dispositional factors are held constant in the within-person analyses. In other words, because our main analyses are within-person, any observed effects cannot

be attributed to *between-person* differences such as partisan strength. (While this is a key aspect of our experimental design, we of course recognize that, in general, dispositions such as partisan strength are likely to affect political bargaining, e.g. Mason 2018, which is why within-person analyses are important for disentangling moral conviction from dispositions.)

Study 1: The Political Ultimatum Game

Study 1 examines how moral conviction relates to behavior in a political ultimatum game. The ultimatum game is a standard method in behavioral economics for studying how people bargain (Güth et al. 1982). One player proposes how to split a fixed sum of money, which represents the potential surplus from a deal; a second player chooses whether to accept or reject the split. If accepted, both players earn the amounts specified in the proposal; if rejected, both earn nothing. The ultimatum game represents the final stage of bargaining in which one person proposes a final offer as an ultimatum, and the other person must decide whether to take it or leave it. A large experimental literature finds that proposers generally offer close to half of the money and receivers regularly reject smaller amounts (Camerer 2003); moreover, research shows a variety of factors that alter these patterns including certain framings, how the money is earned, cultural expectations, outside offers, and so forth (Camerer 2003; Levitt & List 2007). Importantly, the ultimatum game captures strategic relationships that regularly arise in politics. When a legislative committee presents the full chamber with a bill that is not subject to amendment, or when a union publicly vows to go on strike if its final offer is not accepted, they are playing a kind of ultimatum game. A key difference, however, is that payoffs are defined by the desirability of various policies, rather than direct cash payouts. Thus, an innovation in the studies below is to superimpose the substantive content of particular issues onto the basic payoff structure of the ultimatum game. Doing so positions us to bridge a divide between literatures. We can examine how bargaining changes when negotiations become infused with political and moral meaning.

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Method

Participants. We recruited 204 participants via Amazon's MTurk (in November 2015).[1] MTurk has become a common source of convenience samples that is used widely across the social sciences; it is also common in behavioral economics and direct comparisons have found the same patterns of behavior as in lab experiments for many standard games (Buhrmeister et al. 2011; Horton, Rand, and Zeckhauser 2011; Mullinix et al. 2015). (Note that in Study 3 below we also examine a national sample.) Participants signed up for a study on "topics in the news." They earned $1.50 for completing the experiment and could earn up to an additional $1 from the bargaining game.

Attitude measures. Participants first reported their opinions about six political issues, which were presented in a random order. The issues were: public sector collective bargaining, progressive taxation, minimum wage, subsidies for low emission vehicles, stem cell research, and road tolls. To elicit variation in moral conviction, we aimed to include some issues that liberals are likely to moralize and some that conservatives are likely to moralize. We included road tolls as an issue that seemed likely to be less moralized by both liberals and conservatives.

For each issue, participants read a brief description of a policy and reported how much they favored or opposed it. All question wording appears in full in the Supporting Information (SI). For instance, the minimum wage prompt read:

> As you may know, there is a federal minimum wage of $7.25, but each state can make its own
> minimum wage higher if it wants to. Some people favor having a higher minimum wage, while
> others do not. How about you? Do you favor having the minimum wage in your state be

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[1] We intended to restrict the sample to MTurk workers whose accounts were registered in the United States. Due to an error, some non-U.S. workers were allowed to complete the study. However, based on geographical information recorded by the survey software, this applies to only N=5 participants (2.5% of our sample). We retain these responses, since they could represent U.S. participants working from abroad. Our results are not sensitive to excluding them.

higher than $7.25, or do you oppose it?

Participants answered on a seven-point scale (strongly favor, somewhat favor, slightly favor, neither favor nor oppose, slightly oppose, somewhat oppose, strongly oppose). We subsequently used these answers to pair each respondent with another participant who disagreed with them on the issue. If participants chose "neither favor nor oppose," we asked them to make a forced choice between favor and oppose, to ensure we could match them with someone who disagreed. For each issue, we folded and rescaled participants responses to generate a standard measure of attitude *extremity* that runs from 0 (a neutral opinion) to 1 (strongly favor or strongly oppose the policy).

Participants also answered three additional items to characterize their attitudes. They reported their moral conviction about each issue (Skitka et al., 2005) by answering whether their view of an issue is "a reflection of your core moral beliefs and convictions" and "connected to your beliefs about fundamental right and wrong" (not at all, slightly, moderately, much, very much). To compare to other facets of attitude intensity, we also measured personal importance and personal relevance (cf. Petty & Krosnick 1995). Participants answered, "How important is this issue to you personally?" (not important at all, not too important, somewhat important, very important, extremely important), and "How much does the outcome of this issue directly affect you?" (not at all, slightly, moderately, much, very much). For analysis, all attitude measures were scaled 0 to 1.

