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Stereotype activation and self-regulation by conservatives and liberals in political encounters

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ABSTRACT

We examined stereotyping and its effect on self-regulation in preparation for inter-ideological interactions. Turkish conservative and liberal students anticipated interacting with a political outgroup (vs. ingroup) member and the accessibility of outgroup and ingroup stereotypes was measured. Conservatives in both outgroup and ingroup interaction conditions showed higher accessibility for outgroup stereotypes. Liberals, however, showed lower accessibility for both outgroup and ingroup stereotypes in both conditions. Liberals’ suppression of stereotypes about the anticipated partner led to worse self-regulation when the anticipated partner was conservative but better self-regulation when the partner was liberal. Conservatives’ stereotype accessibility did not affect their self-regulation. These findings show that liberals may tend to rely on self-regulatory resources to suppress their stereotypes while anticipating inter-ideological interactions, while conservatives rely on stereotypes to navigate such interactions.

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KEYWORDS

Intergroup perception; political ideology; self-regulation; stereotypes

The past 15 years have witnessed a tremendous increase in research conducted on the psychological motives associated with political ideologies (e.g., Jost, Glaser, Kruglanski, & Sulloway, 2003a; Jost, Napier, Thorisdottir, Gosling, Palfai, & Osta\textsuperscript{f}in, 2007). However, little is known about people’s psychological experiences during (or in preparation for) an inter-ideological interaction. The present research examines stereotyping in preparation for inter-ideological interactions and its effect on self-regulatory processes in such situations. Stereotyping has been shown to bias expectations about interaction partners in important ways and may thus hinder smooth interactions (e.g., Amodio & Devine, 2006). On the other hand, keeping applicable stereotypes at bay may consume self-regulatory resources, which may bring its own disadvantages further downstream (i.e., increased risk of impulsive behavior subsequently) (Muraven & Baumeister, 2000). As a first step to understanding the psychological tendencies that might facilitate or hinder effective and respectful communications with members of the ideological outgroup, we examined the use of stereotypes in liberals and conservatives and its effects on self-regulatory resources in an anticipated interaction involving politics.

Political orientation, prejudice, and stereotyping

People may possess stereotypes of conservatives and liberals, like many other social categories, and such stereotypes should play an important role in navigating social interactions. This should especially be the case when the other person is a stranger about whom the only piece of information known is his/her political ideology (Brewer, 1988; Fiske & Neuberg, 1990). Likewise, in the absence of individuating information coupled with a history of conflict between groups, reactions to outgroup members often involve emotional negativity, that is, prejudice (Allport, 1954). While stereotyping and prejudice are widely observed across human populations, research suggests that there...
may be a stronger link between endorsement of conservative (vs. liberal) ideology and the tendency
to display these phenomena (Duckitt, 2001; Sibley, Robertson, & Wilson, 2006; but see Brandt,
Reyna, Chambers, Crawford, & Wetherell).

Various studies have shown that both of the two critical dimensions of political conservatism (see
Jost et al., 2003a), right-wing authoritarianism (RWA) and social dominance orientation (SDO),
predict prejudice towards out-groups significantly (see Sidanius & Pratto, 1999; see the meta-analysis
by Sibley & Duckitt, 2008). For instance, Duckitt and his colleagues (2002), in an American sample,
showed that RWA and SDO correlated with prejudice against ethnic minorities (Duckitt et al., 2002).
More recently, Asbrock, Sibley, and Duckitt (2010) found that both SDO and RWA scores predicted
change in prejudice toward “dissident” groups who have been typically associated with liberal political
views (e.g., feminists, gay right activists). Studies which used implicit measures of prejudice showed
consistent results. Cunningham, Nezlek, and Banaji (2004) found an indirect relationship (mediated by
explicit ethnocentrism) between RWA and implicit prejudice towards different out-groups (as
measured by an implicit association task, IAT). Taken together, these findings point to a link between
conservative orientation and intolerance toward opposing (i.e., liberal) ideological views in general.

A limited number of work has examined the relationship between political ideology and stereo-
typing (i.e., cognitive representations of beliefs about the groups; Hamilton, 1981), however. In one
of those works, Nosek et al. (2007) reported that conservatives showed a higher tendency of implicit
stereotyping for minority groups and greater implicit preference for the advantaged groups (e.g.,
Whites, males, straight people) over disadvantaged ones (e.g., blacks, females, gays). Another line of
work from the inference-making research showed that conservatives were more likely to implicitly
infer traits (as opposed to context-dependent goals) from mundane behaviors of others whereas the
opposite was true for liberals (Olcaysoy Okten & Moskowitz, 2018). Namely, conservatives showed a
higher tendency to characterize people by attributing stable characteristics (as opposed to temporary
motives) from their simple behaviors, a tendency that forms the foundation of stereotyping.
Examining the same issue from an individual-differences perspective, conservatives tend to have
higher needs for structure and cognitive closure (see Jost et al., 2007), both of which are known to be
closely related to stereotyping (Dijksterhuis, van Knippenberg, Kruglanski, & Schaper, 1996;
(2006) found that the relationship between cognitive style (needs for order and structure) and racism
was mediated by RWA and SDO (see also Yılmaz, Cesur, & Bayad, in press). In contrast, liberals
were shown to have higher levels of openness to experience, cognitive flexibility, and complexity in
thinking (e.g., Hinze, Doster, & Joe, 1997; Tetlock, 1983). This suggests that liberals should be
motivated to be tolerant of “deviators” from their own worldview, unlike conservatives.

