Conservatives do have a negativity bias, but they react less strongly to arousal

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Abstract

Four main perspectives exist on how liberals and conservatives differ in their reactions to threats. The coping perspective says that conservative ideologies serve to buffer against threats, and that conservatives hence respond less strongly to threats. The negativity-bias perspective says that conservatives react more strongly to negative stimuli. Studies that found such a link have confounded negativity and arousal. A third perspective therefore holds that conservatives react more strongly to arousing stimuli regardless of their valence. The meaning-maintenance model holds that everyone affirms their worldview after a violation of expectations. The current research aims to determine the importance of arousal and negativity in conservatives' reactions and expand on the stimuli that create a violation of expectations. This is done by presenting images to participants that are either positive or negative and arousing or non-arousing. In concordance with the coping perspective, more conservative participants who saw arousing images were found to like left-wing groups relatively more. In concordance with the negativity-bias perspective, more conservative participants who saw negative images were found to like right-wing groups relatively more. These results are not at odds with the meaning-maintenance model, although they do suggest that the size of the effect differs for conservatives and liberals.

Introduction

Liberals and conservatives differ markedly in their preferred environment. Much has been said about how conservatives react differently from liberals to a variety of stimuli, but it is still unclear how and to what extent. Conservatism has, among other things, been linked to threat reactivity, i.e. the degree to which people react to perceived threats, but there are four conflicting perspectives on the link between them, and there is mixed evidence with respect to this. For one, attitudes can become more conservative when confronted with threats (Duckitt & Fisher, 2003), which suggests that conservatives would react less strongly to threats. However, conservatives often appear more prejudiced and intolerant and react more strongly to threats (e.g. Hibbing, Smith, & Alford, 2013), which may be interpreted as alternatively negativity or arousal, yet recent research suggests that liberals can likewise react to threats with intolerance (e.g. Wetherell, Brandt, & Reyna, 2013; Brandt, Reyna, Chambers, Crawford, & Wetherell, 2014). The current study aims to disentangle the effects of negativity and arousal on intergroup intolerance.

On the one hand, research has found that attitudes can become more conservative when confronted with threats (Duckitt & Fisher, 2003). Motives to overcome fear, threat, and uncertainty are all associated with increased conservatism and help people cope with those threats (Jost et al., 2003). When presented with a threatening image of the future people become more conservative (Duckitt & Fisher, 2003). This means that conservatives should respond less strongly to threats, because being conservative helps conservatives feel less threatened by those threats.

Other research has suggested a link between conservatism and *increased* threat reactivity, with conservatives focusing more on and responding more strongly to negative stimuli (Hibbing et al., 2013). An example of this negativity bias of conservatives is that they

are more sensitive to disgust than liberals, as indicated by self-reports (Inbar, Pizarro, Iyer, & Haidt, 2012) and by physiological markers (Smith, Oxley, Hibbing, Alford, & Hibbing, 2011). Another example is that conservatives show a greater physiological reaction following sudden noises and threatening images (Oxley et al., 2008). A possible partial explanation for this negativity bias comes from Shook and Fazio (2009), who found that conservative people learned negative stimuli better than positive ones due to less exploratory behavior on their part.

Another perspective on the relationship between conservatism and threat reactivity, the arousal-bias perspective, has arisen from criticism on the negativity-bias perspective. Tritt, Inzlicht, and Peterson (2013, in press) note that many studies that found a negativity bias in humans in general and conservatives in particular have confounded arousal and valence (degree of positivity or negativity). Such studies did not include proper comparison stimuli alongside their negative stimuli. They either did not compare their target stimuli with other stimuli at all or compared them with neutral stimuli or with less arousing positive stimuli. For example, the studies by Inbar and colleagues (2012) and Smith and colleagues (2011) only included disgust and no similarly arousing positive emotions in their study. Likewise, and Oxley and colleagues (2008) only used negative auditory and visual stimuli (sudden noises and threatening images) without comparing them to similarly arousing positive auditory and visual stimuli. It is therefore possible that conservatives do not specifically have a negativity bias, but instead are more easily aroused than liberals. The recent finding by Tritt and colleagues (2013) that arousing movies induce a conservative shift, regardless of their valence, supports this line of thinking.

Also, Jost and colleagues (2003) and Hibbing and colleagues (2013) noted a relationship between conservatism and intolerance of ambiguity. This link can be reinterpreted as a link with intolerance of arousal (Tritt et al., in press), because uncertainty

(i.e. a lack of sufficient information about an event; Bar-Anan, Wilson, & Gilbert, 2009) or novelty can intensify the impact of positive events as well as negative ones (Bar-Anan et al., 2009) or prolong people's positive mood after an event (Wilson, Centerbar, Kermer, & Gilbert, 2005). Intolerance of arousal could mean that conservatives react more strongly to a certain degree of arousal (and therefore can be said to be more sensitive to arousal). If conservatives are more easily aroused or react more strongly to arousal, they should display a greater response to arousing stimuli regardless of their valence. If, on the other hand, they react more strongly to negativity, they should display a greater response to negative stimuli, regardless of how arousing they are.

