A pleasant surprise in partisan politics:

Avoidance of opposing views is partly driven by an affective forecasting error

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Abstract

People selectively consume information that aligns with prior beliefs (Hart et al., 2009), contributing to polarization and undermining democracy. Four studies (collective N=2,249) demonstrate that such "selective exposure" partly results from an affective forecasting error: political partisans systematically overestimate the strength of negative affect (i.e., feelings) that results from exposure to opposing views, and these incorrect estimates drive information consumption choices. Clinton voters overestimated the negative affect they would experience from watching President Trump's Inaugural Address (Study 1) and from reading statements written by Trump voters (Study 2). Democrats and Republicans overestimated the negative affect they would experience from listening to opposing-party Senators (Study 3). The "affective forecasting errors" were driven by individuals' tendencies to underestimate the extent to which (1) they would agree with the views of opponents; and (2) they would perceive opponents as possessing positive characteristics. Finally, in Study 4, correcting biased affective forecasts reduced selective exposure. (150 words)

Keywords: selective exposure, affective forecasting, naïve realism, false polarization, emotions

A well-functioning democracy requires citizens to consume a diversity of views in the "marketplace of ideas" (Milton, 1644/1890). Yet, extensive research demonstrates that individuals prefer information that confirms, rather than disconfirms, their prior beliefs. This phenomenon – known as "selective exposure" (Frey, 1986) or the "congeniality bias" (Hart et al., 2009) – has grown particularly pernicious as citizens gain tools to easily filter what they see, hear, and read (Sunstein, 2009), leading to growing concerns with political polarization (Westfall, Van Boven, Chambers, & Judd, 2015; Iyengar & Westwood, 2015).

Across four experiments, we demonstrate that selective exposure partly results from an error in affective forecasting: political partisans systematically overestimate the extremity of negative affect that will result from exposure to opposing views. We observe such biased forecasts across communication medium (verbal vs. written), communication author (president vs. senator vs. voter), and the political spectrum (liberal vs. conservative). Additionally, we test whether specific biased predictions about the contents and the authors of opposing partisan communication drive this forecasting error, and whether correcting biased affective forecasts can reduce selective exposure.

Selective exposure

For several decades, the phenomenon of selective exposure has garnered wide-spread attention in social psychology (Frey, 1986), political science (Sears & Freedman, 1967; Iyengar & Hahn, 2009), and communications (Stroud, 2008). Prior empirical and theoretical work has treated this tendency as an effort to mitigate cognitive dissonance - an unpleasant state of psychological arousal evoked by the presence of contradictory cognitions (Festinger, 1957, 1964). Indeed, meta-analytic evidence supports this interpretation (Hart et al., 2009). Specifically, selective exposure increases when individuals expect to experience greater feelings

of threat and conflict, such as in situations when they recently affirmed their views (Jonas, Schulz-Hardt, Frey, & Thelen, 2001) or made an irreversible decision (Frey & Rosch, 1984).

Although the literature on selective exposure has inferred that people avoid opposing views because cognitive dissonance elicits negative affect (e.g., Wegener & Petty, 1994; Laurin, in press), this work has not, to our knowledge, directly examined the positive and negative affective consequences of such exposure. Instead, these studies typically employ a choice paradigm, inferring that the selected choice (pro-attitudinal information) is more enjoyable than the foregone one (counter-attitudinal information). Furthermore, research has not addressed whether individuals accurately predict how aversive exposure to opposing views turns out to be. Is it possible that individuals make daily choices about which news to read, which radio stations to listen to, and even which friends to socialize with based on faulty predictions about the affective consequences of these choices?

In the present research, we build on methodology from the literature on affective forecasting (Wilson & Gilbert, 2003, 2005) to measure the positive and negative affect that political partisans expect to experience when confronted with opposing views. We focus our investigation on the accuracy of those expectations, asking whether exposure to opposing views turns out to be as aversive as anticipated, or whether individuals make a systematic error in forecasting their affect. In addition, we test whether such an error partially accounts for selective exposure – one of the most damaging biases driving contemporary political polarization.

Affective forecasting

Individuals overestimate their negative affective reactions to a wide variety of events (for relevant reviews see Wilson & Gilbert, 2003, 2005). Specifically, individuals systematically mis-forecast both the intensity of their affective reactions (i.e., the impact bias: Gilbert, Driver-Linn,

& Wilson, 2002; Sieff, Dawes, & Loewenstein, 1999; Morewedge & Buechel, 2013) and the duration of those reactions (i.e., the durability bias: Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998; Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000).

Although research on affective forecasting has demonstrated that individuals overestimate their negative reactions to events ranging from divorce, to job rejection, to inter-racial social interaction (Gilbert et al., 1998; Gilbert, Lieberman, Morewedge, & Wilson, 2004; Mallett, Wilson & Gilbert, 2008), this work has not addressed one of the most common sources of potential negative affect: exposure to the disagreeing views of others.[1] Thus, although the literature on affective forecasting provides a robust framework and set of methodologies relevant to our question, it has not (to our knowledge) addressed whether this error occurs in the context of considering opposing views.

Biased inferences about message content and authors

We examine the systematic tendency to overestimate the pain of exposure to opposing views and test two potential sources of this error. First, it may be the case that when faced with the prospect of consuming opposing views, individuals assume that they will disagree with more of the content than will actually be the case. This inaccurate "content inference" is closely related to the phenomenon of "false polarization" (Monin & Norton, 2003; Keltner & Robinson, 1993; Sherman, Nelson, & Ross, 2003; Fernbach, Rogers, Fox, & Sloman, 2013), whereby partisans in conflict exaggerate the extremity of in-group and out-group views.