Despite the mentioned evidence on the relationship between conservative ideology and stereo-
typing in general, to our knowledge, conservative people’s tendency to stereotype ideological out-
group members (i.e., people who hold political opinions that are inconsistent with conservatism,
such as liberals) has not been shown directly before. Assuming such a tendency would also be
present in inter-ideological interactions, one would expect conservatives to have greater propensity
to stereotype liberals than vice versa. The present study investigates such ideological stereotypes for
the first time to our knowledge.

Stereotyping and self-regulation

Self-regulation has been suggested to operate as a muscle that may be temporarily depleted after
being used (Muraven & Baumeister, 2000). According to resource depletion theory, capacity con-
straints (i.e., cognitive load) affect controlled processes such as generating counterarguments in
response to persuasive messages (Wheeler, Briñol, & Hermann, 2007). More relevant to the argu-
ment of the present study, intergroup interactions were shown to temporarily impair executive
functions of those who find those interactions especially stressful (Richeson & Shelton, 2003; Richeson & Trawalter, 2005).
Gordijn, Hindriks, Koomen, Dijksterhuis, and van Knippenberg (2004) suggested that the mechanism underlying resource depletion during intergroup interactions may be “stereotype suppression.” Stereotypes have been typically conceptualized as mental energy-savers (Macrae, Bodenhausen, Milne, & Jetten, 1994); having them more accessible in mind should save the person’s cognitive resources. Even subliminal presentation of stereotypes during an impression formation task were shown to free up resources for a simultaneous task (Macrae et al., 1994). Suppression of stereotypes, on the other hand, has been shown to be an effortful process. When asked to suppress their stereotypes of skinheads, for instance, people’s performance on a simultaneous task was significantly impaired (Macrae, Bodenhausen, Milne, & Wheeler, 1996). Similarly, Gordijn et al. (2004) showed that those who were motivated to suppress their stereotypical thoughts about the interaction partners were more likely to experience resource depletion during such interactions.

Based on the literature reviewed above suggesting that conservatives may rely more on stereotypes to navigate social interactions than liberals, we expected conservatives to have their stereotypes for the ideological outgroup more accessible than liberals. However, previous research also suggested that such differences in stereotyping between liberals and conservatives may stem from corrective processing, which requires cognitive capacity (see Gilbert, Pelham, & Krull, 1988). Specifically, liberals are more likely than conservatives to correct their initial stereotypical judgments by effortful processing (Skitka, Mullen, Griffin, Hutchinson, & Chamberlin, 2002; Stern, West, Jost, & Rule, 2013). If that is true, liberals may need to exert cognitive resources to engage in such “corrective processing” and actively suppress their stereotypical thoughts of the interaction partner, subsequently leading to impaired performance in a self-regulation task.

**The present study**

Considering the previous work on ideological differences in implicit stereotyping (e.g., Nosek et al., 2007), the present study hypothesized that conservatives (vs. liberals) should show a stronger tendency to rely on their stereotypical knowledge in preparation for a political encounter. Specifically, we hypothesized that, when anticipated to interact with someone of opposing ideology, conservatives (vs. liberals) should tend to have stereotypes that apply to this ideological outgroup member more accessible (Hypothesis 1a). Liberals, on the other hand, should show stronger suppression of their stereotypes related to conservatives in preparation for such inter-ideological interactions (Hypothesis 1b).

The second question the present research examines is how accessibility of stereotypes about the interaction partner affects self-regulatory resources. Two complementary hypotheses can be generated based on the existing evidence on the relationship between stereotyping and self-regulation reviewed above. First, if conservatives (vs. liberals) have outgroup stereotypes more accessible in anticipation of intergroup interaction (i.e., if Hypothesis 1a is supported), they may exhibit less resource depletion and perform better at a subsequent self-regulation task than liberals (Hypothesis 2a). Second, liberals’ tendency to actively suppress outgroup stereotypes (as suggested in Hypothesis 1b) may impair their performance in the self-regulation task they complete when preparing for a cross-group (but not within-group) interaction (Hypothesis 2b).