The meaning-maintenance model states that any mismatch between mental representations of expected relationships (‘meaning’) and actual experience will result in aversive feelings and a motivation to reduce them, i.e. constitute a 'threat'. Possible ways to do this are to reinterpret the experience to fit the already existing mental relationships. Another way is to revise one's mental relationships to incorporate the experience. The third way is to affirm mental relationships not affected by the experience and possibly in very different areas, which symbolically restores congruence (Proulx & Heine, 2006; Heine, Proulx, & Vohs, 2006). There are multiple ways in which people can engage in symbolic affirmation. Possible ways are to affirm one's worldview, which is different for liberals and conservatives, or to derogate out-groups, among others (Heine, et al., 2006). In line with the meaning-maintenance model, liberals and conservatives have been found to show a similar degree of intolerance towards ideologically dissimilar and threatening groups (Brandt et al., 2014). Likewise, work in terror-management theory, which is included in the meaning-maintenance model, has found that both liberals and conservatives react by affirming their own worldview in response to reminders of death (Greenberg, Simon, Pyszczynski, Solomon, & Chatel, 1992).

Aside from these conflicting theories on conservatism, there are also several methodological issues regarding conservatism. For a long time, conservatism was thought to be one-dimensional, but it turned out to consist of two distinct components (Duckitt & Sibley, 2007, 2010). The core psychological components of conservatism are resistance to change and acceptance of inequality (Jost, Glaser, Kruglanski, & Sulloway, 2003). These two components are often related, but still clearly distinguishable (Duckitt & Sibley, 2010).

Political and psychological variables have often been conflated. For example, Wilson and Patterson's Conservatism Scale includes both questions with psychological referents and questions about political issues. Despite this, this scale still has reasonable reliability and validity, because there exists an obvious link from the psychological variables to the political ones (Jost et al., 2003). To capture better the psychology behind political ideology, it is best to use a purely psychology-oriented scale. To this end, the current study uses two psychological scales designed to capture the two distinct components of conservatism, a ten-item resistance-to-change scale adapted from Oreg (2003) and the four-item short social-dominance orientation scale (Pratto et al., 2012), which will henceforth be referred to as the acceptance-of-inequality scale.

Although symbolic affirmation is a central aspect of the meaning-maintenance model, all four perspectives predict that people engage in symbolic affirmation following a threat. They do, however, predict that the degree to which they do so will be different. The coping perspective predicts that conservatives will display less intergroup bias than liberals following a threat. The negativity-bias perspective predicts that conservatives display more intergroup bias following negative stimuli regardless of arousal, whereas the arousal-bias perspective predicts that they display it more following arousing stimuli regardless of their valence. The meaning-maintenance model predicts that all people, so liberals and conservatives alike,

engage in this third, more symbolic affirmation when confronted with threats (Brandt, Wetherell, & Reyna, 2013).

Drawing on the meaning-maintenance model to define what constitutes a 'threat' (i.e. any mismatch between mental representations of expected relationships), this study uses images that are either positive or negative and arousing or non-arousing to create such a mismatch. This way, it aims to determine whether arousal or negativity is the more important factor in conservatives' stronger reactions to threats on intergroup bias in past research.

Method

Two-hundred-fifty-five people (117 men, 138 women) ranging in age from 15–78 (M = 38.5, SD = 17.3, distribution depicted in Figure 1) participated in this experiment. They were recruited from the Netherlands by calls on Facebook (roughly several dozen), calls on the internet forums FOK! and Wetenschapsforum (together roughly a dozen), asking griffies (clerks) and local political parties of several Dutch municipalities to distribute the survey (roughly several dozen), and personal requests to take the survey and distribute it (the majority). Most participants (236) are ethnic Dutch, but 19 are of other backgrounds, such as Turkish or Moroccan, including 5 from mixed ones, such as mixed Dutch–Indonesian. Many, possibly all, participants from other backgrounds are eligible to vote in Dutch elections.

After reporting sex, age, and ethnic background, participants filled in the ten-item adapted resistance-to-change scale (Oreg, 2003) and the acceptance-of-inequality scale (Pratto et al., 2012) on a seven-point scale in random order, whose items are shown in Appendix A. Then, political values were made salient by asking participants about their self-reported placement on a political-ideology scale, their voting behavior in the 2010 and 2012 Dutch national elections and which party they would vote for today. 25 participants were not

allowed to vote in 2010 and 16 in 2012. These three voting-behavior measures were converted to continuous scales using the left–right placement of those parties in the respective elections according to Kieskompas (Electoral Compass), a Dutch voting-aid website. For the would-be voting behavior, the placement during the 2012 elections is used. These placements are presented in Table 1 (M. Boiten, personal communication, February 6, 2014).

