

**No Evidence for Ideological Asymmetry in Dissonance Avoidance: Unsuccessful Close and
Conceptual Replications of Nam, Jost, and van Bavel (2013)**

Timothy P. Collins

St. Olaf College

University of Minnesota

tpcollin@umn.edu

651-235-0606

Jarret T. Crawford

The College of New Jersey

Mark J. Brandt

Tilburg University

Accepted for publication at *Social Psychology*

Abstract

Nam, Jost, and van Bavel (2013) found that conservatives were more likely than liberals to avoid dissonance-arousing situations (viz., writing counter-attitudinal essays in a high-choice situation). A close replication of this original research was unsuccessful, as both liberals and conservatives avoided writing counter-attitudinal essays to similar degrees. We conducted an additional experiment that aimed to conceptually replicate Nam et al. (2013), and to examine whether people whose ideology is threatened might be more likely to avoid dissonance-arousing situations. Again, liberals and conservatives were equally likely to avoid writing counter-attitudinal essays. Threat had no effect on these decisions. A meta-analysis of Nam et al.'s (2013) two studies, the two studies presently reported, and a third supplemental study provide no evidence for asymmetry in dissonance avoidance.

No Evidence for Ideological Asymmetry in Dissonance Avoidance: Unsuccessful Close and Conceptual Replications of Nam, Jost, and van Bavel (2013)

Social scientists have documented psychological differences between conservatives and liberals over the last several decades (Hibbing, Smith, & Alford, 2013; 2014; Jost, Federico, & Napier, 2009; 2013). One common set of findings is that, compared to liberals, conservatives tend to be less open to experience (Carney, Jost, Gosling, & Potter, 2008), less cognitively flexible (Dodd et al., 2012), more intolerant of ambiguity (Chirumbolo, 2002), and higher in the need for cognitive closure (Webster & Kruglanski, 1994). These findings have been confirmed in meta-analyses (Jost et al., 2003; Sibley & Duckitt, 2008; Sibley, Osborne, & Duckitt, 2012) and support the *motivated social cognition* prediction that political conservatism helps people meet underlying needs and motives related to certainty and the avoidance of ambiguity (see also Hibbing et al., 2013; 2014; Jost et al., 2009; 2013; Jost, Krochik, Gaucher, & Hannes, 2009).

A key shortcoming of much of the foundational work for this motivated social cognitive perspective is that it relies heavily—albeit, not exclusively—on self-report questionnaires assessing motivational and cognitive styles that are thought to be free from political content. For example, findings that liberals are more open to experience than conservative may reflect a fundamental difference in how these groups approach new people, places, and ideas (Carney et al., 2008; Van Hiel, Kossowska, & Mervielde, 2000); *or*, according to critics (Charney, 2015; Conway et al., 2015), they may reflect the politically liberal values embedded in some of the self-report items used to *measure* openness to experience and cognitive style. One recent study (Brandt, Chambers, Crawford, Wetherell, & Reyna, 2015) found that even people high in openness can express prejudice towards attitudinally-dissimilar others, suggesting that openness may be capturing differences in values and beliefs rather than differences in information

processing. Other work finds that the association between ideology and openness depends on which measure of openness you choose, and suggests that the higher correlations are due to content overlap between the independent and dependent measures (Sibley & Duckitt, 2008; Sibley, Osborne, & Duckitt, 2012). These findings suggest that the correlations between openness and political ideology—or dogmatism and political ideology (Hanson, 1989; Parrott & Brown, 1972)—may be more indicative of overlapping content than differences in motivational and cognitive style. To avoid this issue, some researchers have moved beyond questionnaires to test how differences in motivational and cognitive style can be observed behaviorally.

In one recent example, Nam, Jost, and Van Bavel (2013) found that political conservatives were less likely than liberals to choose to be in a situation that arouses a sense of personal contradiction and a threat to one's self-image, thereby exhibiting higher rates of cognitive dissonance avoidance (Festinger, 1957). In two experiments, based on the common “induced compliance” cognitive dissonance procedure (Festinger & Carlsmith, 1959; see Harmon-Jones & Harmon-Jones, 2007, p. 8), participants were asked to choose their favored President (in Study 1, Obama or Bush; in Study 2, Clinton or Reagan) and then were either asked (i.e., participants with a high degree of choice) or were told (i.e., participants with a low degree of choice) to write an essay inconsistent with their stated preference (e.g., if they preferred Bush, they were asked to write a pro-Obama essay). In Study 1, among “high-choice” participants, 0% of Bush-preferrers were willing to write a pro-Obama essay, compared to 28% of Obama-preferrers willing to write a pro-Bush essay—a significant difference of proportions ($b = -2.36$, $SE = 1.05$, Wald = 5.03, two-tailed $p = .03$). Study 2 found the same pattern of results, albeit to a weaker—and marginally significant—extent, with 10% of “high-choice” Reagan-preferrers compliant, compared to 22% of Clinton-preferrers ($b = -1.36$, $SE = .80$, Wald = 2.91, $p = .09$).

Thus, across the two studies, supporters of Republican presidents refused to write the inconsistent essay more often than supporters of Democratic presidents in the high-choice condition—a pattern of behavioral results consistent with the motivated social cognitive perspective.

Why Replicate?

We sought to replicate and extend the work on the avoidance of dissonance-arousing situations for two reasons. First, although there is other evidence for ideological asymmetry consistent with Nam et al. (2013), there is also evidence inconsistent with this perspective. More specifically, whereas some research on motivated reasoning has found that conservatives engage in motivated reasoning more often than liberals (Barberá, Jost, Nagler, Tucker, & Bonneau, 2015; Bullock, 2011; Garrett, 2009; Iyengar, Hahn, Krosnick, & Walker, 2008; Lavine, Lodge, & Freitas, 2005; MacCoun & Paletz, 2009; Nyhan & Reifler, 2010; Sears & Freedman, 1967), some has found the inverse (Bakshy, Messing, & Adamic, 2015), and some has found no ideological differences (Kahan, 2012; Kahan, 2013; Petersen, Skov, Serritziew, & Ramsøy, 2014; Taber & Lodge, 2006). Thus, there is a mix of evidence for ideologically symmetry and asymmetry in constructs similar to dissonance avoidance.

Second, there are other possible explanations for finding that conservatives are more likely to avoid a dissonance-arousing situation with the induced compliance procedure. Conservatives' avoidance of the attitude-inconsistent essay could be interpreted as conservatives' refusal to follow the instructions of the experimenter. People tend to comply with authorities with whom they identify (Frimer, Gaucher, & Schaefer, 2014; Reicher, Haslam, & Smith, 2012), and conservatives may be less likely to identify with a psychology experimenter who is stereotyped, often accurately, as a liberal (Gross, Medvetz, & Russell, 2011; Inbar & Lammers,

2012). Moreover, conservatives in the United States are more likely to distrust science in general (Gauchat, 2012). Thus, a *compliance perspective* suggests that conservatives' apparent avoidance of dissonance-arousing situations in a psychology-experiment setting may be attributed to disobedience to ideologically dissimilar authorities.

The Current Experiments

The finding that conservatives avoid dissonance-arousing situations more than liberals is an important experimental and behavioral demonstration of conservatives' greater motivation for certainty and reduced ambiguity. However, it is also at odds with other findings that both liberals and conservatives avoid information they do not like and make decisions motivated by their prior ideological worldviews. Combined with the compliance perspective as a potential alternative explanation, we attempted to replicate and extend these findings in two studies.