In a preliminary analysis, we examined the intercorrelations between these attitude measures. Similar to past studies (Krosnick et al. 1993; Skitka et al. 2005), we found that attitude intensity measures were correlated but distinct. Looking at all pairwise correlations across all issues, the median correlation was $r = 0.53$ and the maximum was $r = 0.69$. We particularly looked at whether moral conviction about a political issue was distinct from attitude extremity, assessing the possibility that moral conviction is a stand-in for what some consider to be an omnibus measure of attitude intensity. Similar to past attitude research, the correlations are low enough to treat moral conviction

as distinct: pairwise correlations between moral conviction and extremity range from 0.30 (for the Tolls issue) to 0.63 (for Collective Bargaining). We report all correlation matrices in the SI.

A separate point of interest is how strongly moralization of one issue is associated with moralization of other issues. If moral conviction on one issue is highly correlated with moral conviction on several other issues, it might be appropriate to think of moral conviction as an individual-level trait, rather than a more granular construct that varies by issue, *within* individuals. On the other hand, if these correlations are low, it corroborates that moral conviction is a loosely-constrained (or "morselized") characteristic, as discussed above. In the SI, we report all pairwise correlations between moralizing one issue and moralizing another issue. For Study 1, the highest correlation is $r = 0.49$, and the median is $r = 0.36$, suggesting moralization is granular, not reducible to an individual-level trait. (The pattern in Studies 2 and 3 is similar.)

Political bargaining interactions. Next, participants made decisions in a political ultimatum game. We asked participants to "imagine you are a state legislator who is bargaining over the policies in Part 1." Each participant was randomly assigned to be either a *proposer* or a *receiver,* and they remained consistently in this role across six different negotiations about each of the six political issues, which were presented in a unique randomized order for each participant.[2]

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[2] Despite the separate order randomization, one might worry about whether measuring issue attitudes before the bargaining interaction could lead to demand effects, such as if doing so made participants motivated to bargain tougher on issues they reported to be moral. We do not think our hypotheses are advantaged in this way, as it is not clear why the moral conviction measure would be advantaged by the ordering more than other attitude intensity measures. Additionally, including a delay of several weeks between measures of attitude intensity and judgment tasks does not appear to affect the former's predictive power (Ryan 2017, Study 4).

For each issue, the proposer chose to offer from zero to five "policy points" to a receiver. We described the payoffs as policy points so that the description fits the political theme, where the stakes often include non-monetary rewards such as public services or electoral popularity. However, participants knew that each policy point was worth 20 cents in real money that would be added to their bonus payment. Hence, they were essentially bargaining over a dollar in every case, while we varied the political theme using fictional descriptions of the negotiation. We designed the choices such that an even split is not possible. We did this to reflect the fact that political payoffs are often not continuously divisible, precluding a relatively easy settlement on an even split.

While the proposer chose how much to offer, the receiver saw a list of all possible offers and chose all of the offers they would accept. This approach is called the "strategy method" (e.g., Bahry & Wilson 2006), and it allows us to observer receivers' reactions to all possible offers rather than only a specific proposer's choice. Participants read that after the study, each proposer would be matched with a receiver who disagreed with them about the specific policy issue. If the receiver accepted the offer that was actually made by the proposer, then the deal was successful, and participants were awarded policy points and associated bonus earnings. If the receiver did not accept the proposer's offer, the negotiations would fail and neither participant would receive a bonus.

The instructions emphasized that each of the six negotiations would be with a different participant. We note that this study did not use deception and participants were paid as described. Because the number of issue-liberals and issue-conservatives was not something we could control, we used some players' decisions in multiple interactions in order to match each proposer with a receiver. Before making their decisions, participants answered two comprehension questions; most answered correctly the first time (97% for the first item and 83% for the second) and the remaining participants received additional training on the points they misunderstood.

For illustration, Figure 1 shows the negotiation screen for a receiver who favored minimum

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wage increases. Participants saw a list of the possible deals that could be made to choose a policy on the minimum wage. Each possible deal was associated with different divisions of the 5 policy points at stake. Importantly, this payoff structure and the associated monetary earnings in the study were held constant across the six political negotiations.

The dependent measure is a player's *generosity*—the proportion of the stake a player would allow her opponent to keep, which we assess separately for each issue. For proposers, generosity is the proportion offered to the receiver. For receivers, generosity is the maximum proportion for the proposer that the receiver would accept (potentially among multiple acceptable offers). Hence, for both proposers and receivers a generosity score of 0 means they would not allow the other person to have any points and a score of 1 mean they would allow the other person to have all the points.

Game-theoretic analysis. Our political negotiations have the same properties as a standard ultimatum game. If both players are rational and want to maximize their own monetary earnings, then the political description of the game should be irrelevant (participants know the description is fictional). A receiver should accept all non-zero proposals, so a proposer should offer the minimal non-zero amount of one policy point, yielding cash earnings of 80 cents for the proposer and 20 cents for the receiver. Of course, as we noted above, past work finds that in reality people's social preferences lead to more even splits (Camerer 2003; Levitt & List 2007). Typically, receivers reject very unequal offers and, anticipating this, proposers offer close to half the stake. However, because the payoffs are constant across issues, these considerations likewise should be constant across issues.

Statistical approach. We conduct two main types of analyses. In one, we look for pure experimental effects by testing whether participants' bargaining decisions differ across the different political issues that frame each negotiation; these analyses use standard within-subject analysis of variance techniques (ANOVA).