**Method**

**Design**

A 2 (Ideology of Participant: conservative, liberal) × 2 (Ideology of Partner: conservative, liberal) between-subjects design was used. The analysis of our lexical decision task data required a third, within-subjects factor with three levels representing word type (outgroup stereotype, ingroup stereotype, control).
**Procedure and materials**

The present study consisted of two phases: preselection and the experiment. An online battery of measures was administered to preselect participants into the experiment. It included an extensive self-report measure of conservatism besides several other unrelated questionnaires. All materials and communication with the participants were in Turkish.1

**Preselection phase**

Five hundred seventy-six students enrolled in introductory psychology classes in Bogazici University, Turkey, completed an online battery, including a conservatism scale that was shown to be a reliable and valid measure of political ideology in Turkish context (Saribay, Olcaysoy Okten, & Yilmaz, 2017). The conservatism score was determined through responses on items in two subscales of this scale; resistance to change (9 items; e.g., “In order to preserve national stability, establishment of new political parties should be limited”) and opposition to equality (17 items; e.g., “Groups of a lower status should know their place in society”). Participants rated their agreement with each statement on a 7-point scale (1: Strongly Disagree, 7: Strongly Agree). The average scores in these subscales were used to rank participants in terms of conservatism scores. Participants from the top and bottom quartiles in terms of conservatism score were invited to the study. 227 (152 female, $M_{\text{age}} = 20.04$, $SD_{\text{age}} = 1.46$) students agreed to participate in the experiment. Among the 208 participants whose data were included in the analyses (see below for exclusion criteria), the “conservative” group ($N = 101$) scored significantly higher than the “liberal” group ($N = 107$) within both subscales of conservatism (resistance to change: $t(206) = 21.86, p < .001$; opposition to equality: $t(206) = 20.27, p < .001$). Conservative participants also rated themselves as being significantly more conservative than liberal participants on a self-placement scale (1: very liberal, 7: very conservative), $t(203) = 6.15, p < .001$.

**Experimental phase**

Participants attended the experimental phase at least 1 week and at most 5 weeks after completing the online battery. They arrived individually and were asked to sign a consent form, which provided the cover story that they would participate in two separate studies: one study on attention and another on “how knowing the view of a person before meeting him/her affects the interaction during a collaborative political task.” The consent form indicated that, in the political task, the participant would develop resolutions for a political issue in Turkey together with another participant who was allegedly continuing his/her own experimental session in another room. This was a cover story to create anticipation of an actual interaction; no such task was actually completed.

**Exposure to political ideology**

Participants were given a printed sheet containing a subset of the items in the conservatism scale (similar to the one in the online battery) ostensibly filled in by the other participant. To reinforce the cover story provided in the consent form, the experimenter verbally explained that the participant who filled in this scale was in the next room and that shortly they would collaborate on a task concerning political issues. However, before the interaction, the participant would have a chance to look over the other participant’s answers to a political questionnaire, in order to form an impression of him/her. The items shown to the participant included 5 items with the highest factor loadings within each subscale (i.e., opposition to equality and resistance to change). The ostensible responses of the interaction partner were arranged to give the impression that he/she was either a conservative (with a mean score of 6 out of 7 on that questionnaire) or a liberal (with a mean score of 2 out of 7). After viewing these responses, participants were asked to place their partner’s political orientation on a 7-point scale (1: very liberal, 7: very conservative). This procedure was intended to ensure that participants attended to the partner’s responses and also for determining those participants who are unable to correctly infer the partner’s political orientation from these responses.
Next, the experimenter asked the participant to complete an “attention task” before the other participant arrived for the political interaction task. All participants received first the Stroop task, and second, the lexical decision task (LDT).

**Self-regulation**
Self-regulation was measured with a Stroop task (Stroop, 1935) and operationalized through “Stroop interference” (see Dalton, Chartrand, & Finkel, 2010; Richeson & Shelton, 2003; Richeson & Trawalter, 2005). Specifically, Stroop interference refers to increased response latency due to the effort at inhibiting a prepotent response (i.e., word reading) while maintaining the task’s focal goal (i.e., color naming). DirectRT (Jarvis, 2010) experimental software was used for exposing participants to Stroop stimuli and measuring vocal response times. Stroop stimuli, which was either the Turkish name for one of four colors (red, blue, yellow, green) or a string of X’s in one of these colors as a baseline, were shown in capital letters in the center of a light grey background. The name of the color was either congruent or incongruent with the color of the font in which it appeared on the screen. Participants were instructed to pronounce the color of the stimulus on the screen as quickly as possible. The stimuli appeared one by one with an inter-trial interval of 1500 ms and remained on the screen until a response was registered. For each of the three types of stimuli (i.e., congruent, incongruent, baseline), there were 40 trials, consisting of 4 practice trials and 36 critical trials (presented in 3 blocks of 12 trials each). The order of stimuli was randomized with the condition of not presenting stimuli of the same trial type or color in a row. Stroop interference was calculated by subtracting the mean reaction times for the baseline trials from the mean reaction times for the incongruent trials (Richeson & Trawalter, 2005).

