



Malleable liberals and fixed conservatives? Political orientation shapes perceived ability to change



Bethany Lassetter*, Rebecca Neel

Department of Psychology, University of Toronto, 100 St. George Street, Sidney Smith Hall, Toronto, ON M5S 3G3, Canada

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ABSTRACT

The belief that others can or cannot change powerfully guides social judgment and behavior. Recent research suggests that perceivers hold *target-specific malleability beliefs* that certain people, but not others, can change. Six experiments and an internal meta-analysis demonstrate that political orientation operates as a target-specific cue to malleability, with liberals judged as slightly more malleable than conservatives. We test whether target age, gender, and political ideological extremity account for the effect, and find that target ideological extremity independently predicts greater perceived fixedness. A final experiment finds that political prejudice influences malleability beliefs: political outgroup members are judged less favorably than political ingroup members and as a result, are judged to be more fixed. This research contributes to a growing body of work illustrating that some people are believed to be more malleable than others.

The extent to which people believe others can or cannot change powerfully shapes many aspects of psychology (e.g., Molden & Dweck, 2006; Plaks, 2017; Plaks, Levy, & Dweck, 2009). Regardless of whether or not others *actually can* change, simply *believing* that attributes are malleable or fixed guides inferences about others. Believing that people are fixed rather than malleable leads to greater stereotyping (Levy, Stroessner, & Dweck, 1998), increased inferences of dispositional traits from behavior (Chiu, Hong, & Dweck, 1997), and a tendency to view outgroups as relatively homogenous (Levy, Plaks, Hong, Chiu, & Dweck, 2001). These beliefs also shape social behavior in a number of domains (see Plaks, 2017, for a review).

Recent work demonstrates that malleability beliefs are *target-specific*; perceivers hold distinct beliefs about different people's malleability. For example, younger people are judged to be more malleable than older people (Neel & Lassetter, 2015). These age-specific malleability beliefs are consequential: they predict support for services or policies that promote change, such as greater support for rehabilitation of younger drug users than older ones (Neel & Lassetter, 2015). Perceivers likely use an array of factors to judge a target's malleability and in the current research, we examine the role of target political orientation.¹

1. Stereotypes of political liberals and conservatives

Liberals and conservatives are stereotyped as differing in their values (Chambers, Baron, & Inman, 2006; Chambers & Melnyk, 2006; Graham, Nosek, & Haidt, 2012) and several psychological characteristics (Crawford, Modri, & Motyl, 2013; Scherer, Windschitl, & Graham, 2015; Udluft, 1973), with conservatives stereotyped as more strongly endorsing tradition and having a greater need for cognitive closure than liberals. These stereotyped values and characteristics suggest that liberalism and conservatism may be associated with malleability and fixedness, respectively.

However, rather than being about political orientation per se, perceived differences in a liberal vs. conservative target's malleability may actually reflect assumptions about the target's age, gender, or ideological extremity. Younger people are stereotyped as more liberal than older people (Grant, Ross, Button, Hannah, & Hoskins, 2001; Hummert, Garstka, Shaner, & Strahm, 1994), and females are stereotyped as more liberal than males (e.g., Huddy & Terkildsen, 1993; Koch, 2000). Past research also suggests that the extremity of a target's political orientation (i.e., how strongly they identify as liberal or conservative) rather than the content or direction of their political orientation (i.e., whether they identify as liberal or conservative) predicts cognitive rigidity (for a review, see Greenberg & Jonas, 2003; Jost, Glaser, Kruglanski, &

* Corresponding author.

E-mail addresses: bethany.lassetter@mail.utoronto.ca (B. Lassetter), neel@psych.utoronto.ca (R. Neel).

¹ We use the term *political orientation* to refer to where people fall on the left-right spectrum of political ideology commonly associated with the United States (e.g., Erikson & Tedin, 2003; Fuchs & Klingemann, 1990; Jost, Federico, & Napier, 2009), focusing specifically on liberalism and conservatism.

Sulloway, 2003a, 2003b; van Praag & Krouwel, 2017). To the extent that people's beliefs about others' characteristics reflect those others' actual characteristics (i.e., people's stereotypes are accurate; see Jussim, Crawford, & Rubinstein, 2015), people may judge targets with extreme political ideologies – regardless of whether those targets are liberal or conservative – as fixed. Additionally, if either conservative or liberal targets are assumed to be particularly ideologically extreme (e.g., perceived associations between conservatism and dogmatism may lead perceivers to believe that conservatives are in general more ideologically extreme than liberals; Shils, 1954; Stone, 1980), apparent differences in malleability by political orientation could actually be driven by perceived differences in ideological extremity.

2. Perceiver political orientation

Perceivers' own political orientation may shape their judgments of liberals' and conservatives' malleability. One possibility is that liberal and conservative perceivers may value malleability and fixedness differently. Indeed, liberals tend to show implicit preferences for flexibility and progress over stability and tradition, respectively, whereas increased conservatism is associated with stronger implicit preferences for order (Jost, Nosek, & Gosling, 2008). Thus, liberals may value malleability over fixedness, whereas conservatives may value fixedness over malleability. Alternatively, malleability-related constructs have typically been viewed positively, and in many contexts believing that attributes can change is associated with more positive outcomes than believing that attributes cannot change (e.g., Dweck, 2012; Plaks, 2017). This suggests that all perceivers might value malleability more than they value fixedness, regardless of their own political orientation.

Perceivers may also exhibit ingroup biases in judging target malleability, and these biases may operate in conjunction with whether they more strongly value malleability or fixedness. People tend to prefer their political ingroup (Brandt, Reyna, Chambers, Crawford, & Wetherell, 2014; Nosek et al., 2007), and hold beliefs that enhance the image of their own political identity in contrast to that of others (Farwell & Weiner, 2000). Thus, if both liberals and conservatives more strongly value malleability over fixedness, ingroup bias may manifest as both liberal and conservative perceivers judging ingroup targets as more malleable than outgroup targets. However, if liberal and conservative perceivers value malleability and fixedness differently (with liberals judging malleability positively and conservatives judging malleability negatively), ingroup enhancement may differ between perceiver political orientations.

3. Research overview

Six experiments test the prediction that liberals will be judged as more malleable than conservatives. Past work demonstrates that malleability judgments are target-specific across a range of attributes (e.g., personality, moral character, intelligence, racial bias; Neel & Lassetter, 2015). In the current research, we measure the perceived malleability of targets' personalities because of the wealth of research focusing on the perceived malleability of this global attribute (e.g., Chiu et al., 1997; Dweck, 1999). We also measure malleability judgments of moral character given overlap between political stereotypes and moral foundations (Graham et al., 2012), and the close relationship between political attitudes and the moral domain (Brandt, Wisneski, & Skitka, 2015; Skitka, 2014; Skitka, Bauman, & Sargis, 2005).

We also examine the role of variables related to political orientation: target age (Experiments 3A–B), target gender (Experiment 3B), and the extremity of a target's political ideology (Experiment 4). Experiment 5 examines the joint influence of target political orientation, participant political orientation, and prejudice felt toward the target on malleability judgments. We conclude with an internal meta-analysis to characterize across experiments the evidence for the effect of target political orientation on perceiver judgments of malleability.