The other type of analysis examines how moral conviction and other facets of attitude

intensity relate to bargaining behavior. For these analyses, we estimate crossed random effects models—a multi-level approach that accounts for similarity within groups (issues and participants), neither of which is nested in the other (cf. Baayen et al. 2008). One advantage of this approach is that our estimates of attitude intensity relationships draw from our full dataset (all issues combined). (In the SI, we also report models where subjects and issues are entered as fixed effects, which is less efficient but makes weaker assumptions. The same pattern of results emerges.) Additionally, we estimate the effects of attitude intensity using only *within*-subject variation—how variation in attitudes within a person predicts their negotiation strategies across different political issues. As we discuss above, individual traits such as partisan strength no doubt bear on political negotiations, but they are not our focus here.

Results

Our main measure is players' generosity: the highest proportion of the stake a player would allow their partner to have. We begin by noting that pooling across issues, receivers are significantly more generous than proposers: Receivers were willing to allow proposers to keep 0.57 of stake (SE = 0.01) whereas proposer only offered receivers 0.42 (SE = 0.01; for the difference, $p < .01$). This is consistent with previous research and it fits bargaining theory because proposers are in the stronger bargaining position since they can make a final take-or-leave offer. Moreover, participants' generosity is quite variable across issues. Proposers most commonly make an offer that slightly favors themselves but there is substantial variation around this point. The SI reports histograms for generosity, broken down by issue and game role (proposers vs. receivers).

We next examine whether players' generosity depends on what issue is in focus, despite the fact that all issues actually had the same payoff structure in terms of real monetary earnings. As predicted, bargaining behavior depends on the issue. A within-subject ANOVA reveals a significant

effect of issue on bargaining, $F(5, 203) = 4.75, p < .01$.[3] Figure 2 shows that generosity differed by issue. For instance, proposers offered 46% of the stake for the Collective Bargaining issue but only 38% for the Stem Cell issue. For the responders, the same comparison is 64% versus 56%.

We next turn to the question of moral convictions: Do participants with stronger moral convictions drive a harder bargain? Table 1 presents the results. We estimate three separate specifications: the bivariate relationship between moral conviction and generosity; a specification in which moral conviction is entered along with measures of attitude importance and relevance; and one in which extremity is also included. Each specification has different advantages. The first specification estimates the main effect of moral conviction, without additional observational covariates and without requiring additional assumptions about how moral conviction relates to other attitude measures.[4] The second specification tests whether moral conviction has consequences that are distinguishable from importance and relevance—two attitude intensity measures with a long history in the attitude literature. The third model introduces attitude extremity, which we consider separately because of its special standing as a potential omnibus measure of attitude intensity (see Visser et al. 2006, 55-56).

As shown in Table 1, people with stronger moral convictions drive harder bargains. For example, based on Model 3, people with the strongest moral convictions offer 7.4 percentage points less of the stake than people with the weakest moral convictions. In other words, compared to

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[3] Do the same patterns emerge when we examine each game role (proposer or receiver) in isolation? They do. Proposers are overall less generous than receivers, but issues show nearly the same rank order in terms of generosity. The within-subjects ANOVA is significant for receivers (F(5, 101)=4.36, p<.01) and marginally significant for receivers (F(5, 101)=1.84, p=.10).

[4] See also Lenz & Sahn (2017) on the advisability of reporting bivariate models.

people with no moral convictions, proposers with strong moral convictions would offer 7.4 percentage points less and receivers with strong moral conviction would be willing to allow proposer to keep 7.4 points less. Attitude extremity also predicts bargaining; when directly compared to moral conviction, the two coefficients are not statistically distinguishable ($p = .68$). Thus, it seems that these two facets of attitudes independently contribute to tough bargaining—and in comparable degree. In contrast, associations with importance and relevance are smaller and not significant.

In sum, we have two primary results. First, as predicted, greater moral conviction is associated with tougher bargaining. In this case, the association is equal to or stronger than standard measures of attitudes. Thus, participants' moral concerns predicted how they bargained with real payoffs at stake—even in a situation where the moral concerns were based on fictional descriptions that were irrelevant to the actual money at stake in the study.

Second, we find consistent differences in bargaining behavior as a function of the (fictional) political issue that frames the negotiation. This is noteworthy because, whereas the association between moral conviction and bargaining is correlational, this other finding is a pure experimental manipulation. Different issues are causing different choices in bargaining—and, again, despite the issues being irrelevant to the actual monetary payoffs.

Studies 2 and 3: The Political Compromise Game

The ultimatum game is a bargaining scenario in which a proposer makes a final take-it-or-leave-it offer. As we noted above, this setup mimics real moments in politics. However, the setup is asymmetric: proposers have the upper hand and regularly earn higher payouts than receivers. In contrast, other political negotiations are more symmetric. (Think, for instance, of committee members who make proposals and counterproposals for budget allocations.) Studies 2 and 3 examine another important type of bargaining in which the two negotiators stand on equal footing. Although less well-known than the ultimatum game, behavioral economists have also studied

people's behavior in symmetric bargaining games (reviewed in Camerer 2003). In one common version, both negotiators propose a deal and if the two proposals are compatible, then the deal is successful, otherwise it fails. Following this previous work, we designed a political compromise game in which participants negotiate over political policies in symmetric bargaining roles.