**Stereotype accessibility**
Accessibility of the negative stereotypes for people of one’s own and of the partner’s political orientation was measured through a lexical decision task (LDT) administered via DirectRT experimental software. This task has been widely used in stereotyping research to assess stereotype accessibility, specifically, the average time to respond to stereotype-related concepts in comparison to stereotype-unrelated concepts (e.g., Galinsky & Moskowitz, 2000; Sassenberg & Moskowitz, 2005). In this task, participants were asked to judge whether a letter string was a legitimate word or a nonword by pressing on the instructed keys (“L” for word and “A” for nonword stimuli) as quickly as possible. Items included 20 target words, 10 control words, and 30 filler nonwords. As target words, conservative and liberal participants were shown 10 words stereotypical of their ingroup and 10 words stereotypical of the outgroup (see the English translation of the word list in Appendix A). The stereotypical and nonstereotypical (control) words that conservative and liberal participants saw were chosen on the basis of ratings provided by a different set of conservative and liberal participants in a separate pilot study. Participants in the present experiment saw letter strings in black font one by one on a light grey background. The order of the strings was randomized individually. Before the experimental trials, participants completed five practice trials by responding to object words that were irrelevant to the experimental trials. Stereotype accessibility refers to the difference between the mean response latency for stereotypical words about a certain ideological category (i.e., liberal, conservative) and control words in the experimental trials. Lower response latency (i.e., faster responses) for stereotypical words compared to control words indicates higher stereotype accessibility.

**Debriefing**
Finally, participants were told that the interaction will not actually take place and were asked to fill out a debriefing form including two questions. First, participants were asked to guess the aim of the study and report any other suspicion they had about the procedure. Second, they were asked to report whether they have participated in a similar study before. All participants were debriefed about the real aim of the study via email after the completion of data collection.
Results

Manipulation check

We checked whether each participant could correctly identify the political orientation of his/her alleged interaction partner after viewing the scale filled out by this partner (see above). Nineteen participants (17 conservatives) failed to do this and were thus excluded from the analyses. None of the participants suspected that the interaction partner was not real or reported having participated in a similar study before.\(^3\)

Stereotype accessibility

Mean RTs for each type of stimuli in the LDT were computed by leaving out RTs faster than 200 ms or slower than 2000 ms (0.48% of all trials) and false responses, as in previous studies using LDT (e.g., Saribay, Rim, & Uleman, 2012). The data of three conservative and three liberal participants with z-scores over 3.29 for at least one of the three types of words (outgroup stereotypes, ingroup stereotypes or controls) were dropped from the related analyses.\(^1\) Response latencies were submitted to a 3 (Word Type: outgroup stereotype, ingroup stereotype, control) X 2 (Ideology of Participant: conservative, liberal) × 2 (Ideology of Partner: conservative, liberal) mixed ANOVA, where the first factor was within-subjects. There was a significant main effect of word type, \(F(2, 396) = 6.54, p = .002, \eta^2_p = .03.\) Bonferroni tests comparing word types revealed that participants responded to both outgroup (\(M = 737.09, SE = 8.39\)) and ingroup (\(M = 741.60, SE = 9.11\)) stereotype words slower than to control words (\(M = 723.87, SE = 8.56\)) (\(p_s < .03\)). The latency for ingroup and outgroup stereotypes did not differ significantly.

More importantly, there was a significant interaction between word type and ideology of participant, \(F(2, 396) = 36.15, p < .001, \eta^2_p = .15,\) (see Table 1 for all RTs across experimental conditions). Pairwise comparisons with Bonferroni adjustment showed that conservatives expecting to interact with a liberal partner responded to outgroup stereotypes faster than to control words, \(F(1, 198) = 9.27, p < .01, \eta^2_p = .05,\) supporting their outgroup stereotype accessibility in this condition as suggested in Hypothesis 1a. However, conservatives had their outgroup (liberal) stereotypes accessible also when they expected an interaction with an ingroup (conservative) partner, \(F(1, 198) = 8.57, p < .01, \eta^2_p = .04.\) Conservatives’ RTs for ingroup stereotypes, on the other hand, did not differ from their RTs for neutral words in either liberal or conservative partner conditions, \(p_s > .6,\) suggesting no accessibility for ingroup stereotypes, unlike outgroup stereotypes.