Study 1 included measures to test both the motivated social cognition and the compliance accounts of the original findings (Nam et al., 2013). After failing to find evidence in support of either account and instead finding that liberals and conservatives were equally likely to avoid dissonance-arousing situations in Study 1, we conducted an additional study to conceptually replicate Nam et al. (2013), as well as examine the potential moderating effect of worldview threat, which may increase people's commitments to their prior worldviews (Kosloff, Greenberg, Weise, & Solomon, 2010), and increase selective exposure to attitudinally-congruent information among authoritarians (Lavine, Lodge, & Freitas, 2005).

Study 1

Study 1 was a close replication of Nam et al. (2013) with a few modifications.

First, we only included high-choice conditions because low-choice conditions do not evoke dissonance and, thus, do not test the dissonance-avoidance hypothesis. This decision may

impede our ability to replicate Nam et al.'s (2013) full pattern of results, but we reasoned that the benefits of a high powered and focused test of the most relevant comparison outweighed the opportunity to replicate the full pattern. Note, however, that the original conditions that we do not include in our study are between-subject conditions and so do not affect how the participants in our study experienced the procedure. Moreover, as we will explain in our results, we took steps to ensure that participants understood that they had a choice to write or not write the essay.

Second, to test the motivated social cognition perspective, we included a 20-item measure of the need for cognitive closure (NFCC; Houghton & Grewal, 2000; Webster & Kruglanski, 1994) on seven-point Likert scale, rescaled to run in a consistent direction and then averaged to obtain a scale.

Third, to test the compliance perspective and increase statistical control, we varied whether participants were asked to write a belief-inconsistent essay (as in Nam et al. [2013]), or a belief-consistent essay, under the assumption that compliance would have the same effect in both conditions, but that dissonance avoidance would not.

Fourth, to see if they affected compliance, as would be predicted by a compliance account of the original effects, we included (a) a 6-item measure of right-wing authoritarianism (RWA; Altemeyer, 1998) on a 7-point Likert scale; (b) measures of the perceptions of the experimenters' political beliefs, and (c) measures of confidence in science to see if these factors affected compliance, as would be predicted by a compliance account of the original effects (see Supplemental Information for item batteries). Critically, the analyses of the measures of NFCC, RWA, perceptions of the experimenters' political beliefs, and science confidence do not support either the motivated social cognitive or the compliance perspectives. Therefore, we only report liberal-conservative differences in these above measures to demonstrate our samples' ability to

replicate extant findings, and otherwise focus exclusively on the study's experimental results as they pertain to ideological differences in dissonance avoidance. The comparison of mean scores for the traits across presidential preference groups demonstrates differences consistent with previous research, but their incorporation into predictive models of essay compliance yields no significant findings (see Supplemental Information).

Fifth, participants were randomly assigned to compare either Bush and Obama or Reagan and Clinton, instead of doing so in two different studies as in Nam et al. (2013), in order to reduce any potential issues that may stem from temporal differences between data collections, and to more easily avoid repeat participants.

Sixth, given that this is a replication attempt, we took Simonsohn's (2015) data-driven suggestion of collecting a sample 2.5 times larger than that of the original study's sample.

And seventh, the payment amount for participants was increased from \$0.25 to \$0.50. While this is a relatively substantial increase, in relative terms, it is not enough to change compliance rates. Payment differences affect dissonance effects in the induced compliance paradigm (Festinger & Carlsmith (1959), but the payment differences in this paradigm are substantial. Festinger and Carlsmith (1959) paid \$1 and \$20—or, according to the Bureau of Labor Statistics Inflation Calculator, around \$8.20 and \$165.40, respectively, in 2016 dollars. Because differences in Festinger and Carlsmith (1959) depended on a difference of \$157.20 in modern terms, it is highly unlikely (though admittedly possible) that a payment difference of \$0.25 would explain any differences in dissonance-avoidance between the original studies and our own.

Method

Participants

In September, 2013, we used Amazon’s Mechanical Turk (MTurk) to run a full total of $N = 452$ participants (54.5% female, mean age = 34.61; compared to $N = 330$ in Nam et al.). Because the analyses were conducted using listwise deletion, the exact sample sizes vary depending on the variables being tested and included in the models.

In terms of presidential pair assignment and essay prompt assignment, Table 1 shows the numbers of participants in each condition, compared to the numbers in Nam et al.’s two studies. Consistent with Nam et al., participants who did not follow or who misread instructions were excluded from analyses.¹

Assigned president essay	Nam et al.			Study 1		
	Preferred president Republican	Preferred president Democrat	Total	Preferred president Republican	Preferred president Democrat	Total
Bush	—	115	165	41	78	119
Obama	50	—		31	83	114
Reagan	—	95	148	39	64	103
Clinton	53	—		36	80	116
Republican	—	210	313	80	142	452
Democrat	103	—		67	163	

Materials & Procedure

We closely followed the procedures of Nam et al. and used their original materials, with the following three central exceptions: (1) the inclusion of additional questionnaires, which were counter-balanced to appear either before or after the original measures; (2) the addition of a

¹ Inclusion of these participants did not affect conclusions. While we acknowledge the irony of excluding participants who did not comply with the instructions for the study from a study about compliance, our focus is on compliance with tasks that induce dissonant cognitions, and not compliance in general (see Supplemental Information for more).

belief-consistent between-subjects condition; and (3) the increase of the payment amount from \$.25 to \$.50.

Participants were told this was a study about “Social Judgments and Decisions.” They first indicated basic demographics and then proceeded to indicate their approval of and preferences for a pair of computer type (viz., Macs vs. PCs) and a pair of Presidents. Thus, computers and Presidents varied within subjects.

For the Presidential pairing, participants were randomly assigned to either George W. Bush and Barack Obama *or* Ronald Reagan and Bill Clinton in a between-subjects design. Approval of the computers and Presidents were on 9-point approval level ratings and a forced choice between the pairs. The primary analyses focus on participant’s forced choice of which president they approved of more consistent with the forced-choice dissonance paradigm and Nam et al (2013). Participants, on an 11-point *extremely liberal to extremely conservative* scale, were asked to indicate (1) their general “political orientation,” (2) their ideology “in terms of social and cultural issues,” and (3) their ideology “in terms of economic issues.” Participants were randomly assigned to complete our additional measures at the beginning or end of the study. The additional measures included three items measuring confidence in the sciences, three items measuring perceptions of the experimenters’ ideologies, six items from the RWA scale (Altemeyer, 1998), and the 20-item NFCC scale (Houghton & Grewal, 2000). No differences were observed between those who completed the measures before or after the essay-writing task.

Participants were then asked to write an essay about why one president was better than the other and why one computer type was better than the other. Essay topic varied within groups, with essay topic counterbalanced. If participants agreed to write the essay, they were coded as

“compliant” for that essay type, and were guided through the Nam et al. “brainstorming” task, in which they were presented with the following (after each of which a text box was available):

1. First, please think of a title:
2. Please write the first main point of your argument.
3. Please write the second main point of your argument.
4. Please state a conclusion to your argument.

Finally, as a manipulation check, all participants were asked to indicate the degree to which they felt like they “really” had a choice in writing the essays on a nine-point scale (1 = *no choice*; 9 = *total choice*).