Further, in Study 3 we extend our observations to a national sample. Studies 1 and 2 use convenience samples recruited from the MTurk website. Convenience samples are appropriate for the present research because our goal is to test hypotheses about how moral conviction affects bargaining decisions, rather than to estimate specific parameters in a larger population. Nonetheless, a national sample can provide additional insight into how these bargaining dynamics might play out in the specific environment of current American politics. For instance, a national sample better positions us to examine the distribution of moral conviction on an issue-by-issue basis, and it allows us to address the potential concern that game participants would expect different behavior from an MTurk opponent, compared to an opponent drawn from the general population.

Method

Participants. For Study 2, we recruited a convenience sample of 304 U.S. participants from Mturk who completed six rounds of the political compromise game. We also recruited a separate sample of 102 participants to complete a purely economic version of the compromise game for comparison; this game had the same payoff structure but was described in economic terms rather than with political content. Data for Study 2 were collected in September and October of 2016.

For Study 3, we recruited a national sample of 414 Americans using Qualtrics Research Services (QRS). QRS recruits participants to its online panel on the basis of demographic characteristics. We asked Qualtrics to generate a sample of respondents who match U.S. Census benchmarks for sex, race/ethnicity, and household income. As we report in the SI, our sample matches Census benchmarks well on these dimensions. Because this data source is more expensive

and might exhibit lower attention to instructions, we used additional comprehension procedures, in addition to QRS's standard quality control standards; see SI for more detail. Data for Study 3 were collected in September and October of 2017.

Attitude measures. We measured participants' attitudes about the same six political issues as in Study 1 (full text in SI). In Study 3, we saved time in the national sample by consolidating the standard moral conviction questions down to the one item asking whether an issue opinion is deeply connected to beliefs about fundamental right and wrong. (Previous studies found that the two moral conviction questions are correlated highly enough—typically above r=.80—that one can suffice.)[5]

 Similar to Study 1, correlations among the attitude dimensions are moderate (see SI). Also as before, moral conviction was only moderately correlated across issues, again indicating that moral conviction is issue-specific, not a general trait (see SI). Although the three studies were conducted over two years the rank ordering of the issues by moral conviction is nearly identical in all.

Bargaining interactions. As in Study 1, participants bargained with someone who disagreed with them on each of six issues (a different partner for each issue). They would be paid for one of the six interactions, as determined by a random draw. However, the political compromise game has two key differences from the previous ultimatum game.

First, the negotiators had symmetric roles. Both players indicated which policies that they would accept. Each policy is associated with a division of 10 policy points (each point worth 10 cents). The possible divisions were 8/2, 6/4, 4/6, or 2/8 (points for self/other). (Note that it was not possible to demand the entire stake.) If the players agreed on one or more than one policy, then

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[5] In one sense, this more parsimonious moral conviction measurement addresses a potential concern in the other studies: is moral conviction advantaged relative to the other intensity dimensions because it is measured more precisely—with two questions, rather than one?

the deal succeeds and they earn the average payoffs across all of the jointly agreed-to policies. If no policies are mutually accepted, then the deal fails and both players earn nothing. Note that a player could reject all four policies which guarantees that the deal will fail (Figure 1).

Second, we used more general descriptions of each policy, as compared to Study 1. For example, in the minimum wage negotiation, the possible policies were greatly increase, somewhat increase, somewhat decrease, or greatly decrease the minimum wage (see Figure 1.) We did this to help focus our measurement on participants' overall generosity in bargaining, while minimizing noise from their views on particular policy details.

We also collected a sample that completed a purely economic version of the compromise game with no political content. These participants completed a single round of the compromise game with no prior attitude measures. Participants simply bargained over how to divide a dollar with an opponent by proposing the set of divisions they would accept (see instructions in SI).

The main dependent measure is a participant's generosity for each negotiation, similar to Study 1. We measure generosity as the maximum proportion of the stake that a player was willing to allow her partner to have across the policies they accepted. For instance, a player whose most generous accepted split is 2/8 (self/opponent) has a generosity score of .8, and a player whose most generous accepted split is 4/6 has a generosity score of .6. If a player rejected all possible offers, the generosity score is 0. (Note, however, that a generosity score of zero has a different meaning than in the ultimatum game, where zero means a demand for all of the stake; in the compromise game, zero means guaranteeing a failed deal with zero payoffs for both players.)

Game-theoretic analysis. This game is more complicated than the ultimatum game. Here, we characterize the equilibria, providing a fuller treatment in the SI. All possible cases where players agree on just one division are *asymmetric* pure strategy equilibria. However, since nothing rationally differentiates players in the game, *symmetric* equilibria merit particular attention. There are no pure-

strategy symmetric equilibria. There are three symmetric mixed-strategy equilibria: one in which both players alternate between accepting 6/4 and 4/6 with 20% and 80% probability, respectively; one in which they alternate between accepting 8/2 and 2/8 with 60% and 40% probability, respectively; and one in which whey they alternate between all four choices 8/2, 6/4, 4/6, 2/8 with 33%, 13%, 8%, and 46% probability.