Liberals showed a different pattern in terms of stereotype accessibility. As expected, liberals with a conservative partner responded to outgroup stereotypes more slowly than to control words, \(F(1, 198) = 36.84, p < .001, \eta^2_p = .16,\) supporting the stereotype suppression hypothesis (Hypothesis 1b). A similar tendency of outgroup (conservative) stereotype suppression was also observed when liberals expected to interact with another liberal partner, \(F(1, 198) = 29.74, p < .001, \eta^2_p = .13.\) Unexpectedly, liberals’ responses to ingroup (liberal) stereotypes were also slower than to control words (suggesting low accessibility of ingroup stereotypes) both in within-group (liberal partner, \(F(1, 199) = 9.56, p < .01, \eta^2_p = .05) and cross-group (conservative partner, \(F(1, 199) = 23.87, p < .001, \eta^2_p = .11) interaction conditions.

<table>
<thead>
<tr>
<th>Word Type</th>
<th>Conservative Participants</th>
<th>Liberal Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Conservative Partner</td>
<td>Liberal Partner</td>
</tr>
<tr>
<td>Outgroup Stereotype</td>
<td>741.117 (17.196)</td>
<td>717.276 (16.849)</td>
</tr>
<tr>
<td>Ingroup Stereotype</td>
<td>766.212 (18.657)</td>
<td>743.481 (18.28)</td>
</tr>
<tr>
<td>Control</td>
<td>770.938 (17.532)</td>
<td>747.667 (17.178)</td>
</tr>
</tbody>
</table>
Self-regulation

For each participant, we computed a Stroop interference score by subtracting the mean vocal reaction time (RT) for baseline trials from the mean vocal RT for incongruent trials. In other words, higher Stroop interference scores indicated slower responses to incongruent Stroop trials compared to baseline trials, indicative of self-regulatory depletion. Incorrect responses and double responses due to microphone error, which constituted 2.56% of all trials, were excluded. Equipment failure occurred during recording the vocal responses of nine participants, so their data were removed from the analyses. No outliers, defined as z-scores above or below 3.29, were determined for Stroop interference.

The relationship between political ideology and Stroop interference was analyzed through a 2 (Ideology of Participant: conservative, liberal) × 2 (Ideology of Partner: conservative, liberal) between-subjects ANOVA. Neither main effects nor interaction effects turned out to be significant in this analysis, ps > .1. In other words, conservatives and liberals’ self-regulation differed neither generally nor across different partner conditions.

The relationship between stereotype accessibility and self-regulation

Next, we sought to investigate the relationship between self-regulation and stereotype accessibility. In order to analyze whether stereotype accessibility predicted self-regulation in the Stroop task, we created two variables representing outgroup and ingroup stereotype accessibility, by subtracting the mean RT for outgroup/ingroup stereotype words from the mean RT for control words (see Figure 1 for the distribution of stereotype accessibility across different groups).

We conducted moderated moderation analyses to examine the relationship between (1) outgroup stereotype accessibility and Stroop interference (impairment in self-regulation), and (2) ingroup stereotype accessibility and Stroop interference (see Figure 2). We conducted path models (Hayes’ Model 3) for ingroup and outgroup stereotype activation separately by using PROCESS 2.11 for SPSS (Hayes, 2013). The effect of stereotype accessibility on Stroop performance, moderated by the ideology of the participant and the anticipated partner, was tested by using bootstrapping procedures with 5000 bootstrapped samples for each model.

Figure 1. Outgroup and ingroup stereotype accessibilities. Accessibility score was calculated as the difference between the mean RTs for control words and target words. Experimental conditions are shown on the x-axis. The error bars indicate the standard errors.
While the overall model for outgroup stereotype accessibility fell short of the conventional significance level, $R^2 = .256$, $F (7, 188) = 1.93$, $p = .067$ (see Figure 3), further analyses indicated the presence of systematic effects. Outgroup stereotype accessibility did not predict Stroop accessiblility significantly; $b = −.14$, $t(188) = −1.77$, $p = .08$, 95% CI $−.26, .01$, although there was an overall pattern of a negative relationship (in the expected direction of a suppression effect) between those two variables. However, the political ideology of the partner significantly predicted Stroop interference such that participants who interacted with an opposing political ideology showed less Stroop interference, $b = −22.73$, $t(188) = −2.15$, $p = .03$, 95% CI $[−43.62, −1.84]$. Most relevant to the purpose of the present study, the analysis of the conditional effect of outgroup stereotype accessibility on Stroop interference in this model revealed that for liberals who anticipated to interact with a conservative other, outgroup stereotype accessibility significantly and negatively predicted Stroop interference, $b = −.36$, $t(188) = −2.54$, $p = .01$, 95% CI $[−.64, −.08]$ (see Figure 4 for slopes). This suggested that consistent with Hypothesis 2b, when liberals suppressed their stereotypes (and had

![Figure 2](image2.jpg)

**Figure 2.** A model of moderated moderation to examine the relationship between stereotype accessibility and Stroop interference (self-regulation), moderated by the participant's and the anticipated interaction partner's ideology.