Table 1: The placement of the Dutch political parties in 2010 and 2012 on the left–right dimension (scale from −2 to 2).

	2010	2012
PvdA	−0.88	−0.43
VVD	1.29	1.64
CDA	0.76	0.93
ChristenUnie	−0.58	0.57
GroenLinks	−0.82	−0.50
SP	−1.76	−1.43
D66	0.23	0.64
SGP	0.35	0.71
PVV	0.00	0.00
PvdD	−0.82	−0.86
50Plus	N/A	−0.57

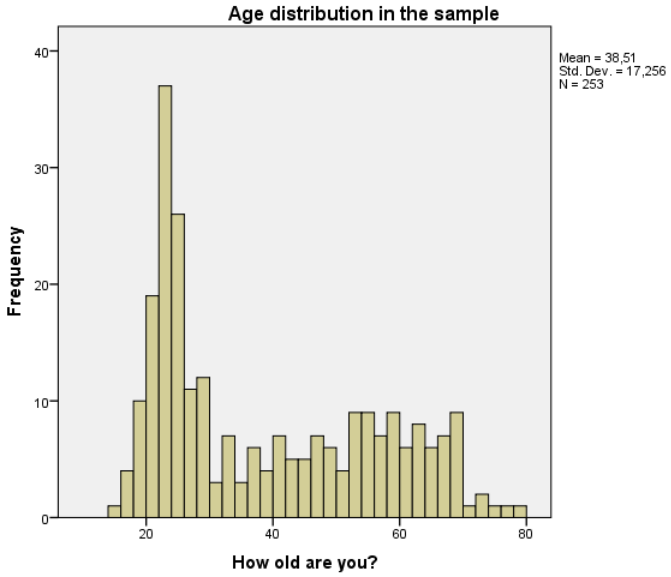

Figure 1: Age distribution in the sample

Next, participants were shown selected from the International Affective Picture System (IAPS) 2008 (Lang, Bradley, & Cuthbert, 2008) and asked to judge them on their brightness, sharpness, and colorfulness, and how positive they were. Lang and colleagues (2008) have carefully determined how positive and arousing these images are. These values were used to select the images that were presented to the participants. All participants were shown two sets of five images. The first set consisted, for all participants, of five positive non-arousing images presented in random order (images 5760, 5891, 1604, 5811, and 1620 of the IAPS 2008). The second set either consisted of another five positive non-arousing images ($N = 65$, images 5200, 2370, 5010, 1610, and 7325 of the IAPS 2008), five positive arousing

images ($N = 61$, images 8030, 8492, 8185, 8370, and 8186 of the IAPS 2008), five negative non-arousing images ($N = 64$, images 9331, 2722, 9001, 2590, and 2490 of the IAPS 2008), or five negative arousing images ($N = 63$, images 6230, 9940, 6550, 6510, and 3500 of the IAPS 2008). These were randomly assigned to participants and also presented in random order. These images were selected from the International Affective Picture System (IAPS) 2008 (Lang, Bradley, & Cuthbert, 2008).

Subsequently, participants completed a positive and negative affect schedule (PANAS) on a five-point scale, whose items are shown in Table 2 (Peeters, Ponds, & Vermeeren, 1996). The PANAS scale measures participants' mood and is long enough to act as a distracter task. After the PANAS scale, participants were asked to indicate how positive or negative they felt about the six groups in Table 3. These groups were taken from Chambers, Schlenker, and Collisson (2013), adapted to Dutch society if possible (or else deleted), and supplemented to fill in some gaps. The three most extreme groups on both the left and the right with relatively low standard deviations were selected using a pretest (see Appendix B).

Table 2: Items from the PANAS mood scale as used in this experiment

Dutch	English translation
aandachtig	attentive
geïnteresseerd	interested
alert	alert
uitgelaten	excited
enthousiast	enthusiastic
geïnspireerd	inspired
trots	proud
vastberaden	determined
sterk	strong
actief	active
vijandig	hostile
prikkelbaar	irritable
schuldig	guilty
beschaamd	ashamed

nerveus	nervous
rusteloos	jittery
overstuur	distressed
van streek	upset
bang	scared
angstig	afraid

Lastly, participants were asked to indicate how good, excited, and tense they had felt seeing the images, how interested they are in politics, and how they got to this survey. The first three questions served as manipulation-check items and the effects on these were all in the expected directions. Participants felt best if they saw positive arousing images (relative to the mean, $M = 4.07$: $b = 1.10, SE = 0.49, F(1,250) = 5.07, p = 0.025, \eta^2 = 0.020$), and worst if they saw negative arousing images (relative to the mean: $b = -0.51, SE = 0.28, F(1,250) = 3.31, p = 0.070, \eta^2 = 0.013$). Participants felt more excited if they saw positive arousing images (relative to the mean, $M = 1.38$: $b = 0.60, SE = 0.33, F(1,250) = 3.29, p = 0.071, \eta^2 = 0.013$), and felt more tense if they saw negative arousing images (relative to the mean, $M = 1.14$: $b = 0.46, SE = 0.18, F(1,250) = 6.21, p = 0.013, \eta^2 = 0.024$).