Although it is not an equilibrium, the case where both players offer 4/6 (i.e. 60% of the stake to the opponent) merits special attention. This is the least generous strategy that, if played symmetrically, consistently leads to a successful deal: an agreement is reached, and both players earn half the stake. As such, it might constitute a natural focal point (cf. Schelling 1957), and hence we use this strategy as a basis for comparison in the analysis below.

Results

Do players bargain differently when politics is involved? The middle and right panels of Figure 2 report mean generosity scores by issue. Although the payoff scheme is always the same, participants approach negotiations in very different ways depending on what issue is in focus.

For the purely economic (non-political) negotiation version collected alongside Study 2, participants were relatively generous. Eighty-four percent of respondents accept at least one allocation that favors the bargaining opponent (i.e., allowing the partner to have 60% or 80% of the stake). The average offer was 62% of the stake. It is noteworthy that the average offer is approximately 60%, given that, as we described above, 60% is the minimum symmetric offer that allows a deal to be reached. If a participant offers less than 60%, she is relying on the partner to meet her more than halfway. (As such, we show this value as a reference line in Figure 2.) When our game is presented in a nonpolitical way, participants are likely to strike a deal.

When politics is introduced, bargaining behavior changes. For nearly all the political negotiations in Studies 2 and 3, the average offer is significantly below 60%; see Figure 2 (all ps <

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.04, except the tolls scenario in Study 2). In Study 2, participants made less generous offers for each

political issue in comparison to the purely economic negotiation (all ps < .02, except the tolls issue).

These results show that participants bargained more aggressively when faced with political issues—

at the risk of negotiation failure. These comparisons provide direct experimental evidence that the

political content of a negotiation can alter people's bargaining behavior. And this occurred even

though participants knew that real payoffs were at stake while the political description was fictional.

We also see differences in bargaining behavior among different political issues. In both

studies, participants' generosity differed by political issue, which was experimentally varied within-

subject (within-subject ANOVA; Study 2, $F(5, 303) = 28.74$, $p < .01$, and Study 3, $F(5, 413) = 14.61$,

$p < .01$). For instance, participants made less generous offers in negotiations over minimum wage

than collective bargaining (nine percentage points less in Study 2 and six percentage points less in

Study 3). Again, although the real payoffs were identical, participants negotiated differently

depending on the political issue superimposed on the negotiation.

Finally, do people with stronger moral conviction about a political issue drive a harder

bargain? The main analysis appears in Table 1, following the same statistical approach as Study 1.

Generally, we find that moral conviction predicts tougher bargaining in both Studies 2 and 3. Going

from participants with weakest to strongest moral convictions, there is a 4 and 6 percentage-point

decrease in generosity in the two studies. Greater moral conviction continues to predict harder

bargaining when we include controls for other aspects of attitudes, importance and personal

relevance (model 2 in both studies). Finally, even when we control for attitude extremity, there is still

marginally significant ($p = .057$, two-tailed) evidence that moral conviction independently predicts

tough bargaining (model 3)

In sum, Studies 2 and 3 had three primary findings. The first two are direct experimental

effects of political issue frames on bargaining behavior. We found that people bargain differently

across the different political issues, even though the real-world monetary consequences are always identical and the frames are fictional. Second, we found in Study 2 that participants were less generous in political negotiations compared to a purely economic negotiation. Third, we found that people with stronger moral convictions offered smaller percentages of the stake to their partners. Finally, we found these patterns of political bargaining both in a convenience sample and in a diverse national sample of Americans.

Negotiation Failure

The results so far focused on the strategies of individual players. Since participants negotiated with each other, we can also examine the likelihood that a *pair* of negotiators—one on the liberal side of an issue, and one on the conservative side—will successfully strike a bargain. Table 2 reports the probability of a deal being struck for each political issue. We calculated these probabilities by examining the joint distribution of offers by liberals and conservatives on each side of each issue. The probability of a bargain differs noticeably across issues. The range is approximately thirty percentage points in Study 1, and around fifteen percentage points in Studies 2 and 3. For instance, in all three studies participants were most likely to reach a deal on public sector collective bargaining, whereas they often found it most difficult to reach a deal on progressive taxation.

Importantly, the probability of a deal diverges noticeably from the issue's average generosity (reported in Figure 2). For instance, in Study 2, participants had the lowest average generosity for minimum wage, but they were still more likely to strike a bargain for minimum wage than for progressive taxation or stem cell research. This divergence arises from asymmetries in generosity between the liberal and conservative sides. For minimum wage, participants on the liberal side made low offers (mean = 48% of the stake), but participants on the conservative side made relatively generous offers (mean = 60%) which helped close the deals. The direction of this asymmetry in

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generosity was not constant: on several issues, liberals made more generous offers than conservatives. (We report average generosity by issue and issue side in the SI.) These results suggest that people might strategically accommodate their political opponents in negotiations—using generous strategies on issues where they expect opponents to bargain aggressively, thereby preserving the hope of striking a deal.