![Figure 3](image3.jpg)

**Figure 3.** Estimates for the moderated moderation path model for outgroup stereotype accessibility. Ideo S: Ideology of the Participant (Self), Liberal (+.5) vs. Conservative (−.5); Ideo O: Ideology of the Partner (Other), Opposite Ideology (+.5) vs. Same Ideology (−.5). Coefficients are unstandardized. $+p < .1$, $*p < .05$. 


them less accessible) in anticipation of an interaction with a conservative partner, they performed worse in the self-regulation task. None of the other effects in this model was significant.

The overall moderated moderation model for the ingroup stereotype accessibility was significant, $R^2 = .293$, $F(7, 187) = 2.68$, $p = .01$ (see Figure 5). This model revealed a significant three-way interaction between ingroup stereotype accessibility, ideology of the participant and the ideology of the anticipated partner, $b = −.70$, $t(187) = 2.21$, $p = .02$, 95% CI $[−1.32, −.08]$. The analysis of the conditional effect of ingroup stereotype accessibility on Stroop interference showed that for liberals who anticipated to interact with a liberal other, ingroup stereotype accessibility positively predicted Stroop interference, $b = −.36$, $t(188) = −2.54$, $p = .01$, 95% CI $[−.64, −.08]$ (see Figure 6 for slopes). In other words, liberals who had ingroup stereotypes more accessible in mind when they anticipated an interaction with another liberal tended to perform worse in the self-regulation task.

For conservative participants, regardless of the partner’s group, neither outgroup nor ingroup stereotype accessibility predicted Stroop performance, $ps > .1$. Taken together with the ANOVA showing no difference in the overall Stroop performance of liberals and conservatives, the current findings did not support Hypothesis 2a, which stated that higher stereotype accessibility would facilitate conservatives’ self-regulation. However, the results supported Hypothesis 2b, which stated that liberals’ tendencies of stereotype suppression would impair their performance in an independent self-regulation task performed when preparing for an intergroup interaction.

**General discussion**

Previous research showed that, compared to liberals, people who subscribe to a conservative ideology tend to show more prejudice and stereotyping (explicitly and implicitly) toward minority groups that threaten traditional values (Asbrock et al., 2010; Duckitt et al., 2002; Nosek et al., 2007). However, no previous research has focused on stereotyping biases among ideological groups and toward people of opposing ideology specifically. In the present study, we
examined conservatives’ and liberals’ reliance on stereotypes of ideological groups and how this affects their self-regulatory resource expenditure in anticipation of an interaction involving either an ideological ingroup or an outgroup.

Figure 5. Estimates for the moderated moderation path model for ingroup stereotype accessibility. Ideo S: Ideology of the Participant (Self), Liberal (+.5) vs. Conservative (−.5); Ideo O: Ideology of the Partner (Other), Opposite Ideology (+.5) vs. Same Ideology (−.5). Coefficients are unstandardized. * p < .05.

Figure 6. The relationship between ingroup stereotype accessibility and Stroop interference (self-regulation) as a function of the ideology of the participant and anticipated interaction partner. The slope for the liberal participant—liberal partner condition is statistically significant.
We observed that, for conservatives, stereotypes for the ideological outgroup were cognitively accessible (more than traits that are nonstereotypical for the outgroup), regardless of whether the partner was an ideological ingroup or outgroup. It is possible that the explicit political nature of the alleged interaction made opposing political views salient and thus activated the liberal stereotype for conservative participants regardless of whether they anticipated interacting with another conservative or liberal. That is, activation of outgroup stereotypes could be motivated by the presence of an outgroup member (in the liberal partner condition) because outgroup stereotypes are expected to help navigate the upcoming interaction in a mentally efficient manner. On the other hand, when anticipating to interact with an ingroup (i.e., another conservative person), the political nature of the task may increase the utility of activating the outgroup stereotype, because this would potentially help navigate the task. This finding is also consistent with the literature that documents people’s need to affirm their shared beliefs about an outgroup with other ingroup members (for a review, see Ruscher & Hammer, 2006). The procedure of the present study might have motivated the conservative participants to get ready for such “opportunity” to affirm their outgroup stereotypes with other conservative individuals. In any case, these findings are compatible with previous findings on the relationship between conservatism and the desire for simple categorical information that applies to the social world (e.g., Carney, Jost, Gosling, Niederhoffer, & Potter, 2008; Cornelis & van Hiel, 2006).

In striking contrast, for liberals, stereotypes of both the ideological outgroup and ingroup were less cognitively accessible, regardless of the partner’s group membership. This finding suggests that liberals might have desired to steer free of stereotypes in navigating this interpersonal interaction, to individuate their interaction partner (conservative or liberal) and thus to suppress group-related stereotypes (as evidenced by low cognitive accessibility for those stereotypes). Hence, one contribution of the present research is the demonstration of these clear differences in conservatives’ and liberals’ tendency to rely on stereotypes, specifically in the domain of political ideology.