Results

Preliminary analyses. We first tested whether participants indicated that they felt they had a choice in their decision to write an essay. Participants felt they had a choice to write the essay, as the average score was well above the midpoint of 4 on the scale ($M = 6.06$, $SD = 2.89$), $t(448) = 7.81$, $p < .001$, η^2 partial = .35.

We also checked if there were self-reported ideological and/or approval-rating differences between those who reported preferring Republican vs. Democratic presidents. Those who preferred Bush were significantly more conservative in their 11-point general ideological identification than those who preferred Obama (Bush-preferrers’ $M = 7.45$, $SD = 1.95$; Obama-preferrers’ $M = 3.73$, $SD = 2.07$), $F(1,225) = 160.33$, $p < .001$, η^2 partial = .65—a difference that was also observed when comparing Reagan-preferrers ($M = 7.23$, $SD = 2.34$) to Clinton-preferrers ($M = 3.94$, $SD = 2.24$), $F(1,212) = 100.66$, $p < .001$, η^2 partial = .57. Moreover, Bush-preferrers indicated significantly higher mean 9-point approval of Bush than Obama-preferrers (Bush-preferrers’ $M = 6.10$, $SD = 2.104$; Obama-preferrers’ $M = 2.55$, $SD = 1.69$), $F(1,230) =$

187.28, $p < .001$, η^2 partial = .67, and significantly lower mean approval of Obama (Bush-preferrers' $M = 2.62$, $SD = 2.00$; Obama-preferrers' $M = 5.48$, $SD = 1.88$), $F(1,231) = 109.60$, $p < .001$, η^2 partial = .57. The same difference was observed for those in the Reagan/Clinton condition, with Reagan-preferrers indicating significantly higher mean approval of Reagan than Clinton-preferrers (Reagan-preferrers' $M = 7.04$, $SD = 1.85$; Clinton-preferrers' $M = 4.15$, $SD = 1.84$), $F(1,217) = 124.20$, $p < .001$, η^2 partial = .60, and interestingly, to a significantly smaller degree, significantly lower approval of Clinton, $F(1,215) = 34.36$, $p < .001$, η^2 partial = .37 (Reagan-preferrers' $M = 4.95$, $SD = 2.06$; Clinton-preferrers' $M = 6.55$, $SD = 1.86$).

Importantly, we also observed that participants who preferred Republican presidents had significantly higher mean NFCC scores (Republican-preferrers' $M = 4.38$, $SD = .64$; Democrat-preferrers' $M = 4.24$, $SD = .64$), $F(1,416) = 4.53$, $p < .05$, η^2 partial = .10, and higher mean RWA scores (Republican-preferrers' $M = 3.81$, $SD = 1.17$; Democrat-preferrers' $M = 3.15$, $SD = .64$), $F(1,448) = 42.89$, $p < .001$, η^2 partial = .25. Both of these differences are consistent with previous research (Jost et al., 2003; Jost et al., 2009; see Supplemental Information).

Primary analyses. Results consistent with the asymmetry perspective would demonstrate either (a) a direct replication of Nam et al.'s results, in which compliance with an inconsistent essay prompt was predicted by presidential preference, or (b) a conceptual replication, in which compliance with an inconsistent essay prompt was associated with other variables related explicitly or tangentially to participants' personal politics (e.g., ideological identification, NFCC). Results consistent with a symmetry perspective would demonstrate no such effects. Both perspectives make the straight-forward prediction that people comply more with attitude-consistent compared to attitude-inconsistent essays; however, the obedience perspective makes

the prediction that conservatives will be less compliant across both attitude-consistent and inconsistent essays.

Like Nam et al., we used binary logistic regression models predicting compliance for the political essay (1 = compliant, 0 = noncompliant; see Table 2). In Model 1, we regressed compliance on whether the essay prompt was consistent or inconsistent with their presidential preference (1 = consistent, -1 = inconsistent), whether they preferred the Democratic or Republican president (Obama/Clinton = -1, Bush/Reagan = 1), and the interaction between these two variables. There was only a main effect of essay consistency: People were more likely to comply with a consistent than inconsistent essay, with 25.4% of participants being compliant with an inconsistent essay, compared to 41.2% who were compliant with a consistent essay, $\chi^2 = 12.52$, $df = 1$, $p < .001$. Contrary to both the compliance and asymmetry perspectives, there were no other main effects or interactions.

Additional models were tested. First, Model 2 (Table 2) demonstrated that the results of Model 1 were not moderated by which presidential pair participants responded to; however, there was a *main* effect of presidential pair, such that participants were more likely to comply to write essays regarding the more recent presidential pairing (Obama/Bush) than the more distant pairing (Clinton/Reagan).

Second, several additional models included our additional measures—including the use of alternative ideological measurements as predictors (e.g., NFCC, RWA)—but no significant or relevant effects were observed (see Supplemental Information). Meanwhile, the regularly observable uniformity in the standard error values throughout our two studies and supplemental studies is due to the minimal total degree of compliance from participants, ultimately constituting

no more than a statistical fluke as a result of the predictors being categorical variables and interactions thereof.

Predictor	Model 1		Model 2	
	<i>b</i> (SE)	Wald	<i>b</i> (SE)	Wald
Political Essay Consistency	.342** (.109)	9.917	.339** (.113)	12.733
Presidential Preference	.059 (.109)	.292	.044 (.113)	4.366
Consistency * Preference	-.056 (.109)	.263	-.046 (.113)	2.187
Presidential Pair			-.324** (.113)	.438
Presidential Pair * Preference			-.212 (.113)	4.892
Consistency * Presidential Pair			-.068 (.113)	3.593
Consistency * Pair * Preference			.174 (.113)	2.389
Constant	-.699*** (.109)	41.345	-.718*** (.113)	21.703
<i>n</i>	452		452	
Chi-Squared (<i>df</i>)	13.143** (3)		27.197*** (7)	
** <i>p</i> < .01; *** <i>p</i> < .001				

To see if there were any conditions that revealed conservative avoidance of dissonance-arousing situations, we conducted chi-squared tests in each of the four conditions that should have aroused dissonance (e.g., Bush-preferrers prompted to write pro-Obama essays, Clinton-preferrers prompted to write pro-Reagan essays), the percentages of each of which are illustrated in Figure 1. Across these four tests, only one significant difference in compliance rates emerged: 21.8% of Obama-preferrers were willing to write a pro-Bush essay compared to 41.9% of Bush-preferrers who were willing to write a pro-Obama essay ($\chi^2 = 4.51$, $df = 1$, $p = .034$). This effect is the opposite of what the motivated social cognition perspective predicts and is not robust when using the more precise Fisher's Exact Test (two-tailed $p = .056$). Thus, the effect does not appear to reject the null hypothesis.

[Figure 1 about here]

Discussion

Contrary to the ideological asymmetry findings in Nam et al. (2013), and our alternative compliance perspective, we found only ideological symmetry across presidential preference groups: Democrat-preferrers and Republican-preferrers were equally likely to avoid writing belief-inconsistent (i.e., dissonance-arousing), as well as belief-consistent, essays. This was the case regardless of whether the comparison was between Bush and Obama (Nam et al.'s Study 1) or Reagan and Clinton (Nam et al.'s Study 2). We used identical measures to Nam et al., and our manipulation checks indicated that our measures worked as expected. We also increased the sample size of our study relative to those in the original studies—consistent with Simonsohn's (2015) recommendations for replication study sample sizes—and combined across Presidential pairings to increase power. Nonetheless, no evidence for asymmetry or for our alternative compliance-related perspective emerged.