If issue liberals and conservatives differ in their bargaining strategies, do they also differ in how much they moralize the different issues? Figure 3 reports the distribution of moral conviction, broken down by issue and issue-side in our national sample. (The SI reports similar figures for the other samples.) As expected, all issues are moralized by a substantial proportion of respondents, further underscoring that moralization depends on how someone thinks about an issue, rather than certain issues being inherently moral issues. More to the point, several issues show liberal-conservative asymmetries. For instance, liberals show greater moral conviction about minimum wage than conservatives, and conservatives have greater moral conviction about stem cell research.

Given these observations, future research might examine how individuals can signal moralization to issue opponents. Previous research suggests that moralization is associated with distinctive rhetorical styles (Clifford & Jerit 2014; Ryan forthcoming). Additionally, it seems plausible that leaders and interest groups could demonstrate a moral basis to their bargaining position via partnerships, policy statements, advertising, and the like. If opponents take this sort of posturing as a credible commitment to stand firm in negotiations, then ostentatious moralization might help secure concessions from political opponents.

Conclusion

In three experiments, we found that participants bargained differently depending on the political issue at stake. Further, participants who had stronger moral convictions about a particular issue were more aggressive when bargaining on that issue. Importantly, these differences across

political issues occurred even though the underlying monetary payoffs were always identical. Hence, the substantive considerations that come to mind as individuals contemplate political negotiations can lead them to bargain harder and thus can contribute to failed negotiations.

These results return us to Barney Frank's assertion that anything can be the basis of a political deal. Anything? Perhaps not. Our studies imply a caveat: People are more resistant to compromise on some issues than others. For some people, certain issues may not be negotiable at all. Moreover, these psychological obstacles to fungibility do not come only from people's intense attitudes and preferences. They can also arise more specifically from people's moral convictions.

Our focus throughout the analyses above has been on the association between attitude intensity and bargaining behavior: in particular, whether moral conviction about a political issue distinctly predicts tough bargaining on that issue. As is always the case, one set of studies can only go so far in parsing the mechanisms underlying a particular association. We focus on what we consider to be the most straightforward interpretation: moral conviction predicts a rule-bound mindset that makes it difficult to offer concessions in a political domain. We are not positioned to assess whether the association between moral conviction and compromise is mediated by any number of more elaborate psychological relationships, such as if moral conviction induces disliking or even despising of opponents on a particular issue, and this personal antipathy in turn drives tougher bargaining. Since our primary goal is to understand the net effect of moral psychological factors on political bargaining, we do not think it is necessary to arbitrate this distinction here, though future work could do so.

Looking across our studies, we see substantial convergence in how attitude facets relate to compromise. Specifically, both attitude extremity and moral conviction independently and consistently predicted tough bargaining strategies. In contrast, personal relevance did not affect bargaining, and importance had inconsistent effects. We suggest that the effect of extremity is to be

expected because extremity is a sort of omnibus index of attitude strength (Visser et al. 2006, 56). However, we think that the persistent effect of moral conviction merits further attention, since moral conviction is a less studied dimension of political attitudes. Moreover, the finding that moral conviction predicted resistance to compromise aligns with moral psychology research, which finds that people's moral judgments are shaped by strong prohibitions and obligations that resist cost-benefit considerations (e.g., Cushman 2013; Haidt 2012; Tetlock et al. 2000).

In conclusion, we think that the special challenges posed by political negotiations are more than small framing effects working at the margin of rational choice. Moral considerations are likely to be fundamental to political bargaining because they infuse negotiations with meaning that serves as a basis for commitments and focal points for coordination (Schelling, 1960). Moreover, the ability to trade off one issue against another is key to the legitimacy of a representative government. As Wallach (2018, 21), channeling Madison, writes, "Mutual give and take across the whole range of issues allows accommodation of different groups' most intense preferences, while also allowing the 'losers' in one round of bargaining to keep faith with a larger process they trust will serve them in another round." If moralization damages this important component of pluralism, then it may portend mischief for a government's ability to resolve moral conflicts in peaceful ways.

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	Study 1			Study 2			Study 3		
Moral Conviction	-0.158**	-0.118**	-0.074*	-0.082**	-0.059**	-0.038*	-0.065**	-0.040**	-0.024†
	(0.024)	(0.030)	(0.031)	(0.012)	(0.015)	(0.015)	(0.010)	(0.012)	(0.012)
Importance		-0.075	-0.035		-0.051	-0.019		-0.077**	-0.041*
		(0.038)	(0.039)		(0.018)	(0.019)		(0.016)	(0.017)
Relevance		0.006	0.005		0.013	0.010		0.024	0.023
		(0.030)	(0.029)		(0.015)	(0.015)		(0.013)	(0.013)
Extremity			-0.111**			-0.064**			-0.076**
			(0.025)			(0.012)			(0.010)
σ_{issue}	0.032	0.031	0.031	0.025	0.023	0.021	0.018	0.016	0.012
ICC_{issue}	0.016	0.015	0.015	0.023	0.020	0.016	0.012	0.009	0.006
$\sigma_{participant}$	0.150	0.151	0.151	0.107	0.107	0.106	0.093	0.093	0.094
$ICC_{participant}$	0.346	0.353	0.355	0.408	0.411	0.415	0.322	0.326	0.337
$\sigma_{residual}$	0.204	0.203	0.202	0.126	0.126	0.125	0.134	0.133	0.131
Observations	1,224	1,224	1,224	1,824	1,824	1,824	2,484	2,484	2,484
Participants	204	204	204	304	304	304	414	414	414