4. Experiment 1: Beliefs that liberals and conservatives can change

Experiment 1 examines whether target political orientation guides malleability beliefs. We predicted that the average conservative would be judged as less malleable than the average liberal. Participants judged the malleability of the average liberal and conservative target in a two-cell within-subjects design.

4.1. Method

In this and all subsequent experiments, data collection was terminated before data analysis. Across experiments, we report all measures, manipulations, and exclusions.

4.1.1. Participants

Two hundred one participants from the United States were recruited via Amazon's Mechanical Turk (MTurk; 114 males, 86 females, 1 other; $M_{age} = 32.10$ years, $SD_{age} = 10.26$ years; $M_{political\ orientation} = 4.70/7$, $SD_{political\ orientation} = 1.51$; 17 Asian or Asian Americans, 10 Black or African Americans, 10 Hispanic or Latinos/as, 149 White or White Americans, 1 Native Hawaiian or other Pacific Islander, 12 biracial/multiracial/others, 2 declined to respond).² Because we sampled from MTurk, sample characteristics are highly similar across experiments, and all subsequent experiment demographics are reported in Supplemental Materials (Tables S2 and S3). A sensitivity analysis revealed that when examining the difference between two dependent means, Experiment 1's sample ($N = 201$) provided 80% power to detect an effect size of $d = 0.20$.

4.1.2. Procedure

All participants completed malleability judgments of personality and moral character (counterbalanced) for the average liberal target and average conservative target (also counterbalanced). Finally, all participants completed demographic measures, including a measure assessing their own political orientation.

4.1.3. Measures

In this and all subsequent experiments, items assessing malleability beliefs were anchored at 1 (*strongly disagree*) and 6 (*strongly agree*), coded so that higher responses represented a stronger belief that the target can change.

4.1.3.1. Malleability judgments of personality and moral character. Four items were modified from Dweck's (1999) measure to assess perceived malleability of personality (e.g., "The average [liberal/conservative] can do things differently, but the important parts of who he or she is can't really be changed", reverse-coded). Four different items assessed perceived malleability of moral character (e.g., "The average [liberal/conservative] can change his or her behavior, but his or her underlying moral character can't really be changed", reverse-coded). Malleability judgments of personality and moral character were combined into a composite malleability dependent variable.³

² To account for repeated IP (internet protocol) addresses within each dataset, we retained only the first responder for any repeated IP. That is, we ensured that the same responders did not participate in more than one of Experiments 1–5 and S1. This produced some sample sizes that were lower than the target n s. Additionally, given the online format of the experiments, each dataset invariably included responders who opted into the experiment but did not complete it. Responders with such "blank responses" were removed from the dataset prior to analyses, and are not included in the total n of each experiment. See Supplemental Materials (Table S1) for repeat IP and blank responder totals per experiment.

³ Exploratory factor analysis with maximum likelihood extraction and promax rotation did not identify separate factors for personality and moral

4.1.3.2. Participant political orientation. In this and all subsequent experiments, participants self-reported how conservative to liberal they were (a) overall, (b) on social issues, and (c) on economic issues (1 = *very conservative*; 7 = *very liberal*). The responses to these three items were combined into a composite score ($\alpha = .90$).

4.1.3.3. Demographics. In this and all subsequent experiments, participants responded to the following demographic items (in addition to political orientation, described above): gender, age, race/ethnicity, political affiliation, whether or not (and if so, for whom) they voted in the 2008 and 2012 US Presidential Elections, and whether or not English was their native language.⁴

4.2. Results

Unanticipated order effects emerged in the data, but because they did not change our conclusions about the effect of political orientation, we collapsed across conditions and compared judgments of liberals and conservatives using paired-samples *t*-tests. Order effects are discussed in Supplemental Materials.

Paired-samples *t*-tests indicated that, consistent with predictions, the average liberal was judged as more malleable ($M = 3.67$, $SD = 0.97$) than the average conservative ($M = 3.47$, $SD = 0.99$), $t = 3.66$, $p < .001$, $d = 0.20$. To test whether this effect differs by perceiver political orientation, we conducted a repeated-measures analysis of covariance (ANCOVA) on malleability beliefs with target political orientation (liberals vs. conservatives) as the repeated factor, and participant political orientation as a covariate. Participant judgments of target and participant political orientation did not interact to predict malleability beliefs, $F(1, 199) = 1.02$, $p = .313$, nor was there a main effect of participant political orientation, $F(1, 199) = 0.89$, $p = .347$.⁵

4.3. Discussion

In Experiment 1, the average liberal was judged as more malleable than the average conservative. Participant political orientation did not predict malleability judgments. To test for convergent evidence that liberals and conservatives are judged as differently malleable, we next aimed to replicate this effect with a different method.

5. Experiment 2: Exemplars of malleability and fixedness

In Experiment 2, participants generated exemplars of malleability or fixedness. After nominating a person who they believed demonstrated

(footnote continued)

character items in Experiment 1. Composite scores for malleability of personality and moral character were strongly correlated ($r_s = .84$ and $.86$, $p < .001$ for liberal and conservative targets, respectively). These patterns persisted throughout all subsequent experiments that measured malleability judgments. We thus combined malleability judgments of personality and moral character into a single composite measure of malleability for each of these experiments (Experiment 1 $\alpha_s = .92$ and $.93$ for liberals and conservatives, respectively).

⁴ Across experiments, we focused analyses on measures of participant political orientation rather than party affiliation or for whom participants voted in prior elections for several reasons. Participant political orientation offered a continuous – rather than categorical – response option, allowing for more response variance and a more precise representation of participant political views than the other measures. We opted not to use the voting measures in analyses because participants may have endorsed a presidential candidate who did not fully reflect their general political views, and also may have been biased to report having voted for the winning candidate (e.g., Atkeson, 1999; Belli, Traugott, Young, & McGonagle, 1999).

⁵ Across all experiments, we also examined whether participant political ideological extremity influenced the predicted effects. See Supplemental Materials.

that people either can or cannot change, participants reported a number of characteristics about their exemplar, including his or her political orientation, age, and gender. If, as Experiment 1 suggests, target political orientation corresponds to perceived malleability, then malleable exemplars will be rated as more liberal than fixed exemplars. The design of Experiment 2 also allows us to examine other predictors that may overlap with perceived malleability. For example, previous research suggests that age shapes perceived malleability: younger targets are judged as more capable of change than older targets (Neel & Lassetter, 2015). Further, because women are stereotyped as more politically liberal than males (e.g., Huddy & Terkildsen, 1993; Koch, 2000), target gender may also account for the relationship between malleability and exemplar political orientation. Finally, targets holding more extreme political ideologies may be judged as more fixed than targets holding less extreme ideologies. Malleable exemplars, therefore, may be younger, more likely to be female, and less ideologically extreme than fixed exemplars.