Suppression of stereotypes and correction for stereotype activation typically requires cognitive effort and consumes self-regulatory resources (Gordijn et al., 2004). Given the previous research on liberals’ tendency to deliberately correct their initial stereotypes (Skitka et al., 2002; Stern et al., 2013), it was sensible to expect excessive self-regulation to be followed by resource depletion during liberals’ stereotype suppression. Our analyses were consistent with this account; when liberals anticipated interacting with a conservative partner, their decreased accessibility of stereotypes of conservatives was associated with worse performance in an independent self-regulation task. This supports the idea that it might be costly for liberals to suppress their stereotypes of conservatives, in terms of self-regulatory resources.

A different scenario played out when liberal participants anticipated an interaction with another liberal person. In this case, having stereotypes of the ingroup more accessible in mind predicted worse performance in the self-regulation task. The reasons why this occurred is less clear to us, and further research is needed in this regard. However, one can speculate that the activation of liberals’ negative self-stereotypes (which is what our accessibility measure tapped) would not play an especially facilitating role in an interaction with another liberal person. They might even distract from a focus on the ideological common ground between such two people. Thus, instead of serving the role of simplifying complicated aspects of the upcoming interaction, activation of such stereotypes may be unnecessarily distracting, consuming up mental resources. In any case, our findings suggest that liberals experienced a cost of suppressing their outgroup stereotypes on self-regulation task when they anticipated interacting with an ideological outgroup partner. On the other hand, liberals experienced a cost of not suppressing their ingroup stereotypes on self-regulation task when they anticipated interacting with an ideological ingroup partner. The latter suggests the interesting possibility that stereotypes are not universal mental energy-savers, but rather that the energy-saving function of stereotypes depends on context; a possibility that should be examined in further research.

The present study thus contributes to the literature by being the first attempt to directly measure online inter-ideological stereotyping and its relation to self-regulation. We conducted the research in a country (Turkey) with a scarcity of social cognition research, adopting the methods and theoretical assumptions of the Western literature while using locally constructed operationalizations of our key
constructs (e.g., the political ideology of the participants, the content of ingroup/outgroup stereotypes). Also, we used implicit measures of stereotyping and self-regulation instead of self-report measures which are typically more sensitive to social desirability concerns of the participants in such experimental procedures.

Besides these contributions, one can think of some limitations of the present study. One possible limitation is the presentation order of the tasks. In this study, participants received the Stroop task before the LDT. This was necessary to prevent potential priming effects (which stem from stereotype words presented in LDT) on self-regulation (measured by the Stroop task). More specifically, we aimed to prevent a potential increase in participants’ anxiety as a result of being primed with ingroup and outgroup stereotypes (rather than anticipation of an upcoming ideological interaction) which might have affected self-regulation performance in the Stroop task (e.g., Wheeler & Petty, 2001). However, the given order of the tasks (self-regulation before the stereotype accessibility task) may create an interpretational ambiguity for the relationship between those phenomena. Future studies can minimize such interpretational ambiguity by measuring self-regulation after stereotype accessibility but by distancing these two tasks (while also making sure that the cognitive processes due to the anticipation of the future interaction are not disrupted). Furthermore, this study did not include a control condition with no anticipated interaction that would help us assess a direct effect of anticipating an interaction itself on stereotype accessibility and self-regulation. It would be useful to include that control condition in future research to examine such anticipation effects.

One other important point to consider is the content of stereotypes we determined through our pilot studies. There is a possibility that some stereotypes determined in the present study, which are originally in Turkish, may be rather context-specific (e.g., “anarchy” and “capitalist” that were rated as having negative connotations and being descriptive of liberals in Turkish context). Therefore, we believe that it is important to carefully determine the content of specific stereotypes for ideological groups in future studies that are to be conducted in other cultures.

In sum, the present study’s findings indicate that while conservatives tend to utilize stereotypes, liberals are likely to suppress their stereotypical views during inter-ideological interactions. Moreover, such suppression seems to be costly (i.e., resource-depleting) to liberals. Future studies should bring to light how stereotype utilization by conservatives and stereotype suppression by liberals affect inter-ideological communication in practice, which is the sine qua non of a democratic society. Does conservatives’ heightened stereotype accessibility result in prejudicial behaviors during actual inter-ideological interactions? Or does liberals’ resource depletion (as a result of stereotype suppression) hinder their regulations of intrusive thoughts or emotions in the midst of heated political discussions? These are only two of the questions this research may potentially bear. We hope that the present study will contribute to and encourage increased attention to the domain of inter-ideological communication and its social cognitive bases which, we are convinced, is worthy of continued research effort.