** $p<0.01$, * $p<0.05$, † $p=.057$ (two-tailed)

Crossed random effects models. Standard errors in parentheses. All independent measures are scaled from 0 to 1. The dependent variable is the proportion of benefits allocated to the bargaining opponent and ranges from 0 to 1 in Study 1, and (given the different structure of the compromise game) from 0 to 0.8 in Studies 2 and 3. ICC statistics are intraclass correlation coefficients. The Supporting Information reports models with respondent and issue fixed effects.

Table 2: Probability of a Bargain

CB	EM	MW	PT	SC	TO	NP
Study 1 (Ultimatum Game)						
0.487	0.337	0.250	0.180	0.258	0.351	--
Study 2 (Compromise Game)						
0.876	0.841	0.830	0.721	0.728	0.875	0.843
Study 3 (Compromise Game)						
0.725	0.725	0.716	0.694	0.600	0.724	--

Cell entries are the probability of a randomly selected liberal and conservative striking a bargain, given the distribution of offers made by liberals and conservatives in our studies. Issue abbreviations are as follows: CB=Collective Bargaining; EM=Emissions; MW=Minimum Wage; PT=Progressive Taxation; SC=Stem Cells; TO=Tolls; NP=Non-political.

Figure 1: Negotiation Tasks

The Ultimatum Game (Study 1)

As you recall, the federal minimum wage is $7.25, but states can make their own minimum wage higher if they want. Some people favor a higher minimum wage, while others oppose it.

This year, there is a proposal to change your state's minimum wage law. The minimum wage can be as high as $15.00 per hour, which would be the highest in the country. And it can be as low as $7.25, the federal minimum. But if no agreement is reached, the budget won't pass. The table below shows the policies that are under consideration.

Minimum wage	Policy points for legislator FAVORING a higher minimum wage	Policy points for legislator OPPOSING a higher minimum wage
Policy 1: $7.25 / hour	0	5
Policy 2: $8.75 / hour	1	4
Policy 3: $10.25 / hour	2	3
Policy 4: $12.00 / hour	3	2
Policy 5: $13.50 / hour	4	1
Policy 6: $15.00 / hour	5	0

You said you FAVOR a higher minimum wage. The other legislator in this negotiation OPPOSES a higher minimum wage.

Which of these policies would you be willing to accept? (Please select ALL the policies you would be willing to accept. You CAN select more than 1 if you choose.)

If one of your selections matches the policy the other legislator proposed, then you will both get the policy points from that policy.

If the other legislator's proposal is not one of your selections, then you both get 0 points.

The Compromise Game (Studies 2 and 3)

As you recall, the federal minimum wage is $7.25, but states can make their own minimum wage higher if they want. Some people favor a higher minimum wage, while others oppose it.

You will negotiate whether to increase or decrease your state's minimum wage. If you reach an agreement, the legislation will pass and both legislators gain policy points for their success. If no agreement is reached, then no legislation is passed and the legislators gain nothing.

You said you FAVOR increasing the minimum wage. The other legislator in this negotiation OPPOSES increasing the minimum wage.

The table below shows the policies that are under consideration. Which policies would you be willing to accept? Check off all of the policies you are willing to accept.

Remember, if you both accept a policy, they you gain the policy points listed for that policy.

Policy	YOU	OTHER
Greatly Increase Minimum Wage	8	2
Somewhat Increase Minimum Wage	6	4
Somewhat Decrease Minimum Wage	4	6
Greatly Decrease Minimum Wage	2	8