5.1. Method

5.1.1. Participants

Four hundred two participants from the United States were recruited via MTurk. A sensitivity analysis revealed that when examining the difference between two independent means Experiment 2's sample ($N = 402$) provided 80% power to detect an effect size of $f = 0.14$.

5.1.2. Design and procedure

Participants were randomly assigned to generate an example of a person who demonstrates either that some people can change (*malleable* condition) or that some people cannot change (*fixed* condition). Participants read a prompt corresponding to their condition, with wording based on commonly-used manipulations of malleability beliefs (e.g., Chiu et al., 1997; Neel & Lassetter, 2015; Nussbaum & Dweck, 2008; Rattan & Dweck, 2010). In the malleable condition participants read, "Research suggests that some people can change. Specifically, for some people, their essential attributes and personality are like clay that can be molded and changed with experience and/or effort." In the fixed condition participants read, "Research suggests that some people cannot really change. Specifically, for some people, their essential attributes and personality are set like plaster, tend to stay the same, and cannot be molded or changed with experience and/or effort." Participants were then asked, "Think of someone you know who demonstrates that some people [can/cannot] change. This person can be someone you know personally or someone you have heard about."

Participants wrote briefly about their exemplar and then reported their exemplar's political orientation (measured using the same three items used to measure participant political orientation discussed in Experiment 1 [1 = *very conservative*; 7 = *very liberal*]; $\alpha = .94$), current age, age as they were described in the example, gender, race/ethnicity, political affiliation, and socioeconomic status. We focused our analyses on exemplar political orientation, age as the exemplar was described in the example (hereafter referred to as "age"), and gender. See Supplemental Materials for further discussion of exemplar current age, race/ethnicity, political affiliation, and socioeconomic status. Finally, participants completed demographic items, including a measure assessing their own political orientation, which was measured using the same three items as in Experiment 1 ($\alpha = .94$).

5.2. Results

5.2.1. Exemplar political orientation

As predicted, participants who were asked to generate malleable exemplars reported their exemplars to be more politically liberal ($M = 4.30$, $SD = 1.66$) than did participants who were asked to generate fixed exemplars ($M = 3.80$, $SD = 1.85$), $F(1, 400) = 8.01$, $p = .005$, $\eta_p^2 = .02$.

5.2.2. Exemplar age, gender, and political ideological extremity

Consistent with past research (Neel & Lassetter, 2015), participants asked to generate malleable exemplars reported their exemplars to be significantly younger ($M = 30.51$ years, $SD = 13.47$ years) than did participants asked to generate fixed exemplars ($M = 42.96$ years, $SD = 18.40$ years), $F(1, 395) = 58.50, p < .001, \eta_p^2 = .13$.⁶ Chi-square analysis indicated that exemplar gender did not differ by condition, $X^2(1, N = 402) = 0.81, p = .368$.

To examine the effect of malleability on exemplar ideological extremity, we transformed exemplar political orientation into an extremity score. The midpoint of the orientation scale (4) was subtracted from each rating (ranging from 1 [*very conservative*] to 7 [*very liberal*]) and the absolute values of those scores were computed. This transformation resulted in an extremity variable that ranged from 0 (*least extreme*) to 3 (*most extreme*). Participants in the fixed condition ($M = 1.56, SD = 1.02$) generated exemplars of marginally more extreme ideologies than did participants in the malleable condition ($M = 1.39, SD = 0.95$), $F(1, 400) = 2.91, p = .089, \eta_p^2 < .01$.

Finally, we ran several follow-up analyses to explore the malleability condition's effect on exemplar political orientation. When accounting for exemplar age and gender, the effect of condition on exemplar political orientation was no longer significant, $\beta = -.06, t = -1.09, p = .275$. Older exemplars ($\beta = -.22, t = -4.16, p < .001$), and male exemplars ($\beta = .17, t = 3.44, p = .001$) were reported to be more politically conservative than younger exemplars and female exemplars, respectively. Because malleability condition predicts exemplar age, and exemplar age predicts political orientation, participants may report their fixed exemplars to be older and therefore more politically conservative, a pattern consistent with an indirect effect. We fit the data to a mediation model (PROCESS Model 4; Hayes, 2017), entering condition (effects-coded with malleable = -1, fixed = 1) as the independent variable, exemplar age (centered) as the mediator, and exemplar political orientation (1: *very conservative* to 7: *very liberal*) as the dependent variable. The 95% confidence interval of the indirect effect did not include zero, supporting an indirect effect of condition on exemplar political orientation via exemplar age, $B = -0.14, SE = 0.04, 95\% CI [-0.22, -0.07]$. See Supplemental Materials for further details, including parallel analyses treating exemplar political ideological extremity as the dependent variable.

5.2.3. Participant political orientation

To examine whether participant political orientation predicted exemplar political orientation, we regressed exemplar political orientation onto malleability condition (effects-coded), participant political orientation (centered), and their interaction. Participant political orientation positively predicted exemplar political orientation, $\beta = .26, t = 5.63, p < .001$; the more liberal or conservative the participant, the more liberal or conservative, respectively, the participant's exemplar. Participant political orientation also interacted with condition, $\beta = -.20, t = -4.16, p < .001$. To interpret this interaction, we examined the effect of condition on exemplar political orientation separately for liberal and conservative participants. Because the sample skewed liberal, instead of re-centering one standard deviation above and below the mean of political orientation (which would fail to capture the effect of condition for conservatives), we re-centered political orientation at the midpoint of the liberal range of the scale (5.5) and again at the conservative range of the scale (2.5; see Aiken & West, 1991). Liberal participants generated exemplars that differed significantly by condition, $\beta = -.25, t = -4.64, p < .001$: Liberals' malleable exemplars were more liberal than their fixed exemplars. However, conservative participants' exemplars did not differ by

⁶ One participant indicated that their exemplar was 1992 years old at the time they were described and another indicated a range of ages. Both data points were removed from all analyses that included exemplar age as a variable.

condition, $\beta = .11, t = 1.39, p = .166$.

5.3. Discussion

Experiment 2's findings partially corroborate those of Experiment 1: Malleable exemplars were more likely to be politically liberal than were fixed exemplars. These exemplars were also younger and marginally less ideologically extreme than those generated in the fixed condition. Participant political orientation positively predicted exemplar political orientation, perhaps because people's social networks tend to be made up of similar others (e.g., McPherson, Smith-Lovin, & Cook, 2001) and people tend to live geographically close to similar others (Motyl, 2014; Motyl, Iyer, Oishi, Trawalter, & Nosek, 2014).

The effect of condition on exemplar political orientation became non-significant upon accounting for exemplar age and gender. Indeed, the results are consistent with exemplar age mediating the effect of malleability on political orientation. However, age and gender were measured in this experiment, rather than manipulated. To more directly test whether a target's political orientation influences judgments of malleability independent of factors such as the target's age and gender, we returned to an experimental design similar to Experiment 1.⁷

6. Experiments 3A-B: The roles of target age and gender

Experiments 3A-B use between-subject manipulations to test whether the target political orientation effect from Experiment 1 is independent of target age (3A and 3B) and gender (3B). If political orientation independently predicts malleability judgments, then liberal targets will again be judged as more malleable than conservatives.