Null results are notoriously difficult to interpret. Although the larger sample sizes and clearly non-significant results can give some confidence to the conclusion that liberals and conservatives (i.e., president-preferrers) do not differ in dissonance avoidance—or, if they do, only by a small amount—there are other possible reasons for why our study failed to confirm the original findings (Nam et al., 2013). One reason, and the reason we explore in an additional study, is that the political context shifted from the time the original studies were conducted to the time when we conducted our study. For example, there is evidence that the association between political ideology and life satisfaction depends on which party holds power (Mandel & Omorogbe, 2014). Other work has found that the association between ideology and integrative

complexity of Supreme Court justices is driven by who holds the majority on the court (Gruenfeld, 1995). In other words, effects that might appear to be a fundamental psychological difference between political ideologies may actually be a feature of the current political environment.

We reasoned that the political context may have shifted from being relatively threatening to conservatives to relatively threatening to liberals between the original studies and our replication. If personal politics are at least partially dynamic and context-dependent, then people may be less likely to engage in a dissonance-arousing situation regarding their political attitudes when their political values are threatened. Conversely, when people's political values are *assured*, they may be more willing to engage in a dissonance-arousing situation. Some perspectives suggest that conservatives are especially responsive to threatening circumstances (Hibbing et al., 2014; Oxley et al., 2008); thus, conservatives may be more prone to avoid dissonance-arousing situations under threat than liberals. However, other perspectives suggest that people across the political spectrum react similarly to worldview- and meaning-based threats (Brandt, Wetherell, & Reyna, 2014; Slegers, Proulx, & Van Beest, 2015; Vail, Arnst, Motyl, & Pyszczynski, 2012); thus, *both* liberals and conservatives may become more dissonance-avoidant when under threat. Study 2 varied different types of worldview threat to examine whether threat can explain variation among liberals and conservatives in avoidance of dissonance-arousing situations.

Study 2: Post-Election Worldview Threat

Study 2 was conducted in late November, 2014, and tested the effects of worldview threat surrounding the issue of equal marriage rights for same-sex couples, and the potential effect of recent federal court rulings on future U. S. Supreme Court rulings: Some U. S. Circuit Courts

had ruled in favor of states' rights and in opposition to federal marriage equality; thus, the stage had been set for a marriage-rights showdown at the Supreme Court.

According to the asymmetry perspective, not only should conservatives be less likely than liberals to write belief-inconsistent essays, but they should be especially unlikely to do so under a threat to their worldview (Lavine et al., 2005). According to the symmetry perspective, meanwhile, liberals and conservatives should be equally likely to avoid writing belief-inconsistent essays, and further, compliance should be significantly lower among both liberals and conservatives in conditions that threaten their respective worldviews. By providing threats to both liberals and conservatives, and requiring both liberal and conservative participants to write belief-inconsistent or belief-consistent essays, this study provides a test of when the symmetry or asymmetry perspectives might find more or less support.

Method

Ethics Statement

The study was approved by the Institutional Review Board at The College of New Jersey. All participants provided informed consent prior to study participation.

Participants

In late November 2014, MTurk was used to recruit $n = 500$ U. S. adults—given a desired target of $n = 100$ participants per cell (see Simonsohn, 2015)—who were told they would be participating in research titled “Social Attitudes,” earning \$.50 for survey completion.

Participants who did not give consent, did not respond to any items, wrote the wrong essay (e.g., did not follow directions), or indicated not reading the prompt given to them were removed. The

inclusion of those who did not follow instructions did not affect the ultimate results. The final number of participants was $n = 463$ (46.9% female; mean age = 33.56, $SD = 11.51$).

Materials & Procedure

Participants first indicated standard demographics (viz., gender and age), self-identified ideological orientation (three 5-point items measuring ideology *in general*, *on social issues*, and *on economic issues*), and party affiliation (7-point *Strong Democrat* to *No Party Affiliation* to *Strong Republican*), and were then shown the following:

- Some issues are very cut and dry, and some are clearly more complicated than others. We recognize that this may be a complicated issue, but, if you had to choose just one of the options below, which best describes your stance on whether individual states should or should not be required to allow same-sex marriage?

Response options were either “All states should be required to allow same-sex marriage” or “All states should not be required to allow same-sex marriage.”

Next, participants completed the 21-item Wilson-Patterson Attitude Inventory (Wilson & Patterson, 1968)—updated to remove outdated items (Smith, Oxley, Hibbing, Alford, & Hibbing, 2011)—from which operational conservatism scores could be computed. Responses were made on a 5-point *Strongly Disagree* to *Strongly Agree* scale, coded so that higher operational ideology scores indicated more conservative operational ideologies, and then summed (see Smith et al., 2011).

Afterwards, participants were randomly assigned to read one of two “brief essay[s] about America’s current political landscape” (see Supplemental Information), which served as priming vignettes. The threatening-to-conservatives condition served to threaten opponents of same-sex marriage (SSM) by stating that the Supreme Court was “most likely” going to rule that there is a

constitutional right to SSM, and that “all states would be required to allow same-sex marriage”; the threatening-to-liberals condition served to threaten supporters of SSM, by stating that the Supreme Court was most likely going to rule that states can ban SSM, and that “all states would not be required to allow same-sex marriage.” (The full vignettes are included in the Supplemental Information document.) Participants then indicated whether they “read the above paragraph about the upcoming elections” and “understand its consequences for legalized abortion.”

Next, participants were told,

The purpose of this study is to understand people’s social attitudes, and to require participants to brainstorm on topics covered in the political world. An important part of that is studying participants’ abilities to craft arguments arguing positions they may or may not personally endorse.

At the moment, we don’t have enough of certain kinds of essays, and we need to collect several more. We would really, really appreciate it if you would help us out by writing one. Your response will be kept anonymous.

Participants were then randomly divided into one of two essay-writing conditions: arguing either that states should or should not be “required to allow same-sex marriage.” If participants indicated “Yes, I will write an essay,” they were told that, before writing the essay, “it is important to go through a brainstorming process,” with the same four-step procedure as in Study 1. If they indicated unwillingness to write the essay, they were moved ahead to the next section.

Next, participants were given the shortened ten-item Big Five personality inventory (Gosling, Rentfrow, & Swann, 2003; Rammstedt & John, 2007), followed by the 15-item Need

to Evaluate scale (Jarvis & Petty, 1996), and a 3-item political engagement scale (Malka et al., 2014). These scales were included either (a) because they have been shown previously to influence compliance in induced compliance procedures, as is the case for the Big Five (Cialdini, Trost, & Newsom, 1995), or (b) because they are involved in the decision-making processes inherent to cognitive dissonance research, as is the case for the need to evaluate (Jarvis & Petty, 1996; Federico, 2007).

Also included was a 4-item manipulation check that measured the extent—on a 5-point *Strongly Disagree* to *Strongly Agree* scale—to which (1) participants indicated paying attention throughout the whole survey, (2) participants felt like they had a choice in writing the essay, (3) participants were only doing the survey to earn monetary payment, and (4) in order to discern the degree to which participants were more actually paying attention during the prime, which ruling was “the most likely outcome of the Supreme Court’s upcoming ruling on same-sex marriage” (viz., *states would be required* or *states would not be required to allow same-sex marriage*).