Table 3: The six groups presented in this experiment

Left-wing groups	**Right-wing groups**
The environmentally conscious	People with a good income
Antilleans	Managers
Single mothers	Owners of a large company

Results

Preliminary analyses

The correlations between voting behavior in 2010, that in 2012, and the party participants would vote for today converted to a left–right scale and self-reported political

preference are, as expected, all strong (all $rs > 0.53, ps < 0.001, \alpha = 0.90$), see Table 4. Participants' resistance to change did not correlate significantly with their acceptance of inequality ($r = 0.081, p = 0.202$), which supports the interpretation that these are two distinct factors. Cronbach's alphas of the resistance-to-change and acceptance-of-inequality scales are $\alpha = 0.67$ and $\alpha = 0.65$, respectively, with items reverse-coded where necessary. Moreover, participants' resistance to change correlated only weakly with their self-reported political preference ($r = 0.13, p = 0.043$) and did not correlate significantly with their voting behavior converted to a left–right scale (all $ps > 0.13$). Participants' acceptance of inequality did significantly correlate weakly with voting behavior in 2012 converted to a left–right scale ($r = 0.177, p = 0.010$) and what they would vote for now ($r = 0.217, p = 0.001$) and moderately with self-reported political preference ($r = 0.296, p < 0.001$), which indicates an interpretation of resistance to change being related to a progressive–conservative dimension and acceptance of inequality as related to the traditional left–right distinction most prevalent in Dutch politics.

Table 4: Linear (Pearson) correlations between the various political-ideology measures.

	2010 vote	2012 vote	would vote now	self-reported preference	resistance to change	acceptance of inequality
2010 vote	—	0.78**	0.61**	0.67**	0.05	0.09
2012 vote		—	0.74**	0.65**	0.01	0.18*
would vote now			—	0.53**	−0.10	0.217*
self-reported preference				—	0.13*	0.30**
resistance to change					—	0.08
acceptance of inequality						—

* p < 0.05
** p < 0.001

The two-factor structure of the PANAS is reproduced in this survey, with the extraversion items ($\alpha = 0.91$) and neuroticism items ($\alpha = 0.91$) only occasionally correlating significantly with each other, but strongly internally (internally all $ps < 0.001$), except for 'uitgelaten' (excited) ($ps \leq 0.003$), and 'trots' (proud) ($ps \leq 0.032$ if significant), which correlates also significantly with all or most neuroticism items. The overall extraversion and neuroticism scores significantly correlate weakly with each other ($r = 0.13, p = 0.046$). A general linear model with positivity and arousal as its predictors determined that participants who saw positive images felt significantly less negative emotions than participants who saw negative images, as measured by the PANAS scale, ($b = -0.18, SE = 0.09, F(1,243) = 4.05, p = 0.045, \eta^2 = 0.016$), but participants who saw positive images did not report feeling more positive emotions than participants who saw negative images ($F(1,243) = 2.10, p = 0.148$). When resistance to change and acceptance of inequality and their interactions are added to the model, participants' resistance to change report has a significant effect on amount of negative emotions reported, but not acceptance of inequality, see Table 5. The overall effect of seeing positive images on less negative emotions reported remains significant ($b = -0.20, SE = 0.09, F(1,230) = 4.68, p = 0.032, \eta^2 = 0.020$). Overall, the higher participants' resistance to change, the more negative emotions they report. This effect is attenuated if they saw positive images, but is increased if these positive images were arousing. This means that seeing the images did not affect participants' reported positive feelings, but did affect participants' reported negative feelings in the expected direction. The effect on participants' reported negative emotions was somewhat higher for participants with more resistance to change when they saw positive arousing images.