6.1. Method

6.1.1. Participants

We recruited 386 and 810 participants for Experiments 3A and 3B, respectively, from the United States via MTurk. Sensitivity analyses revealed that when examining mean differences using Experiment 3A and 3B's designs, the samples ($N_s = 386$ and 810) provided 80% power to detect effect sizes of $f_s = 0.14$ and 0.10, respectively.

6.1.2. Design and procedure

In Experiment 3A, participants were randomly assigned to complete malleability judgments of personality and moral character about one of four targets in a 2(target political orientation: liberal, conservative) \times 2(target age: 20-, 65-year-old) between-subjects design. In Experiment 3B we added target gender as a between-subjects factor, creating a 2(target political orientation: liberal, conservative) \times 2(target age: 20-, 65-year-old) \times 2(target gender: woman, man) between-subjects design. Participants in both experiments were randomly assigned to answer questions about either personality or moral character first. Finally, all participants completed demographic measures. As in Experiment 1, the participant political orientation items (3A: $\alpha = .90$; 3B: $\alpha = .92$) were combined into a composite score.

6.1.3. Measures

The eight items measuring perceived malleability of personality and moral character from Experiment 1 were modified to specify the target's age and political orientation. In Experiment 3B, target gender also was specified. As in Experiment 1, malleability judgments of personality and

⁷ An initial, separate replication of Experiment 1 tested target age as an alternative explanation of the predicted effect by specifying a fixed age (20 years) for the average liberal and conservative targets. Results were consistent with the patterns found in Experiment 1: 20-year-old liberals ($M = 3.88, SD = 1.03$) were viewed as more malleable than 20-year-old conservatives ($M = 3.76, SD = 1.05$), $t = 2.98, p = .003, d = 0.12$. See Supplemental Materials.

moral character were combined into a composite malleability dependent variable for both experiments ($\alpha > .85$ for all between-subjects groups).

6.2. Results

6.2.1. Experiment 3A

Data were subjected to a between-subjects analysis of variance (ANOVA) including target political orientation, target age, and their interaction. Attribute order did not independently predict, nor did it interact with the focal variables to predict, malleability judgments ($p > .242$). We therefore collapsed across order conditions.

Contrary to predictions, liberals and conservatives were judged as equally malleable, though the effect trended in the predicted direction ($M_s = 3.53$ [$SD = 1.05$] vs. 3.39 [$SD = 0.99$] for liberals and conservatives, respectively), $F(1, 382) = 2.42, p = .121$. Replicating past work, younger targets were judged as more malleable than older targets ($M_s = 3.81$ [$SD = 0.88$] vs. 3.11 [$SD = 1.04$], respectively), $F(1, 382) = 51.78, p < .001, \eta_p^2 = .12$. The interaction between target political orientation and target age was not significant ($p = .150$).

6.2.1.1. Participant political orientation. To examine the influence of participant political orientation, we regressed malleability judgments onto target political orientation (effects-coded with liberal = -1, conservative = 1), target age (effects-coded with 20 years = -1, 65 years = 1), participant political orientation (centered), and their interactions. Participant political orientation did not independently predict, nor did it interact with target political orientation or age to predict, malleability judgments ($\beta_s < |.10|, ps > .069$).

6.2.2. Experiment 3B

As in Experiment 3A, data were subjected to a between-subjects ANOVA including target political orientation, target age, target gender, and their interactions. Unanticipated attribute order effects emerged in the data, but because they did not change our conclusions about the effect of political orientation, we collapsed across conditions. Order effects are discussed in Supplemental Materials.

Consistent with predictions, liberals were judged as more malleable than conservatives ($M_s = 3.50$ [$SD = 0.95$] vs. 3.26 [$SD = 1.06$], respectively), $F(1, 802) = 12.71, p < .001, \eta_p^2 = .02$. Younger adults were also judged as more malleable than older adults ($M_s = 3.77$ [$SD = 0.96$] vs. 2.99 [$SD = 0.91$], respectively), $F(1, 802) = 145.57, p < .001, \eta_p^2 = .15$. Men were judged as marginally more malleable than women ($M_s = 3.44$ [$SD = 1.06$] vs. 3.32 [$SD = 0.95$], respectively), $F(1, 802) = 3.79, p = .052, \eta_p^2 < .01$.

Finally, target age and target political orientation interacted, $F(1, 802) = 13.48, p < .001, \eta_p^2 = .02$, such that older liberals ($M = 3.22, SD = 0.90$) were judged as significantly more malleable than older conservatives ($M = 2.76, SD = 0.86; p < .001$); younger liberals and conservatives did not differ ($M_s = 3.76, SD = 0.92$ vs. $3.77, SD = 0.99$, respectively; $p = .940$).

6.2.2.1. Participant political orientation. To examine the influence of participant political orientation, we regressed malleability judgments onto target political orientation (effects-coded with liberal = -1, conservative = 1), target age (effects-coded with 20 years = -1, 65 years = 1), target gender (effects-coded with male = -1, female = 1), participant political orientation, and their interactions. Participant political orientation did not independently predict, nor did it interact with any of the focal independent variables to predict, judgments of malleability ($\beta_s < |.06|, ps > .108$) save for one three-way interaction with target political orientation and age, $\beta = -.07, t = -2.06, p = .040$. See Supplemental Materials for discussion.

6.3. Discussion

Experiments 3A–B provide mixed support for the effect of target political orientation on malleability judgments. When accounting for target age and gender, liberal targets are judged as more malleable than conservative targets in Experiment 3B, but not in Experiment 3A.

Unexpectedly, in Experiment 3B target political orientation and age significantly interacted to predict malleability judgments: Whereas older liberals were judged as more malleable than older conservatives, judgments of younger liberals and conservatives did not differ. This interaction suggests that political orientation may function as a stronger cue of a person's ability to change for some targets (i.e., older targets) than others (i.e., younger targets). However, the effect did not emerge in Experiment 3A, and a separate experiment (see Footnote 7) found effects of political orientation influencing malleability beliefs about 20-year-old targets. Thus, across experiments the evidence does not point to a clear and consistent pattern whereby target age and political orientation interact.

7. Experiment 4: Extremity of political ideology

The purpose of Experiment 4 is two-fold. First, and following Experiment 2, we more extensively test whether the extremity of a target's political ideology influences judgments of malleability. If political ideological extremity is itself seen as indicating fixedness, then extreme conservative and extreme liberal targets will be judged as more fixed than politically moderate targets. Second, we examine whether people consider the average liberal and conservative to be differently extreme in their political ideologies. Given the findings of Experiments 1–3B, if people judge the average conservative to hold a more extreme political ideology than the average liberal, it may be this difference in presumed extremity, rather than political orientation per se, that accounts for the perceived fixedness of conservatives relative to liberals. In Experiment 4, participants reported malleability judgments about either the personalities or moral characters (randomly assigned) of seven different targets ranging in political ideological extremity.