Results

Preliminary analyses. Again, the choice prompts were effective, as participants indicated having felt they had a choice to write the essay when compared to the midpoint of 3 on a five-point scale ($M = 4.23$, $SD = .92$), $t(462) = 28.78$, $p < .001$, η^2 partial = .80. Importantly, 21.0% ($n = 97$) of participants indicated opposition to states being required to allow SSM, but the mean differences in mean self-identified conservatism (anti-SSM $M = 3.66$, $SD = .735$; pro-SSM $M = 2.31$, $SD = .764$; $F(1,462) = 243.94$, $p < .001$, η^2 partial = .59) and Wilson-Patterson conservatism (anti-SSM $M = 66.11$, $SD = 9.94$; pro-SSM $M = 48.27$, $SD = 11.67$; $F(1,450) = 184.28$, $p < .001$, η^2 partial = .54) between the two groups suggests ideological differences

between pro-SSM and anti-SSM participants. In other words, SSM stance is a suitable approximation of ideology.

Primary analyses. Using logistic regression, we ran three models (see Table 3). We first regressed essay compliance on the consistency of the essay with the participants' respective points of view (inconsistent = -1, consistent = 1), stance on SSM (anti-SSM = -1, pro-SSM = 1), and the interaction of the two (Model 1). Results indicate that the only significant predictor of compliance was the consistency of the essay ($p < .001$): Participants were more likely to write belief-consistent than inconsistent essays.

For Model 2, we included the prime condition, dummy coded to correspond to whether the condition was threatening to the participant (threatening = 1; reassuring = 0), its interaction with essay consistency, and the three-way interaction between prime, stance, and consistency. The interactions were not significant. The threat prime played no role in any models: Being confronted with a political outcome that should threaten participants' worldviews had no effect on whether or not participants were willing to write an essay that contradicted their worldviews. The proportions of participants complying in each condition are illustrated in Figure 2. Additional analyses demonstrated that the individual differences that we measured played no significant role in the models (see Supplemental Information).

Predictor	Model 1		Model 2	
	<i>b</i> (SE)	Wald	<i>b</i> (SE)	Wald
Essay Consistency	.782*** (.222)	12.424	.856** (.313)	7.470
SSM Stance	.294 (.222)	1.762	.277 (.223)	1.536
Consistency * Stance	.031 (.222)	.020	-.183 (.302)	.367
Threatening = 1			-.177 (.319)	.310
Consistency * Prime			-.098 (.413)	.056

Consistency * Stance * Prime			.399 (.374)	1.140
Constant	-2.090*** (.222)	88.839	-1.991*** (.273)	53.266
<i>n</i>	463		463	
Chi-Squared (<i>df</i>)	35.497*** (3)		37.050*** (6)	
* <i>p</i> < .05; ** <i>p</i> < .01; *** <i>p</i> < .001				

[Figure 2 about here]

Discussion

Study 2 shows no differences between liberals and conservatives in dissonance avoidance. Inconsistent with the asymmetry perspective, but consistent with the symmetry perspective, liberals and conservatives were equally likely to avoid writing a belief-inconsistent essay. Inconsistent with our expectations, there was no effect of worldview threat in this study. Thus, our results offer no support for the ideological asymmetry perspective or for the worldview threat hypothesis. Instead, people were less likely to write belief-inconsistent essays, regardless of their political orientation or exposure to threat.

Meta-Analysis

We performed a meta-analysis of available data to examine the hypothesis that conservatives are more likely than liberals to avoid dissonance-arousing situation (inconsistent essay, high choice condition). The meta-analysis was conducted with the R package *metafor* (Viechtbauer, 2010). Included in it was evidence from five studies: the high choice conditions in Nam et al.'s Studies 1 and 2; the inconsistent-essay conditions in Studies 1 and 2 from the present paper; and the inconsistent-essay conditions in a third study we conducted, reported in the Supplemental Information document. Figure 3 displays the log odds ratio for each study and the results of both a fixed and random effects meta-analysis. In both random effects and fixed effects models, the effect does not differ from zero. Thus, across these five sources of data, there is no evidence for ideological differences in dissonance avoidance.

General Discussion

In two studies and a meta-analysis of five studies, we found no support for ideological asymmetry in dissonance avoidance using the standard induced compliance procedure. When considered in light of the results of Nam et al. (2013), this suggests that ideological asymmetry in dissonance avoidance is not robust to different samples or policy issues. The discrepant findings between Nam et al. and our own studies might suggest that results depend on temporal political context and environment, although the fact that manipulated political threat in Study 2 did not moderate the effect casts some doubt on at least one major political environment cue.

In each of our studies, there were no ideological differences in the tendency to avoid writing counter-attitudinal essays, regardless of whether ideology was operationalized by Presidential party preference (Study 1, as in Nam et al., 2013), marriage equality (Study 3), or political orientation (Studies 1–2, see supplemental materials). Inconsistent with our expectations, these effects were not moderated by worldview threat (Study 2). Instead, the only consistent effect we observed was that people preferred to write belief-consistent over belief-inconsistent essays. Our observation of no support for the ideological asymmetry perspective could imply that the original findings of Nam et al. (2013) were the result of a Type I error, that our null results are the result of a Type II error, or that there is some as-yet unidentified moderator.

Limitations and Future Directions

Our samples were not representative of the United States population. This is most clearly observable in Study 2 where relatively few participants endorsed the conservative position when, according to nationally representative polling data (Pew Research Center, 2014), upwards of four of every ten Americans *did* around the time of the survey. That said, it is important to highlight

that the Mechanical Turk samples are the same data source as the original Nam et al. studies.

This suggests that representative data is not necessary to obtain the effects. Nonetheless, a better representation of conservative participants should be a goal for future studies on this topic and other related topics.

It is also possible that the inconsistent essay conditions were not aversive enough to arouse dissonance. For example, liberals and conservatives may be equally likely to engage with dissonance arousing information up to a certain base level of aversion and conservatives differ from liberals only after that base-level has been reached. If that is the case and if our inconsistent essay conditions were too weak, then this could explain the relative similarity between liberals and conservatives across our study. One goal for future studies would be to understand why the Nam et al. samples found these inconsistent essay conditions to be aversive enough and to determine the approximate base-level of aversion that leads to liberal and conservative differences. Similarly, it could be that our discrete manipulations of worldview threat were not substantial enough to cause large enough changes in threat to moderate the effect of attitude inconsistency on willingness to write the essay. More extreme manipulations or the chronic experience of worldview threat may be necessary to observe such a moderation effect.

Conclusion

In two studies, we sought to closely and conceptually replicate recent findings that conservatives are less likely than liberals to write belief-inconsistent essays in order to avoid dissonance-arousing situations (Nam et al., 2013). Results in both studies were inconsistent with these previous findings of ideological asymmetry in dissonance avoidance; instead, liberals and conservatives avoided dissonance-arousing situations to similar degrees, and were not reliably moderated by worldview threat. Like the work of Nam et al., these present studies are certainly

far from the final word on the question of asymmetry or symmetry in motivated reasoning, as even evidence drawn from millions of participants on social networking sites demonstrates evidence supportive of both perspectives (Bakshy et al., 2015; Barbera et al., 2015). Instead, the available evidence indicates that we still do not clearly understand the ways in which political beliefs do or not influence behavior, and that continued research is needed to identify ideology's boundaries.