Table 5: Statistics of the main and interaction effects of participants' resistance to change (RtC) on reported negative emotions.

	b	***SE***	***F*(1,230)**	***p***	**η^2**
Main effect	0.32	0.11	8.10	0.005	0.034
Interaction effect for participants who saw positive images	−0.35	0.15	5.21	0.023	0.022
Interaction effect for participants who saw positive arousing images	0.44	0.21	4.40	0.037	0.019

On average, both right-wing groups ($M = 3.59, SD = 0.98$) and left-wing groups ($M = 3.70, \sigma = 0.85$) were perceived as equally moderately positive (paired-samples $t(254) = 1.62, p = 0.106$). Using a repeated-measures general linear model, the mean perceptions of individual groups, however, were found not to be equally positive, as shown in Table 6. The perceptions of all other groups differ significantly from each other ($p \leq 0.023$), except that of single mothers from that of people with a good income ($\Delta M = 0.04, p = 0.65$). Dutch Antilleans were seen as least positive ($M = 3.16, \sigma = 1.15, \Delta M \geq -0.20, p \leq 0.020$). The environmentally conscious were seen as most positive ($M = 4.11, \sigma = 1.16, \Delta M \geq 0.275, p \leq 0.002$). The left-wing groups are more distinct from each other than the right-wing groups are. Because any individual group will have error in it and the focus of this experiment goes beyond the effects on the perception of individual groups, this difference will be ignored.

There is no significant effect of participants' sex on their perception of the groups ($ps > 0.15$). Aside for the perception of people with a good income ($F(1,251) = 13.27, p < 0.001, \eta^2 = 0.05$), there were no significant effects of age on the perception of the groups ($ps > 0.130$).

Table 6: Overall perceptions of the six groups relative to the other groups.

	Single mothers	Dutch Antilleans	The environ-mentally conscious	Owners of a large company	Managers	People with a good income
M	3.83	3.16	4.11	3.62	3.36	3.79
SE	0.07	0.07	0.07	0.08	0.07	0.07
Single mothers	—	0.67***	−0.28**	0.21*	0.47***	0.04
Dutch Antilleans		—	−0.98***	−0.46***	−0.20*	−0.63***
The environmentally conscious			—	0.49***	0.75***	0.31**
Owners of a large company				—	0.26***	−0.18**
Managers					—	−0.44***
People with a good income						—

* p < 0.024
** p < 0.01
*** p < 0.001

Main analyses

The effect of the independent variables on the perception of left-wing and right-wing groups was tested using a general linear model, see Table 7 and Table 8 for left-wing groups and right-wing groups, respectively. Resistance to change, acceptance of inequality, left-wing liking, and right-wing liking were centered around their means ($M = 2.64$, $M = 2.04$, $M = 3.70$, and $M = 3.59$, respectively). For the perception of left-wing groups, participants' acceptance-of-inequality score had a significantly negative effect, which was marginally significantly larger when participants had seen positive arousing images. Also, there was an interaction effect of resistance to change and acceptance of inequality on the perception of left-wing groups that depended on which type of images the participants saw. The interaction effect of resistance to change and acceptance of inequality for positive arousing images may be an artifact caused by the paucity of participants with high scores on both measures: 15 above the midpoint (> 3) on both, of which only two saw positive arousing images, and just

two with RtC, AoI > 4, of which one saw positive arousing images. Overall, negativity appears to increase left-wing liking and arousal to decrease left-wing liking for more conservative people.

Table 7: Main and interaction effects, including marginally significant ones, of resistance to change (RtC) and acceptance of inequality (AoI) on the perception of left-wing groups.

effect of	***b***	***SE***	***F(1,238)***	***p***	η^2
AoI	−0.29	0.10	9.14	0.003	0.037
AoI *for positive arousing images*	−0.35	0.20	3.02	0.084	0.013
interaction of **RtC** and **AoI**	−0.33	0.17	3.56	0.060	0.015
interaction of **RtC** and **AoI** *for positive images*	0.36	0.20	3.24	0.073	0.013
interaction of **RtC** and **AoI** *for arousing images*	0.40	0.21	3.65	0.057	0.015
interaction of **RtC** and **AoI** *for positive arousing images*	−0.61	0.29	4.58	0.033	0.019

Resistance to change had a significant negative effect on the perception of right-wing groups for participants who saw arousing images. Acceptance of inequality had a marginally significant positive effect on the perception of right-wing groups for participants who saw positive images. This means that both arousal and negativity lead to more right-wing liking for progressives.

Table 8: Main and interaction effects, including marginally significant ones, of resistance to change (RtC) and acceptance of inequality (AoI) on the perception of right-wing groups.

effect of	***b***	***SE***	***F(1,238)***	***p***	η^2
RtC *for arousing images*	−0.77	0.27	8.04	0.005	0.033
AoI *for positive images*	0.27	0.15	3.19	0.076	0.013

To compare conservatives' and progressives' left-wing liking and right-wing liking relative to their means, a new dependent variable was created by subtracting right-wing liking from left-wing liking, so that higher scores indicate participants' relative preference for left-wing groups. The statistically significant effects are shown in Table 9. Overall, relative left-wing preference is lower for more conservative participants, which means that, overall, participants like ideological in-groups more. However, relative left-wing preference is higher if participants saw positive images, especially if they are more conservative, which is what would be expected from the negativity-bias perspective. Relative left-wing preference is also higher for more conservative participants if they saw arousing images, which is what would be expected from the coping perspective.