7.1. Method

7.1.1. Participants

Two hundred ninety-nine participants from the United States were recruited via MTurk. A sensitivity analysis revealed that for Experiment 4's design the sample ($N = 299$) provided 80% power to detect an effect size of $d = 0.16$.

7.1.2. Procedure

Participants completed malleability judgments of either personality or moral character (randomly assigned) for seven different targets that varied in political orientation in one of two orders (randomly assigned): either most liberal to most conservative target, or most conservative to most liberal target. Participants then indicated via mouse click where they thought the average liberal and the average conservative fell on the liberal-conservative spectrum (order randomized). Finally, all participants completed demographic measures. The three items measuring participant political orientation ($\alpha = .94$) were combined into a composite score.

7.1.3. Measures and materials

Rather than embedding target information into the malleability judgment questions themselves (as was done in Experiments 1 and 3A–B), target political orientation was conveyed visually. For example, instead of providing their malleability judgments about an “extremely liberal” target or a “moderate” target, participants viewed an illustration indicating the target's self-identified political orientation, and read, “In the image below, the ‘X’ marks how liberal to conservative a person is on the political liberal—political conservative spectrum. Note that by

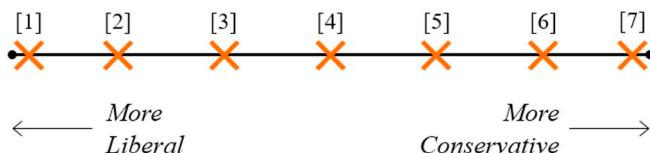


Fig. 1. Target-specific political orientation information was conveyed visually with a single “X” indicating where the target identified themselves on the liberal–conservative spectrum. Placement of the Xs for each of the seven within-subjects targets are illustrated, but were presented to participants separately per target (i.e., participants saw only one X on the spectrum at a time). The values (1–7) are for illustrative purposes only.

‘liberal’ and ‘conservative,’ the image refers to political liberalism and/or conservatism.” See Fig. 1 for placement of the Xs used in each of the seven within-subjects conditions.

We reasoned that had we explicitly labeled targets corresponding to various extremities of political ideologies (e.g., “extremely liberal,” “slightly liberal,” “moderate,” etc.), rather than visually representing this information, we might have biased responses on the extremity of perceived malleability.

7.1.3.1. Malleability judgments of personality and moral character. The eight items from Experiment 1 were modified to assess perceived malleability of personality and moral character. As in previous experiments, malleability judgments of personality and moral character were combined into a single outcome measure of malleability ($\alpha > .74$).

7.1.3.2. Political ideological extremity judgments of the average liberal and conservative. Participants were presented with the same illustration used to convey target political orientation (Fig. 1), but with no Xs. They read, “Please take a moment to think about the average person who is [liberal/conservative]. How liberal to conservative are they?” Participants were instructed to use their cursor to indicate where they would place the target on the political spectrum. The blank spectrum on which participants responded was divided into seven areas corresponding to the seven Xs on Fig. 1; the areas were not visible to participants. We recorded participant responses numerically reflecting the closest X to their response, from 1 (*more liberal*) to 7 (*more conservative*).

7.2. Results

To test whether Experiment 4 replicated the prior finding that liberals are judged as more malleable than conservatives, we conducted paired-samples *t*-tests comparing malleability judgments of the average of the three liberal targets vs. the average of the three conservative targets. Results replicated prior experiments: Liberals were judged as more malleable ($M = 3.62$, $SD = 1.01$) than conservatives ($M = 3.41$, $SD = 1.03$), $t = 4.15$, $p < .001$, $d = 0.20$.

We first tested for, and found no evidence of, order effects (see Supplemental Materials). We next conducted repeated-measures ANOVAs on malleability judgments, with target political ideology (seven targets ranging from most liberal to most conservative) as the repeated factor, and attribute (personality, moral character) as the between-subjects factor. Because the assumption of sphericity was violated for all repeated-measures analyses, Greenhouse-Geisser statistics are reported.

Malleability judgments varied with political ideology, $F(3.11, 926.34) = 27.07$, $p < .001$, $\eta_p^2 = .08$. Both the linear and quadratic contrasts were significant. The linear contrast indicates an effect of political orientation, $F(1, 298) = 18.20$, $p < .001$, $\eta_p^2 = .06$, with increasingly conservative targets rated as increasingly fixed, consistent with the *t*-test reported above. The quadratic contrast indicates the effect of political ideological extremity on malleability beliefs, $F(1,$

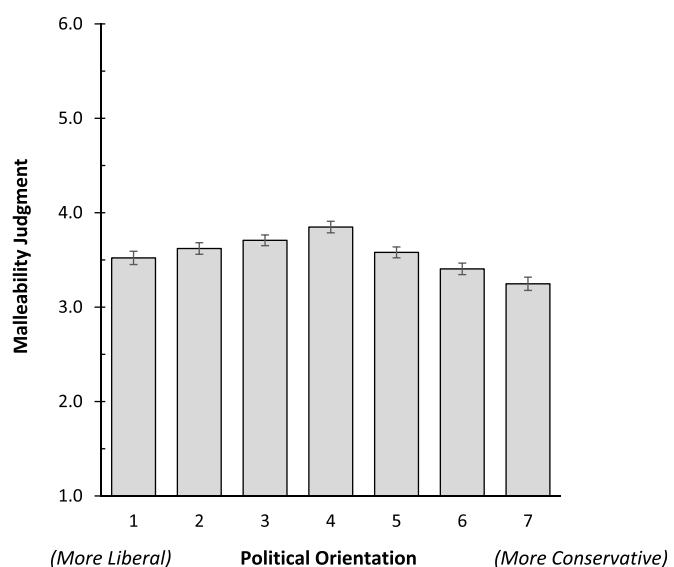


Fig. 2. Malleability judgments about targets of political ideologies that vary in extremity (1 = *more liberal*; 7 = *more conservative*). Higher values represent greater judgments of malleability (vs. fixedness). Error bars represent standard errors. See Table S8 in Supplemental Materials for means, standard deviations, and 95% confidence intervals.

298) = 56.13, $p < .001$, $\eta_p^2 = .16$. Repeated contrasts compared the effect of each group on malleability judgments (see Fig. 2). Targets in the center of the liberal-conservative spectrum were judged as significantly more malleable than every other group ($ps < .025$). Targets on the far right (the most conservative targets) were judged as significantly less malleable than every other group ($ps < .001$).

7.2.1. Target political orientation and ideological extremity

Because we found that greater ideological extremity led to greater perceived fixedness, this raises the possibility that in our prior experiments, participants simply thought of the average conservative as more extreme in their political views than the average liberal. Thus assumed ideological extremity, rather than political orientation per se, may have driven the group differences. However, there was no evidence that participants judged the average liberal ($M = 1.59$, $SD = 0.78$) and average conservative ($M = 1.66$, $SD = 0.78$) as differently extreme ($p = .206$). We report order effects (which do not change interpretation of the data) and how we calculated the index of ideological extremity in Supplemental Materials.