References

- Altemeyer, B. (1998). The other “authoritarian personality”. *Advances in Experimental Social Psychology, 30*, 47-92.
- Bakshy, E., Messing, S., & Adamic, L. (2015). Exposure to ideologically diverse news and opinion on Facebook. *Science*. Advance online publication. doi:10.1126/science.aaa1160
- Barberá, P., Jost, J. T., Nagler, J., Tucker, J. A., & Bonneau, R. (2015). Tweeting from left to right: Is online political communication more than an echo chamber? *Psychological Science, 26*(1), 1531-1542.
- Brandt, M. J., Chambers, J. R., Crawford, J. T., Wetherell, G. & Reyna, C. (2015). Bounded openness: The effect of openness to experience on intolerance is moderated by target group conventionality. *Journal of Personality and Social Psychology, 109*, 549-568.
- Brandt, M. J., Wetherell, G., & Reyna, C. (2014). Liberals and conservatives can show similarities in negativity bias. *Behavioral and Brain Sciences, 37*(3), 307-308.
- Brock, T. C., & Grant, L. D. (1963). Dissonance, awareness, and motivation. *The Journal of Abnormal and Social Psychology, 67*(1), 53-60.
- Carney, D. R., Jost, J. T., Gosling, S. D., & Potter, J. (2008). The secret lives of liberals and conservatives: Personality profiles, interaction styles, and the things they leave behind. *Political Psychology, 29*(6), 807-840.
- Chambers, J. R., Schlenker, B. R., & Collisson, B. (2013). Ideology and prejudice: The role of value conflicts. *Psychological Science, 24*(2), 140-149.
- Charney, E. (2015). Liberal bias and the five-factor model. *Behavioral and Brain Sciences, 38*, e139. doi:10.1017/S0140525X14001174

- Chirumbolo, A. (2002). The relationship between need for cognitive closure and political orientation: The mediating role of authoritarianism. *Personality and Individual Differences, 32*(4), 603-610.
- Choma, B. L., Hafer, C. L., Dywan, J., Segalowitz, S. J., & Busseri, M. A. (2012). Political liberalism and political conservatism: Functionally independent? *Personality and Individual Differences, 53*(4), 431-436.
- Cialdini, R. B., Trost, M. R., & Newsom, J. T. (1995). Preference for consistency: The development of a valid measure and the discovery of surprising behavioral implications. *Journal of Personality and Social Psychology, 69*(2), 318-328.
- Claassen, C., Tucker, P., & Smith, S. S. (2015). Ideological labels in America. *Political Behavior, 37*(2), 253-278.
- Cohen, G. L. (2003). Party over policy: The dominating impact of group influence on political beliefs. *Journal of Personality and Social Psychology, 85*(5), 808-822.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Coles, J. T., Carstens, B. A., Wright, J. M., & Williams, R. L. (2014). Political incongruity between students' ideological identity and stance on specific public policies in a predominantly white southeastern state institution. *Innovative Higher Education, 40*(1), 5-18.
- Conway, L. G., Gornick, L. J., Houck, S. C., Anderson, C., Stockert, J., Sessoms, D., & McCue, K. (2015). Are conservatives really more simple-minded than liberals? The domain specificity of complex thinking. *Political Psychology*. Advance online publication. doi:10.1111/pops.12304

- Crawford, J. T. (2014). Ideological symmetries and asymmetries in political intolerance and prejudice toward political activist groups. *Journal of Experimental Social Psychology*, 55, 284-298.
- Crawford, J. T., Jussim, L., & Pilanski, J. M. (2014). How (not) to interpret and report main effects and interactions in multiple regression: Why Crawford and Pilanski did not actually replicate Lindner and Nosek (2009). *Political Psychology*, 35(6), 857-862.
- Crawford, J. T., & Pilanski, J. M. (2014). Political intolerance, right and left. *Political Psychology*, 35(6), 841-851.
- Critcher, C. R., Huber, M., Ho, A. K., & Koleva, S. P. (2009). Political orientation and ideological inconsistencies: (Dis)comfort with value tradeoffs. *Social Justice Research*, 22(2), 181-205.
- Delli Carpini, M. X., & Keeter, S. (1996). *What Americans know about politics and why it matters*. New Haven, CT: Yale University Press.
- Dodd, M. D., Balzer, A., Jacobs, C. M., Gruszczynski, M. W., Smith, K. B., & Hibbing, J. R. (2012). The political left rolls with the good and the political right confronts the bad: Connecting physiology and cognition to preferences. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 367(1589), 640-649.
- Duarte, J. L., Crawford, J. T., Stern, C., Haidt, J., Jussim, L., & Tetlock, P. E. (2015). Political diversity will improve social psychological science. *Behavioral and Brain Sciences*, 38, e130. doi:10.1017/S0140525X14000430
- Federico, C. M. (2007). Expertise, evaluative motivation, and the structure of citizens' ideological commitments. *Political Psychology*, 28(5), 535-561.

- Federico, C. M., & Hunt, C. V. (2013). Political information, political involvement, and reliance on ideology in political evaluation. *Political Behavior*, 35(1), 89-112.
- Feldman, S., & Johnston, C. (2014). Understanding the determinants of political ideology: Implications of structural complexity. *Political Psychology*, 35(3), 337-358.
- Festinger, L. A. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
- Festinger, L. A., & Carlsmith, J. M. (1959). Cognitive consequences of forced compliance. *Journal of Abnormal and Social Psychology*, 58(2), 203-210.
- Gauchat, G. (2012). Politicization of science in the public sphere: A study of public trust in the United States, 1974 to 2010. *American Sociological Review*, 77(2), 167-187.
- Gawronski, B., & Strack, F. (2004). On the propositional nature of cognitive consistency: Dissonance changes explicit, but not implicit attitudes. *Journal of Experimental Social Psychology*, 40(4), 535-542.
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37(6), 504-528.
- Gross, N., Medvetz, T., & Russell, R. (2011). The contemporary American conservative movement. *Annual Review of Sociology*, 37, 325-354.
- Gruenfeld, D. H. (1995). Status, ideology, and integrative complexity on the US Supreme Court: Rethinking the politics of political decision making. *Journal of Personality and Social Psychology*, 68(1), 5-20.
- Hanson, D. J. (1989). Political bias in the Dogmatism Scale: An item analysis. *The Journal of Social Psychology*, 129(1), 117-118.

- Harmon-Jones, E. (2000). Cognitive dissonance and experienced negative affect: Evidence that dissonance increases experienced negative affect even in the absence of aversive consequences. *Personality and Social Psychology Bulletin*, *26*(12), 1490-1501.
- Harmon-Jones, E., & Harmon-Jones, C. (2007). Cognitive dissonance theory after 50 years of development. *Zeitschrift für Sozialpsychologie*, *38*(1), 7-16.
- Hibbing, J. R., Smith, K. B., & Alford, J. R. (2013). *Predisposed: Liberals, conservatives, and the biology of political differences*. New York, NY: Routledge.
- Hibbing, J. R., Smith, K. B., & Alford, J. R. (2014). Differences in negativity bias underlie variations in political ideology. *Behavioral and Brain Sciences*, *37*, 297-307.
- Houghton, D. C., & Grewal, R. (2000). Please, let's get an answer—any answer: Need for consumer cognitive closure. *Psychology & Marketing*, *17*(11), 911-934.
- Inbar, Y., & Lammers, J. (2012). Political diversity in social and personality psychology. *Perspectives on Psychological Science*, *7*(5), 496-503.
- Iyengar, S., & Hahn, K. S. (2009). Red media, blue media: Evidence of ideological selectivity in media use. *Journal of Communication*, *59*, 19-39.
- Iyengar, S., Hahn, K. S., Krosnick, J. A., & Walker, J. (2008). Selective exposure to campaign communication: The role of anticipated agreement and issue public membership. *Journal of Politics*, *70*, 186-200.
- Iyengar, S., & Westwood, S. J. (2014). Fear and loathing across party lines: New evidence on group polarization. *American Journal of Political Science*. Advance online publication. doi:10.1111/ajps.12152
- Jarvis, W. B. G., & Petty, R. E. (1996). The need to evaluate. *Journal of Personality and Social Psychology*, *70*(1), 172-194.

- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The Big Five inventory—versions 4a and 54*. Berkeley: University of California, Berkeley, Institute of Personality and Social Research.
- Jonas, E., McGregor, I., Klackl, J., Agroskin, D., Fritsche, I., Holbrook, C., ... & Quirin, M. (2014). Threat and defense: From anxiety to approach. *Advances in Experimental Social Psychology, 49*, 219-286.
- Jost, J. T., & Amodio, D. M. (2012). Political ideology as motivated social cognition: Behavioral and neuroscientific evidence. *Motivation and Emotion, 36*(1), 55-64.
- Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology, 60*, 307-337.
- Jost, J. T., Federico, C. M., & Napier, J. L. (2013). Political ideologies and their social psychological functions. In M. Freedom, L. T. Sargent, & M. Stears (Eds.), *The Oxford handbook of political ideologies* (pp. 232-250). New York, NY: Oxford University Press.
- Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin, 129*(3), 339-375.
- Jost, J. T., Krochik, M., Gaucher, D., & Hennes, E. P. (2009). Can a psychological theory of ideological differences explain contextual variability in the contents of political attitudes? *Psychological Inquiry, 20*(2-3), 183-188.
- Kahan, D. M. (2012, February 14). *Mooney's revenge?! Is there "asymmetry" in Motivated Numeracy?* Retrieved from <http://www.culturalcognition.net/blog/2013/10/10/mooneys-revenge-is-there-asymmetry-in-motivated-numeracy.html>
- Kahan, D. M. (2013). Ideology, motivated reasoning, and cognitive reflection: An experimental study. *Judgment and Decision Making, 8*, 407-24.

- Kirton, M. J. (1981). A reanalysis of two scales of tolerance of ambiguity. *Journal of Personality Assessment*, 45(4), 407-414.
- Kosloff, S., Greenberg, J., & Solomon, S. (2010). The effects of mortality salience on political preferences: The roles of charisma and political orientation. *Journal of Experimental Social Psychology*, 46(1), 139-145.
- Lavine, H., Lodge, M., & Freitas, K. (2005). Threat, authoritarianism, and selective exposure to information. *Political Psychology*, 26(2), 219-244.
- Lelkes, Y., & Sniderman, P. M. (2014). The ideological asymmetry of the American party system. *British Journal of Political Science*. Advance online publication. doi:10.1017/S0007123414000404.
- Malka, A., Soto, C. J., Inzlicht, M., & Lelkes, Y. (2014). Do needs for security and certainty predict cultural and economic conservatism? A cross-national analysis. *Journal of Personality and Social Psychology*, 106(6), 1031-1051.
- Mandel, D. R., & Omorogbe, P. (2013). Political differences in past, present, and future life satisfaction: republicans are more sensitive than democrats to political climate. *PloS One*, 9(6), e98854.
- Motyl, M. (2014). "If He Wins, I'm Moving to Canada": Ideological Migration Threats Following the 2012 US Presidential Election. *Analyses of Social Issues and Public Policy*, 14(1), 123-136.
- Nam, H. H., Jost, J. T., & Van Bavel, J. J. (2013). "Not for all the tea in China!" Political ideology and the avoidance of dissonance-arousing situations. *PloS One*, 8(4), e59837.

- Oxley, D. R., Smith, K. B., Alford, J. R., Hibbing, M. V., Miller, J. L., Scalora, M., ... & Hibbing, J. R. (2008). Political attitudes vary with physiological traits. *Science*, *321*, 1667-1670.
- Parrott, G., & Brown, L. (1972). Political bias in the Rokeach dogmatism scale. *Psychological Reports*, *30*(3), 805-806.
- Pew Research Center (2014, June 26). *Beyond red vs. blue: The political typology*. Retrieved from <http://www.people-press.org/files/2014/06/6-26-14-Political-Typology-release.pdf>
- Poteat, V. P., & Mereish, E. H. (2012). (Dis)similarity between liberals and conservatives: Predicting variability in group differences on abortion and same-sex marriage rights attitudes. *Basic and Applied Social Psychology*, *34*(1), 56-65.
- Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of Research in Personality*, *41*(1), 203-212.
- Reicher, S. D., Haslam, S. A., & Smith, J. R. (2012). Working toward the experimenter reconceptualizing obedience within the Milgram paradigm as identification-based followership. *Perspectives on Psychological Science*, *7*(4), 315-324.
- Rokeach, M. (1960). *The open and closed mind*. New York: Basic Books.
- Schimmel, J., Hayes, J., Williams, T., & Jahrig, J. (2007). Is death really the worm at the core? Converging evidence that worldview threat increases death-thought accessibility. *Journal of Personality and Social Psychology*, *92*(5), 789-803.
- Sénémeaud, C., & Somat, A. (2009). Dissonance arousal and persistence in attitude change. *Swiss Journal of Psychology*, *68*(1), 25-31.

- Shaffer, D. R., & Hendrick, C. (1974). Dogmatism and tolerance for ambiguity as determinants of differential reactions to cognitive inconsistency. *Journal of Personality and Social Psychology*, 29(5), 601-608.
- Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review*, 12(3), 248-279.
- Sibley, C. G., Osborne, D., & Duckitt, J. (2012). Personality and political orientation: Meta-analysis and test of a Threat-Constraint Model. *Journal of Research in Personality*, 46(6), 664-677.
- Simonsohn, U. (2015). Small telescopes detectability and the evaluation of replication results. *Psychological Science*, 26(5), 559-569.
- Slegers, W. W., Proulx, T., & van Beest, I. (2015). Extremism reduces conflict arousal and increases values affirmation in response to meaning violations. *Biological psychology*, 108, 126-131.
- Smith, K. B., Oxley, D. R., Hibbing, M. V., Alford, J. R., & Hibbing, J. R. (2011). Linking genetics and political attitudes: Reconceptualizing political ideology. *Political Psychology*, 32(3), 369-397.
- Stimson, J. A. (2004). *Tides of consent: How public opinion shapes American politics*. New York, NY: Cambridge University Press.
- Tormala, Z. L., & Petty, R. E. (2001). On-line versus memory-based processing: The role of “need to evaluate” in person perception. *Personality and Social Psychology Bulletin*, 27(12), 1599-1612.
- Troldahl, V. C., & Powell, F. A. (1965). A short-form dogmatism scale for use in field studies. *Social Forces*, 44(2), 211-214.