Notes
1. All the materials necessary to replicate this study are available at osf.io/7gdxt.
2. An independent group of 22 volunteers (half of whom identified themselves as liberal and the other half as conservative on a self-identification scale) rated a list of 90 words in an internet survey. These 90 words were determined on the basis of a pre-pilot assessment in which 14 graduate students generated possible negative stereotypical words for conservatism and liberalism (also possible control words were added to that list). In the pilot study, each word was rated on a 5-point scale ranging from "extremely descriptive of liberals” to "extremely descriptive of conservatives." Participants reported their own ideological view on a 7-point self-placement scale (1: extremely liberal; 7: extremely conservative). Participants’ ideological views were critical here because we created separate word lists for the liberals and conservatives for the actual study based on the results of this pilot study. Specifically, 10 words that were rated as the most stereotypical for the ideological outgroup in this pilot study were used in the experiment as the outgroup stereotype words. Both conservatives’ and liberals’ ratings of typicality for the outgroup stereotypes significantly differed from the midpoint ("not descriptive of liberals or conservatives") in the expected directions (conservative: $M = 2.03, SD = .52, t(10) = -6.16, p < .001$; liberal: $M = 4.27, SD = .37, t(10) = 6.49, p < .001$) Similarly, 10 words that were rated as the most stereotypical for one’s own ideological group were used in
the experiment as the ingroup stereotype words. Again, both conservatives' and liberals' ratings of typicality for the ingroup stereotypes significantly differed from the midpoint in the expected directions (conservative: $M = 3.85$, $SD = .44$, $t(10) = 6.49$, $p < .001$; liberal: $M = 2.57$, $SD = .38$, $t(10) = -3.76$, $p < .01$) The words that were chosen by the least number of people as being descriptive of liberals or conservatives were selected as control words. Ratings of typicality for those words did not significantly differ from the midpoint for conservative ($M = 2.98$, $SD = .21$, $t(10) = -2.8$, $p = .78$) or liberal participants ($M = 2.94$, $SD = .11$, $t(10) = -1.60$, $p = .14$). The frequency of the words was matched across liberal-stereotypical, conservative-stereotypical, and control words in light of Göz's (2003) previous research on Turkish word frequencies. The distribution of the length of the words was also equalized across word categories.

3. All the data files necessary to reproduce the analyses of this study are available at osf.io/k8pqw.

4. This criterion for outlier analysis was adopted from Tabachnick and Fidell (2007). Including the outliers in the analyses did not change the patterns of the data or significance of the analyses.

5. That is not to say, however, that political interactions are not affected by explicit ideological attitudes or controlled behaviors as well. Future research should disintegrate the role of implicit and explicit stereotypical associations and behavioral reactions during anticipation and/or engagement in such interactions.

References


## Appendix A
### Stereotypical and Nonstereotypical Words Used in LDT (Translated from Turkish)

<table>
<thead>
<tr>
<th>Political Ideology of the Participant</th>
<th>Conservative Stereotype</th>
<th>Liberal Stereotype</th>
<th>Nonstereotypical Words (Control)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>prim</td>
<td></td>
<td>blabbermouth</td>
<td>absentminded</td>
</tr>
<tr>
<td>timid</td>
<td></td>
<td>impiety</td>
<td>ugly</td>
</tr>
<tr>
<td>fundamentalist</td>
<td></td>
<td>rebellious</td>
<td>irritableness</td>
</tr>
<tr>
<td>bigot</td>
<td></td>
<td>impertinent</td>
<td>asocial</td>
</tr>
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<td>fanatic</td>
<td></td>
<td>discreetness</td>
<td>carelessness</td>
</tr>
<tr>
<td>embargo</td>
<td></td>
<td>atheist</td>
<td>heartless</td>
</tr>
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<td></td>
<td>anarchists</td>
<td>dejected</td>
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<td>reactionary</td>
<td></td>
<td>selfish</td>
<td>dull</td>
</tr>
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<td>capitalist</td>
<td>loser</td>
</tr>
<tr>
<td>radical</td>
<td></td>
<td>ambiguity</td>
<td>illiteracy</td>
</tr>
<tr>
<td>status quo (adj)</td>
<td></td>
<td>degeneracy</td>
<td>absentminded</td>
</tr>
<tr>
<td>reactionary</td>
<td></td>
<td>intemperate</td>
<td>inexperienced</td>
</tr>
<tr>
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<td></td>
<td>impiety</td>
<td>voracity</td>
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<tr>
<td>bigot</td>
<td></td>
<td>impertinent</td>
<td>carelessness</td>
</tr>
<tr>
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<td>rebellious</td>
<td>bored</td>
</tr>
<tr>
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<td>clumsy</td>
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<td>forgetful</td>
</tr>
<tr>
<td>Liberal</td>
<td></td>
<td></td>
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</table>