7.2.2. Participant political orientation

To test the potential moderating influence of participant political orientation on the effect of target political orientation on malleability beliefs, we conducted a repeated-measures ANOVA, treating participant political orientation as a covariate and including an interaction term between participant and target political orientation. Participant political orientation did not independently predict, nor did it interact with target political orientation to predict malleability beliefs ($ps > .492$).

7.3. Discussion

Experiment 4 produced three main findings. First, and supporting the primary prediction, liberals were judged as more malleable than conservatives. Second, ideological extremity had a significant influence on malleability judgments: greater extremity on both sides of the liberal-to-conservative spectrum predicted greater perceived fixedness. Differences in extremity did not fully account for the effect of political orientation. Of note, a single measure communicated both orientation and ideological extremity, and the midpoint of the spectrum may reflect

different types of presumed targets, such as a person who is ambivalent and has conflicting political attitudes, is apathetic and identifies as neither liberal nor conservative, or identifies with a distinct “moderate” or “independent” category (see Greene, 1999; Hawkins & Nosek, 2012; Keith et al., 1992). We return to this point in the General Discussion.

Lastly, the average liberal and conservative were not rated as differently extreme in their political ideologies, suggesting that the findings of Experiments 1–3B were not driven by perceived differences in ideological extremity (although Experiment 4’s within-subjects design may have minimized the possibility of observing actual differences in perceived extremity; future research should explore this issue further).

Overall, the results of Experiment 4 suggest that target political orientation and ideological extremity independently predict malleability judgments. With the last experiment, we examine whether prejudice felt toward a liberal vs. conservative target influences judgments of that target’s malleability.

8. Experiment 5: Perceiver prejudice and malleability judgments

Experiments 1–4 paint a nuanced picture of how target political orientation shapes malleability judgments. Although liberal targets tend to be judged as more malleable than conservative targets, a variety of factors (i.e., target age, target ideological extremity) appear to jointly operate with target political orientation on perceived malleability.

In the final experiment, we examine whether the effect of target political orientation on malleability judgments persists when controlling for participant positivity toward the target. We also test whether participants feel more prejudice against their political outgroup, which in turn predicts decreased judgments of malleability. This analysis also can indirectly reveal whether participants view malleability positively or negatively.

We predicted that participants would feel greater prejudice against their political outgroup than their political ingroup. If people in general view malleability positively, then greater prejudice toward a target will predict judgments that the target is more fixed. That said, participants’ political orientation may moderate this effect: if liberals prefer malleability and conservatives prefer fixedness (e.g., Jost et al., 2008) liberal participants may judge targets they dislike as more fixed, whereas conservative participants may judge targets they dislike as more malleable. We used a between-subjects design to test these predictions. Participants reported malleability judgments of, and prejudice felt against, the average liberal or the average conservative target.

8.1. Method

Experiment 5’s sample size, design, materials, and analyses were pre-registered on the Open Science Framework prior to data collection (unless otherwise noted; see <https://osf.io/nfajt/>).

8.1.1. Participants

We recruited 974 participants from the United States via MTurk. Sensitivity analyses revealed that for Experiment 5’s design the sample ($N = 974$) provided 80% power to detect an effect size of $f = 0.09$.

8.1.2. Design and procedure

Participants were randomly assigned to answer questions about one of two targets: the average liberal or the average conservative. We randomly assigned participants to answer questions about target malleability (of personality and moral character; counterbalanced) or prejudice first. Finally, all participants completed demographic measures, including a three-item measure of their own political orientation. As in Experiment 1, these items ($\alpha = .94$) were combined into a composite score.

8.1.3. Measures

8.1.3.1. Malleability judgments of personality and moral character

The same eight items used in Experiment 1 were used to assess malleability judgments of personality and moral character ($\alpha = .88$ and .90 for liberals and conservatives, respectively). As in earlier experiments, judgments of personality and moral character were combined into a single composite measure of malleability.

8.1.3.2. Prejudice. We measured prejudice with a composite of social distance, general feelings, and overall impression, following the approach of Crawford, Brandt, Inbar, Chambers, and Motyl (2017).

8.1.3.2.1. Social distance. Participants indicated their willingness to socially distance themselves from their assigned target on a 7-point Likert scale (1: *very unwilling*; 7: *very willing*). The four items were: “How willing would you be to (1) work with the average [liberal/conservative]; (2) meet the average [liberal/conservative]; (3) have the average [liberal/conservative] marry into your family; and (4) have the average [liberal/conservative] as a close personal friend?”

8.1.3.2.2. Feeling thermometer. Participants indicated how cold to warm they felt toward their assigned target on a 0 (*very cold*) to 100 (*very warm*) scale.

8.1.3.2.3. Overall impression. Participants indicated their overall impression of their assigned target on a 1 (*very unfavorable*) to 7 (*very favorable*) scale.

The four social distance items, the feeling thermometer item, and the overall impression item were each reverse-coded so that higher numbers reflected greater prejudice. The scales of each item were then transformed to a 0 to 1 scale, and averaged into a composite measure of prejudice ($\alpha = .94$ for both liberal and conservative targets).

8.2. Results

To test whether Experiment 5 replicated the finding that liberals are judged as more malleable than conservatives, we first conducted a between-subjects ANOVA comparing malleability judgments of the two targets (note that this analysis was not pre-registered). In contrast to predictions, liberals and conservatives were not judged as differently malleable (liberals: $M = 3.59$, $SD = 0.93$; conservatives: $M = 3.57$, $SD = 0.94$), $F < 1$, $p = .649$.

To examine the role of prejudice felt against the target, we next conducted a between-subjects ANCOVA including target political orientation as the primary predictor and prejudice as the covariate. Liberals and conservatives again were not judged as differently malleable ($p = .618$), but prejudice significantly predicted malleability beliefs: participants judged targets for whom they felt greater prejudice as less capable of change, $F(1, 971) = 15.70$, $p < .001$, $\eta_p^2 = .016$. Neither measure order (whether participants viewed malleability or prejudice measures first) nor attribute order (whether participants viewed personality or moral character items first) independently predicted or interacted with target political orientation to predict malleability judgments ($ps > .344$). We thus collapsed across order conditions for all subsequent analyses.

To examine whether target political orientation, participant political orientation, and prejudice interacted to predict malleability judgments, we fit the data to a moderated mediation model with participant political orientation moderating all three pathways (see Fig. 3).

We used PROCESS Model 59 (Hayes, 2017), entering target political orientation (effects-coded: liberal = -1; conservative = 1) as the independent variable, prejudice (centered) as the mediator, participant political orientation (centered) as the moderator, and malleability beliefs as the dependent variable.