Table 9: Main and interaction effects of resistance to change (RtC) and acceptance of inequality (AoI) on participants' relative preference for right-wing groups. There were no marginally significant effects.

effect of	***b***	***SE***	***F(1,238)***	***p***	η^2
overall *for positive images*	0.28	0.13	4.50	0.035	0.019
RtC	−0.46	0.23	3.91	0.049	0.016
RtC *for arousing images*	0.68	0.29	5.31	0.022	0.022
AoI	−0.27	0.12	5.15	0.024	0.021
interaction of **RtC** and **AoI**	−0.57	0.22	7.08	0.008	0.029
interaction of **RtC** and **AoI** *for positive images*	0.69	0.25	7.59	0.006	0.031
interaction of **RtC** and **AoI** *for arousing images*	0.57	0.26	4.68	0.031	0.019

Discussion

Overall, right-wing groups are perceived relatively better if people are more conservative, which is not surprising given that these groups are ideologically more similar to conservatives and given that people like others who are similar to themselves more than those who are dissimilar from themselves (e.g. Gilovich, Keltner, & Nisbett, 2006).

More conservative participants who saw arousing images liked left-wing groups relatively more. This is in concordance with the coping perspective if the 'threat' that leads to a conservative shift is considered to be arousal. The arousing images were less 'threatening' to more conservative participants and hence felt less need to engage in in-group affirmation. The interpretation of the 'threat' in the coping perspective as arousal is in line with Tritt et al.'s (2013) finding that watching arousing videos, regardless of their valence, leads to more agreement with conservative messages, i.e. a conservative shift. Findings such as the one that threat leads to a conservative shift in liberals (Nail, McGregor, Drinkwater, Steele, & Thompson, 2009) can easily be reinterpreted as being specifically due to the arousal inherent in the situations presented in such studies.

Moreover, more conservative participants who saw negative images liked right-wing groups relatively more. This is in concordance with the negativity-bias perspective, which says that conservatives engage in more in-group affirmation when subjected to negative stimuli (e.g. Hibbing et al., 2013). Together with the above finding with respect to arousal, this suggests that conservatives do indeed have a negativity bias and the effects found previously for conservatives were indeed due to negativity, not arousal.

These results do not preclude the possibility that both conservatives and liberals engage in in-group affirmation, though the size of the effects is apparently different, at least for visual stimuli. In fact, the separate analyses of left-wing liking and right-wing liking

suggest that both progressives and conservatives engage in some form of in-group affirmation. The fact that all people engage, to a certain degree, in in-group affirmation is not surprising, because everyone, regardless of their political orientation, will require ways to deal with all kinds of psychological threats (Proulx, Inzlicht, & Harmon-Jones, 2012). The specifics in the data suggest that more is going on than simple ideological in-group affirmation. It is possible that some of the groups chosen were not really seen as in-groups despite ideological similarities. Future research may look into the effects of ideological similarity and perceived in-groupness on affirmation separately.

Several participants reported significant difficulty in answering the items from the resistance-to-change and acceptance-of-inequality scales. Because these items were all presented in random order, these participants were unable to indicate which of the two scales was difficult for them. No such difficulty was discussed by these scales' authors (Oreg, 2003; Pratto et al., 2012), but may be related specifically to the adaptations made to Oreg (2003)'s resistance-to-change scale. Nevertheless, it does not appear to have had a critically negative effect on its usefulness in this study. It may nevertheless be beneficial if the resistance-to-change items are adapted to make them easier to answer.

Arousing negative images were rated as much less positive than non-arousing negative images. According to the IAPS 2008, these images do not significantly differ on their valence ratings (Lang et al., 2008). It is unclear what exactly has led to this discrepancy, but it could be as simple as a minor difference in how these questions or these images were presented to the participants.

This research has found mixed results with respect to the four dominant models about conservatism. It has found support for both the coping perspective and the negativity-bias perspective. These results are not at odds with the meaning-maintenance model, although they

do suggest that the size of the effect differs for conservatives and liberals. In all, this research joins the body of research that really shows that people's reactions to threat, negativity, and arousal are rather specific to many situational and personal factors.

References

Bar-Anan, Y., Wilson, T. D., & Gilbert, D. T. (2009). The feeling of uncertainty intensifies affective reactions. *Emotion*, *9*(1), 123.

Brandt, M. J., Reyna, C., Chambers, J. R., Crawford, J. T., & Wetherell, G. (2014). The ideological-conflict hypothesis: Intolerance among both liberals and conservatives. *Current Directions in Psychological Science*, *23*(1), 27–34.