Figure 2: Average Generosity, by Issue
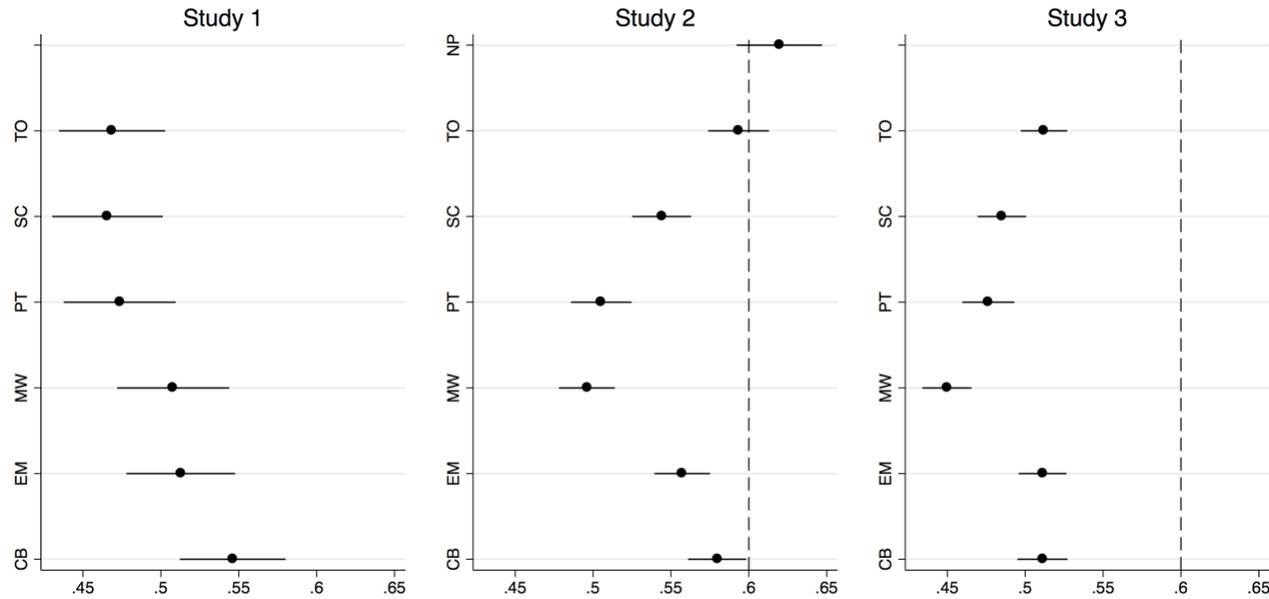
The figure shows the average level of generosity, depending on which issue is focal in the bargaining interaction. CB=Collective Bargaining; EM=Emissions; MW=Minimum Wage; PT=Progressive Taxation; SC=Stem Cells; TO=Tolls; NP=Non-political (Study 2 only). As described in the text, the generosity variable is the proportion of the stake a player is willing to provide to his or her opponent. Darkened lines represent 95% confidence intervals. The dash line in Studies 2 and 3 represents the least generous offer players need to make to strike a bargain, if they assume their opponent will make the same offer.

Figure 3: Distribution of Moral Conviction, by Issue and Issue side (Study 3).
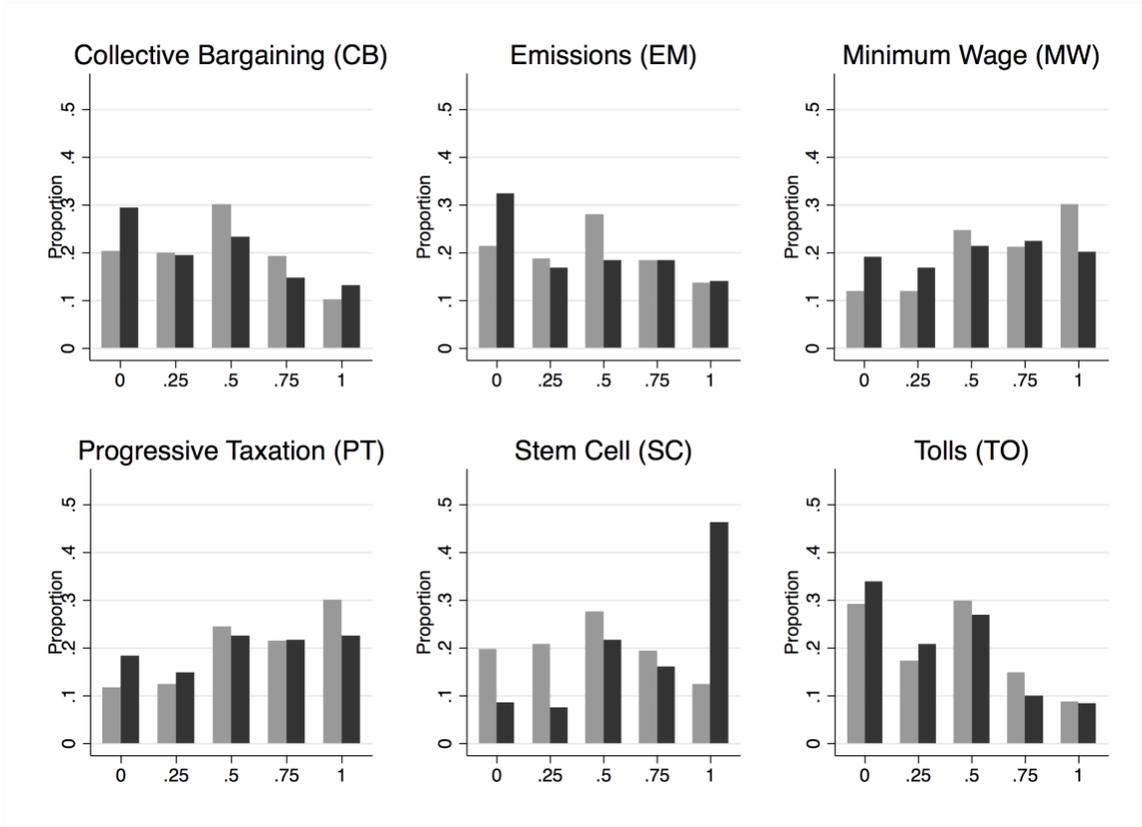
Gray bars represent issue liberals. Black bars represent issue conservatives. Similar figures for Studies 1 and 2 are presented in the SI.