As expected, target and participant political orientation interacted to predict prejudice, $B = 0.09$, $SE = 0.004$, $t = 24.59$, $p < .001$ (pathway d in Fig. 3). To parse this interaction, we examined the effect of target political orientation on prejudice separately for liberal and conservative participants. As in earlier experiments, the sample skewed liberal so following the approach of Experiment 2 we examined effects for participant political orientation at the midpoint of the conservative

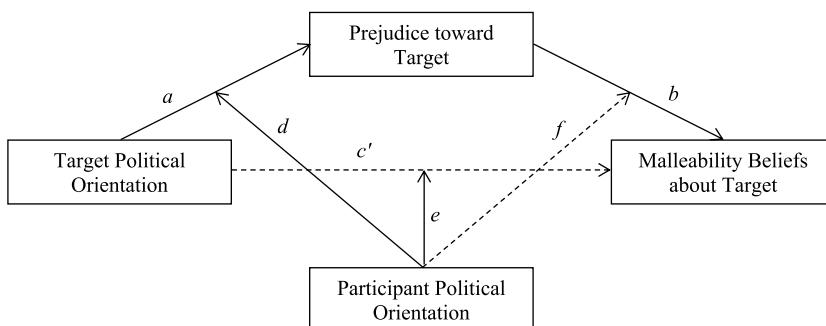


Fig. 3. Model testing the indirect effect of target political orientation on malleability beliefs via prejudice felt toward the target, moderated by participant political orientation. Note that the c' pathway refers to the direct effect of target political orientation on malleability beliefs. The solid and dashed lines indicate model paths that are significant and non-significant, respectively, when fitted to the data.

range of the scale (2.5) and again at the liberal range of the scale (5.5). Whereas conservative participants reported more prejudice against liberal targets ($B = -0.11$, $SE = 0.01$, $t = -12.33$, $p < .001$), liberal participants reported more prejudice against conservative targets ($B = 0.16$, $SE = 0.01$, $t = 21.87$, $p < .001$).

Next, the prejudice participants felt toward the target predicted malleability beliefs about that target such that greater prejudice was associated with increased judgments of fixedness, $B = -0.83$, $SE = 0.16$, $t = -5.16$, $p < .001$ (pathway b). Participant political orientation did not moderate this effect, $p = .789$ (pathway f).

Lastly, and consistent with the analyses reported earlier, target political orientation did not predict malleability beliefs about the target ($B = 0.04$, $p = .283$; pathway c'), though target and participant political orientation did interact to predict malleability beliefs, $B = 0.08$, $SE = 0.02$, $t = 3.29$, $p = .001$ (pathway e); unexpectedly, within the full model and thus controlling for the other paths, liberal participants associated conservative targets with greater malleability, $B = 0.12$, $SE = 0.05$, $t = 2.56$, $p = .011$, whereas conservative participants associated liberal targets with greater malleability, $B = -0.11$, $SE = 0.05$, $t = -2.08$, $p = .038$. Finally, the indirect effect of target political orientation on malleability beliefs via prejudice was significant for both liberal and conservative participants (liberal participants: $B = -0.13$, $SE = 0.03$, 95% CI [-0.20, -0.07]; conservative participants: $B = 0.09$, $SE = 0.03$, 95% CI [0.03, 0.15]).

8.3. Discussion

In Experiment 5, liberals and conservatives were not judged as differently malleable. However, targets for whom participants felt greater prejudice (their political outgroup) were judged as more fixed than targets for whom participants felt less prejudice (their political ingroup). These findings may reflect political ingroup preference, and

suggest that participants in Experiment 5 considered malleability a positive construct, and fixedness a negative construct.

Surprisingly, in examining the interaction between participant and target political orientation on malleability beliefs within the model, political *outgroup* targets were judged as more malleable (liberal participants judged conservative targets as more malleable; conservative participants judged liberal targets as more malleable; pathway e of Fig. 3). This finding appears to oppose the observed indirect effect of greater prejudice toward political outgroup targets, which in turn predicts judgments of outgroup targets as more fixed (pathways a and b). These data patterns suggest that participant political orientation may affect malleability judgments via multiple and potentially opposing pathways, and could account for the lack of moderating effect of participant political orientation in the prior experiments. Further, the participant and target political orientation interaction manifests only upon controlling for participant prejudice within the model. How to best conceptualize malleability upon controlling for positive and negative affect (as is done here) is an open question we return to in the General Discussion.

9. Internal meta-analysis

Given varying effects across experiments, we conducted an internal meta-analysis (Braver, Thoemmes, & Rosenthal, 2014; Goh, Hall, & Rosenthal, 2016) to estimate the effect of target political orientation on malleability beliefs across the totality of the data. We meta-analyzed the effect of target political orientation on the combined outcomes of personality and moral character malleability judgments including Experiments 1, 3A-5, and a separate supplemental replication of Experiment 1 (see Footnote 7; referred to as Experiment S1 in Fig. 4) using a fixed-effects model ($k = 6$). Because the independent and dependent variables of Experiment 2 were switched in relation to the other

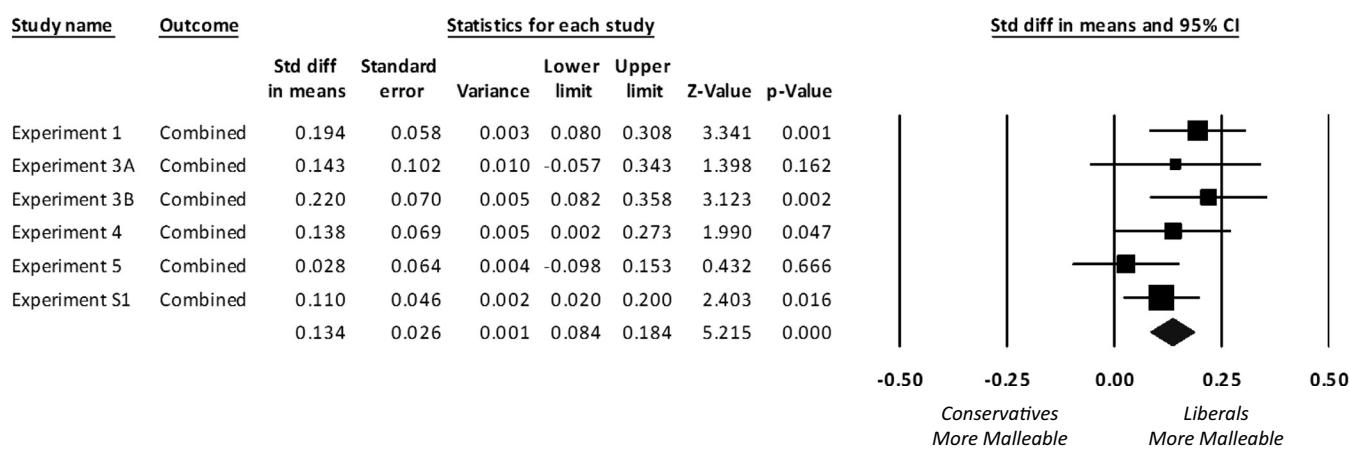


Fig. 4. Meta-analysis of political orientation as a target-specific predictor of malleability beliefs of personality and moral character (combined outcomes). The last row represents the overall effect (visualized with a diamond).

experiments, it was not appropriate to include Experiment 2 in the meta-analysis. The meta-analysis reveals a small effect of political orientation on malleability judgments, $g = 0.13$, 95% CI [0.08, 0.18], $p < .001$ (see Fig. 4) such that liberals are judged as more malleable than conservatives. There was little evidence of heterogeneity, $Q = 5.59$, $p = .348$, $I^2 = 10.58$, suggesting that the effect varies in neither magnitude nor direction across the experiments. These experiments, analyzed meta-analytically, therefore provide evidence that target political orientation shapes malleability judgments.