Brandt, M. J., Wetherell, G., & Reyna, C. (2013). Liberals and conservatives show similarities in negativity bias: Evidence from intolerance, psychological threat, and motivated reasoning. *Psychological Threat, and Motivated Reasoning.*

Chambers, J. R., Schlenker, B. R., & Collisson, B. (2013). Ideology and prejudice: The role of value conflicts. *Psychological science*, *24*(2), 140–149.

Duckitt, J., & Fisher, K. (2003). The impact of social threat on worldview and ideological attitudes. *Political Psychology*, *24*(1), 199–222.

Duckitt, J., & Sibley, C. G. (2007). Right wing authoritarianism, social dominance orientation and the dimensions of generalized prejudice. *European Journal of Personality*, *21*(2), 113–130.

Duckitt, J., & Sibley, C. G. (2010). Personality, ideology, prejudice, and politics: A dual-process motivational model. *Journal of Personality*, *78*(6), 1861–1894.

Gilovich, T., Keltner, D., & Nisbett, R. E. (2006). *Social Psychology*. New York: W. W. Norton & Company.

Greenberg, J., Simon, L., Pyszczynski, T., Solomon, S., & Chatel, D. (1992). Terror management and tolerance: Does mortality salience always intensify negative reactions to others who threaten one's worldview? *Journal of Personality and Social Psychology*, *63*(2), 212–220.

Heine, S. J., Proulx, T., & Vohs, K. D. (2006). The meaning maintenance model: On the coherence of social motivations. *Personality and Social Psychology Review*, *10*(2), 88–110.

Hibbing, J. R., Smith, K. B., & Alford, J. R. (2013). Differences in negativity bias underlie variations in political ideology. *Behavioral and Brain Sciences*.

Inbar, Y., Pizarro, D., Iyer, R., & Haidt, J. (2012). Disgust sensitivity, political conservatism, and voting. *Social Psychological and Personality Science*, *3*(5), 537–544.

Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological bulletin*, *129*(3), 339.

Lang, P.J., Bradley, M.M., & Cuthbert, B.N. (2008). International affective picture system (IAPS): Affective ratings of pictures and instruction manual. *Technical Report A-8.* University of Florida, Gainesville, FL.

Nail, P. R., McGregor, I., Drinkwater, A. E., Steele, G. M., & Thompson, A. W. (2009). Threat causes liberals to think like conservatives. *Journal of Experimental Social Psychology*, *45*(4), 901–907.

Oreg, S. (2003). Resistance to change: Developing an individual differences measure. *Journal of Applied Psychology*, *88*(4), 680–693.

Oxley, D. R., Smith, K. B., Alford, J. R., Hibbing, M. V., Miller, J. L., Scalora, M., et al. (2008). Political attitudes vary with physiological traits. *Science*, *321*(5896), 1667–1670.

Peeters, F. P. M. L., Ponds, R. W. H. M., & Vermeeren, M. T. G. (1996). Affectiviteit en zelfbeoordeling van depressie en angst. *Tijdschrift voor psychiatrie*, *38*(3).

Pratto, F., Çidam, A., Stewart, A. L., Zeineddine, F. B., Aranda, M., Aiello, A. et al. (2013). Social dominance in context and in individuals: Contextual moderation of robust effects of social dominance orientation in 15 languages and 20 countries. *Social Psychological and Personality Science*.

Proulx, T., & Heine, S. J. (2006). Death and black diamonds: Meaning, mortality, and the meaning-maintenance model. *Psychological Inquiry*, *17*(4), 309–318.

Proulx, T., Inzlicht, M., & Harmon-Jones, E. (2012). Understanding all inconsistency compensation as a palliative response to violated expectations. *Trends in cognitive sciences*, *16*(5), 285–291.

Shook, N. J., & Fazio, R. H. (2009). Political ideology, exploration of novel stimuli, and attitude formation. *Journal of Experimental Social Psychology*, *45*(4), 995–998.

Smith, K. B., Oxley, D., Hibbing, M. V., Alford, J. R., & Hibbing, J. R. (2011). Disgust sensitivity and the neurophysiology of left–right political orientations. *PLoS ONE*, *6*(10).

Tritt, S. M., Inzlicht, M., & Peterson, J. B. (in press). Commentary on Hibbing, Smith, & Alford: Confounding valence and arousal: What really underlies political orientation?

Tritt, S. M., Inzlicht, M., & Peterson, J. B. (2013). Preliminary support for a generalized arousal model of political conservatism. . *PLoS ONE*, *8*(12), e83333.

Wetherell, G. A., Brandt, M. J., Reyna, C. (2013). Discrimination across the ideological divide: The role of value violations and abstract values in discrimination by liberals and conservatives. *Social Psychological and Personality Science*, *4*(6), 658–667.

Wilson, T. D., Centerbar, D. B., Kermer, D. A., & Gilbert, D. T. (2005). The pleasures of uncertainty: prolonging positive moods in ways people do not anticipate. *Journal of personality and social psychology*, *88*(1), 5.