- Upton, G. J. G. (1992). Fisher's exact test. *Journal of the Royal Statistical Society*, 155(3), 395-402.
- Van Hiel, A., Kossowska, M., & Mervielde, I. (2000). The relationship between openness to experience and political ideology. *Personality and Individual Differences*, 28(4), 741-751.
- Van Hiel, A., Onraet, E., & De Pauw, S. (2010). The relationship between social-cultural attitudes and behavioral measures of cognitive style: A meta-analytic integration of studies. *Journal of Personality*, 78(6), 1765-1799.
- Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, 36, 1-48.
- Weber, C. R., & Federico, C. M. (2013). Moral foundations and heterogeneity in ideological preferences. *Political Psychology*, 34(1), 107-126.
- 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, G. D., & Patterson, J. R. (1968). A new measure of conservatism. *British Journal of Social and Clinical Psychology*, 7(4), 264-269.

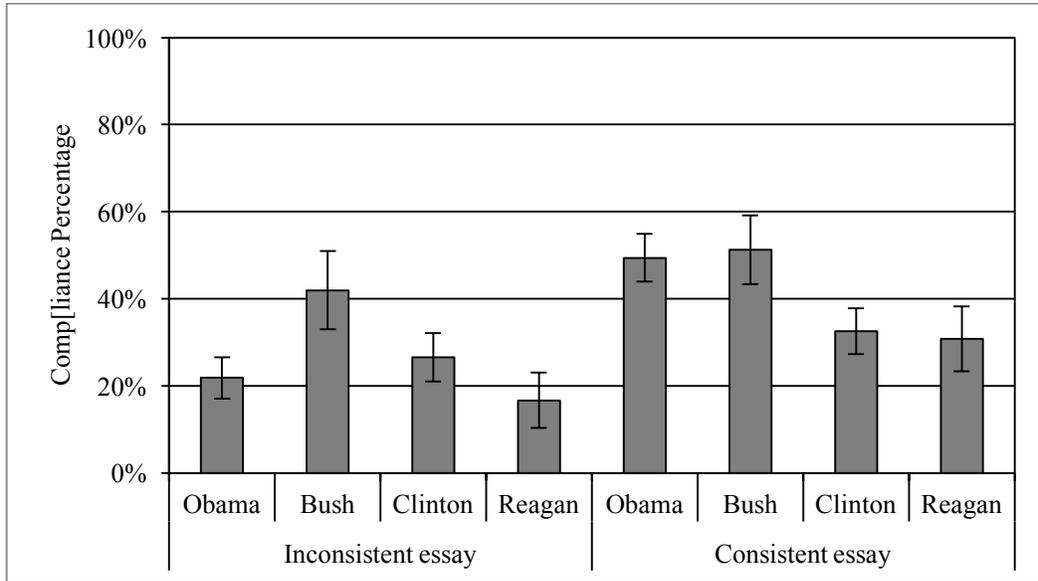


Figure 1. Percent of participants compliant with essay by preferred president and essay consistency

Note: Error bars = \pm standard error of the mean

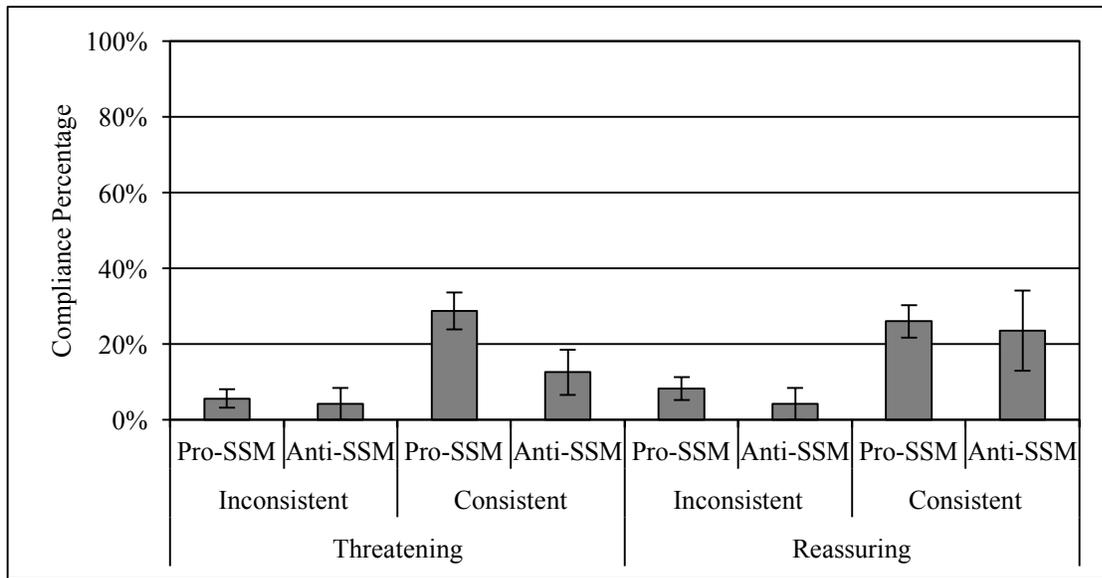


Figure 2. Percent of participants compliant with essay by stance on same-sex marriage, essay consistency, and prime

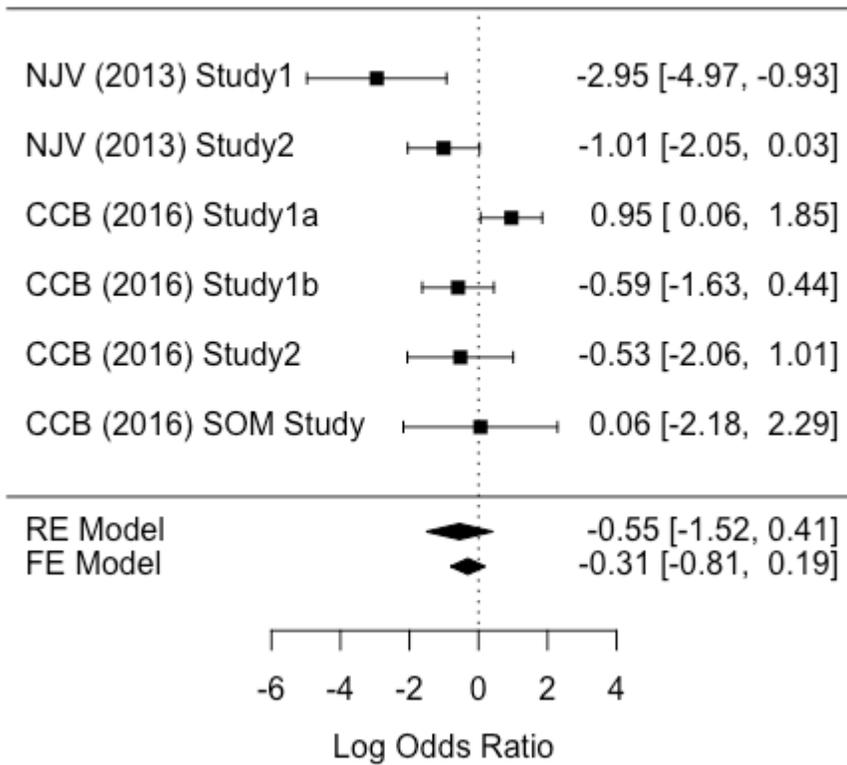


Figure 3. Meta-analysis of relevant extant data testing ideological differences in dissonance-avoidance

Note: NJV stands for Nam, Jost, and van Bavel (2013). CCB stands for Collins, Crawford, and Brandt (the present article). Study 1a refers to the Bush vs. Obama comparison, and Study 1b refers to the Reagan vs. Clinton comparison.