10. General discussion

We demonstrate that a person's political orientation shapes others' beliefs about whether that person can change: Experiments 1 and 3A-5 meta-analytically suggest that liberals are judged as more malleable than conservatives, and Experiment 2 shows that exemplars of malleability are reported to be more liberal than exemplars of fixedness. Across experiments, conservatives fell slightly below the midpoint of the malleability belief scale, whereas liberals fell slightly above or at the midpoint. Rather than conclusively showing that conservatives are judged as fixed and liberals are judged as malleable, these results demonstrate that conservatives are judged as *more fixed than* liberals.

We reveal several other predictors of perceived malleability that overlap with target political orientation, allowing us to draw more nuanced conclusions about the relationship between target political orientation and malleability judgments. First, we replicate the robust effect that younger people are judged as more malleable than older people (Neel & Lassetter, 2015). Experiment 2 speaks to age as a potential mechanism of the effect of malleability on political orientation: malleable exemplars are reported as younger, and younger exemplars are reported as more politically liberal. Exemplar age thus appears to contribute to the link between malleability and target political orientation, but across experiments, does not appear to fully account for that relationship.

Second, with Experiment 5 we show that feeling more prejudice against a political outgroup target predicts judging that target as more fixed. Although we do not replicate the primary effect of political orientation on malleability beliefs with this experiment, fitting the data to a moderated mediation model suggests that liberals and conservatives feel prejudice against their political outgroup, and in turn, judge those outgroup targets as more fixed. Target political orientation may therefore indirectly affect malleability judgments via prejudice.

Third, with Experiment 4 we demonstrate that greater ideological extremity – on both ends of the *liberal–conservative* spectrum – is associated with greater perceived fixedness. We note that the unidimensional liberal–conservative dimension may not fully reflect people's multidimensional belief systems (e.g., Feldman & Johnston, 2014; Morgan & Wisneski, 2017; Treier & Hillygus, 2009). Future research should examine both how people interpret different points on the political spectrum and how they more generally assess others' political orientations and ideological extremities. Recent work suggests that judgments of extremity can independently influence and shape political judgments (e.g., Amira, 2015) and further research in this vein can help to clarify how different operationalizations of political orientation and ideological extremity contribute to malleability judgments.

Our data do not paint a simple picture of how a person's own political orientation influences malleability judgments of conservatives and liberals. With Experiment 5 we examined whether prejudice toward political outgroup members predicted malleability judgments. We found evidence consistent with mediation where liberals and conservatives display outgroup prejudice, which in turn predicted viewing the political outgroup as less malleable. This would suggest that both liberal and conservative participants valued malleability more than fixedness.

However, Experiment 5 also revealed a surprising effect whereby participants associated political outgroup targets with increased

malleability, a finding that appears to be at odds with the same experiment's observed indirect effect of participants holding more prejudice against political outgroup targets, and in turn judging them as more fixed. We note that this interaction only manifests upon controlling for all other pathways in the model, including those associated with prejudice. This raises the question: what do malleability beliefs mean when controlling for prejudice? The residual from this analysis represents beliefs about change free of valence. Future research can identify and directly test psychological constructs that this residual may represent, such as beliefs about susceptibility to social influence (Davison, 1983; Perloff, 1999; Pronin, Berger, & Molouki, 2007).

Overall, these opposing data patterns suggest a multifaceted role of participant political orientation in malleability judgments. If there are opposing pathways through which participant political orientation affects malleability judgments, this could account for the lack of interaction between target and participant political orientation across the prior reported experiments (see Table S9). We also note that the current experiments drew from liberal-skewed samples (see Table S2) and the internal meta-analysis should be interpreted with this caveat in mind. Finally, because our data do not directly test the motivated construal of malleability as positive or negative, future research can more pointedly examine whether and when liberals' and conservatives' preferences for malleability and fixedness differ, and how these attitudes affect judgments of others' malleability.

10.1. Implications and conclusions

Across six experiments, we demonstrate that target political orientation shapes malleability judgments. These findings contribute to a growing body of research that reveals the texture of perceiver malleability beliefs: rather than believing that everyone can or cannot change, perceivers believe that certain people are more able to change than others. Because malleability beliefs influence social perception and behavior, examining target-specific predictors of such beliefs will enable researchers to make nuanced predictions about how different targets will be treated.

For example, if conservatives are judged as less capable of change than liberals, a conservative senator who changes her stance on a policy may be judged as violating expectations more so than a liberal senator who does the same thing. Whereas this unexpected behavior from the conservative senator may result in negative evaluations (Burgoon, 1978; Jussim, Coleman, & Lerch, 1987), a liberal senator may escape these expectancy-driven consequences. Alternatively, if a politician makes a statement that is ambiguous as to whether or not he or she supports change, people may rely on their malleability stereotypes and assume the ambiguous statement calls for greater change when made by a liberal than a conservative politician.

Additionally, if people believe members of political outgroups cannot change, then liberals and conservatives may devalue and avoid intergroup discussion of contentious political issues. Such a tendency may lead to an "echo chamber" of information exposure (e.g., Boutyline & Willer, 2017; Iyengar, Hahn, Krosnick, & Walker, 2008) and ultimately fuel increased political polarization (e.g., Layman, Carsey, & Horowitz, 2006; Westfall, Van Boven, Chambers, & Judd, 2015).

With the current research we focused on malleability beliefs about a target's personality and moral character, but future work can examine whether the effect of political orientation on malleability beliefs extends beyond these fundamental attributes to assumptions about a target's daily routines or preferences (e.g., compared to liberals, perhaps conservatives are assumed to adhere to more stable work schedules or exercise routines or to have more stable food or music preferences). Further, because malleability beliefs have wide-ranging effects on social judgment and behavior (e.g., Chiu et al., 1997; Levy et al., 2001; Plaks, 2017), future research should continue to investigate other target factors on which perceivers might rely to gauge whether a target can change, and why.

Overall, the current research uncovers two target-specific predictors of malleability, political orientation and political ideological extremity, and speaks to potential reasons why political orientation is associated with malleability beliefs. The reported experiments demonstrate that political outgroup members are judged less favorably than political ingroup members and as a result, are judged to be more fixed. Examining the target-specificity of malleability beliefs will allow researchers to build a fuller understanding of who we think can change, who we think cannot, and why. Doing so may help to further illuminate the effects of malleability beliefs on social perception, social judgment, and public policy.

Open practices

Experiments 1–4 and S1 were not formally preregistered. The pre-registration and materials for Experiment 5 can be accessed at <https://osf.io/nfajt/>.

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Appendix A. Supplemental Materials

Supplemental Materials to this article can be found online at <https://doi.org/10.1016/j.jesp.2019.01.002>.

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