Appendix A: Resistance-to-change and acceptance-of-inequality scales

The ten items from the resistance-to-change scale were created by modifying several of the items of Oreg (2003). They are as follows:

1. Ik zou niet graag op grote schaal veranderingen aanbrengen in de sociale orde

2. Over het algemeen beschouw ik sociale veranderingen als negatief

3. Als mij verteld zou worden dat er belangrijk sociale veranderingen aankomen, zou ik me waarschijnlijk niet op mijn gemak voelen

4. Naar mijn mening zorgen sociale veranderingen voor een hoop gedoe

5. Vaak voel ik mij niet op mijn gemak, zelfs als ik nadenk over sociale veranderingen die in mijn eigen voordeel werken

6. Ik heb de neiging me te verzetten tegen sociale veranderingen, zelfs als ik denk dat de veranderingen mij uiteindelijk ten goede zullen komen

7. Gehoorzaamheid is op de lange termijn beter voor ons dan altijd maar de fundering van onze samenleving betwijfelen

8. Wanneer de samenleving stabiel lijkt, zoek ik naar wegen om de samenleving weer te veranderen

9. Als ik op de hoogte word gebracht van aankomende sociale veranderingen, dan kijk ik uit naar die veranderingen

10. Ik ben het vaak eens met sociale veranderingen

The acceptance-of-inequality scale is the Dutch-language version of the short social-dominance orientation scale as presented by Pratto and colleagues (2013), except that in the second item the plural form 'gelijkheden' (equalities) was changed to the more usual singular 'gelijkheid', which is also in concordance with its form in other languages as presented by Pratto and colleagues (2013).

1. Als we prioriteiten gaan stellen, moeten we rekening houden met alle groepen
2. We zouden niet moeten streven naar gelijkheid tussen groepen
3. Groepsgelijkheid zou ons ideaal moeten zijn
4. Superieure groepen zouden inferieure groepen moeten domineren

Appendix B: Groups pretest

Groups that fit or could be adapted to fit Dutch society were selected from the list of groups of Chambers and colleagues (2013). To fill in some gaps, this list was supplemented with several related groups. The resulting list of 36 groups is presented in Table 10.

These groups were presented to participants on a continuous scale from 0 (extreme left) to 6 (extreme right) in random order. Not all participants chose to rate all groups, so that the groups were rated by 61 to 64 participants. The two most extreme groups on the left with relatively low standard deviations (below $\sigma \approx 1.2$) were selected plus single mothers, which had $\sigma \approx 1.29$, but was selected because this group was perceived as considerably left-wing and still had a relatively low standard deviation compared with other considerably left-wing groups. Similarly, the three most extreme ones on the right with relatively low standard deviations were selected. All these are presented in Table 11. The groups on the left and right significantly differed from one another (all $ps < 0.001$) and the midpoint (all $ps < 0.001$). The most extreme group on the left, the environmentally conscious, was also perceived as

significantly more left-wing than the other two left-wing groups ($p = 0.008$ with Antilleans and $p = 0.010$ with single mothers).

Participants' views of the political orientation of most of these six groups did not correlate significantly with their political self-orientation ($ps > 0.091$), except for people with a good income ($r = 0.373, p = 0.003$), nor with voting behavior ($ps > 0.062$)

Table 10: The pretested 36 groups with their means (3 is the mid-point, higher scores indicate stronger right-wing perception)

Group	**Mean**
PvdA voters	2.02
VVD voters	4.29
CDA voters	3.38
People on welfare	1.82
Owners of a small company	3.37
Owners of a large company	4.47
Managers	4.27
People with a good income	4.25
Single mothers	1.95
Gays and lesbians	2.16
Feminists	2.01
Moroccan Dutch	2.21
Antillean Dutch	2.00
Turkish Dutch	2.35
Chinese Dutch	2.84
Surinamese Dutch	2.23
Indonesian Dutch	2.39
Young people	2.91
Elderly people	2.83
Middle-aged people	3.29
Members of trade unions	2.40
The environmentally conscious	1.40
Drug users	2.25
Fundamentalist Christians	3.65
Fundamentalist Muslims	2.94
Catholics	3.17
Protestants	3.21
Jews	2.87
Atheists	3.06
Business people	4.36
Soldiers	3.45
Rich people	4.44
Poor people	1.90

Women	2.58
Men	3.70
Students	2.67

Table 11: The means and standard deviations of the selected six groups

Group	**Mean ($\bar{X}$)**	**Standard deviation (σ)**
The environmentally conscious	1.40	1.13
Antillean Dutch	2.00	1.16
Single mothers	1.95	1.29
People with a good income	4.25	1.07
Managers	4.27	1.01
Owners of a large company	4.47	1.09