Second, individuals may make inaccurate "author inferences" in considering the characteristics of people who hold opposing views. Extensive research on the phenomenon of "naïve realism" suggests that individuals consider their own views to be fundamentally

[1] In our own pilot data (N = 208) examining individuals' enjoyment of a variety of daily activities, we found that individuals rated policy discussion with holders of opposing views as more aversive than any other activity we listed, including household chores, yard work, and a visit to the dentist.

intelligent, rational, and benevolent (Robinson, Keltner, Ward, & Ross, 1995; Ross & Ward, 1995; Minson, Liberman, & Ross, 2011). As a result, they attribute opposing views to ignorance, bias or malevolence on the part of disagreeing others.

Across our studies we examine whether people make biased inferences about the (1) content and (2) authors of opposing partisan communication. We also test whether these inferences in turn lead people to overestimate the negativity of their own affective reactions when exposed to such communication. Finally, we test whether such biased affective forecasts lead individuals to selectively expose themselves to belief-confirming information.

Study 1

Study 1 took place minutes after President Trump's inauguration speech. Participants were Clinton voters who imagined watching President Trump's inauguration speech and forecasted what their affective reactions to it would be as well as the degree to which they would agree with the content of the speech. They then *actually* watched his speech and reported their experienced affect and agreement.

Method

We solicited participation by 247 Amazon Mechanical Turk (Mturk) workers (130 males, 117 females, mean age = 33 years, age range = 21-70 years) who voted for Hillary Clinton to participate in a 25-minute study of political opinions. We paid participants $3.00 for the 25-minute study. In all studies we were attempting to collect 200 participants per condition, based on the results of our pilot studies. In each study we determined a priori that we would drop participants who failed the attention check, or did not meet the recruitment criteria. We report all of our measures, conditions, and exclusions for each study.

Participants first reported their overall political ideology on a 7-point scale anchored at 1: "Very Liberal" and 7: "Very Conservative." Participants then reported the extent to which they agreed with, liked, and approved of President Trump on 7-point scales anchored at 1: "Strongly Oppose" and 7: "Strongly Support."

Participants also indicated their willingness to engage with a variety of individuals and ideologies on both sides of the political divide. Specifically, we asked them how willing they would be to watch brief speeches by Presidents (Donald Trump and Barack Obama), Senators (Ted Cruz and Bernie Sanders), and typical voters (Republican and Democratic), if this content had been presented to them via online media. Participants reported their willingness to consume this content using 7-point scales anchored at 1: "Not at all" and 7: "Extremely." The difference between participants' willingness to consume content presented by own-party and opposite-party targets served as our measure of selective exposure.

Next, participants answered three questions regarding their familiarity with President Trump's inauguration speech – prior to taking part in this study – that we used for later screening. Participants answered whether they had watched the speech (yes/no), if yes, how much they had watched (0-5 minutes, 5-10 minutes, 10-15 minutes, the entire speech), and how familiar they were with the content of the speech as a whole on a 5-point scale anchored at 1: "Not at all familiar" and 5: "Very familiar."

We then asked all participants to imagine watching President Trump's 17-minute inauguration speech and to forecast their feelings. Participants filled out a set of scales previously used in research on affective forecasting (Mallett, Gilbert & Wilson, 2008) reporting expectations regarding their positive and negative affect. All items used a 9-point scale anchored at 0: "Would not feel the emotion even the slightest bit" and 8: "Would feel the emotion more

strongly than ever." The affect scale consisted of ten items: five examining negative affect (annoyed, resentful, nervous, angry, afraid) and five examining positive affect (enthusiastic, relaxed, happy, excited, cheerful), presented in a randomized order. We subtracted the mean of the negative affect items from the mean of the positive affect items, obtaining a single score for each participant where positive numbers meant greater levels of positive than negative affect.

We further measured participants' inferences about the content of the speech. Specifically, participants reported the percentage of the video content with which they expected to strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, and strongly agree. We required participants to allocate their percentages such that the total of the five categories equaled 100%. We created a content inference index by multiplying the percentages in each of the five categories by -2 (strongly disagree), -1 (somewhat agree), 0 (neither agree nor disagree), +1 (somewhat agree), and +2 (strongly agree). Thus, the index ranged from -2 (strongly disagree with 100% of the content) to +2 (strongly agree with 100% of the content), where a score of 0 indicated equally strong levels of agreement and disagreement.

Participants then watched President Trump's actual inauguration speech (that he had just delivered live minutes prior) and responded to the same affect and content inference items, this time with respect to their actual experience. All participants then completed a video attention check (asking about the color of President Trump's tie, the weather in Washington D.C., and the theme of his speech) and demographic measures, including indicating who they voted for in the 2016 Presidential election.

Results

We eliminated from analysis six participants who answered more than one attention check question incorrectly. Consistent with our Mturk solicitation, we also eliminated from

analysis 19 participants who reported not voting for Hillary Clinton, leaving a total of 222 participants.[2]

Affect. Both the forecast (alpha = 0.89) and experience (alpha = 0.93) affect scales achieved high levels of reliability.[3] Participants anticipated experiencing high levels of negative affect while watching the inauguration speech (M = -4.08, SD = 2.94). However, their experiences of the speech proved to be substantially less negative than they anticipated (M = -3.07, SD = 3.86). A paired samples t-test showed that this difference was statistically significant, $t(221) = -6.75$, $p < .001$, mean difference = -1.01, Cohen's $d = 0.29$. Thus, participants clearly over-estimated their negative reactions to the speech, despite the fact that due to the extensive media coverage of the Presidential election most were likely to be quite familiar with Donald Trump, his positions, and his speaking style.

Our data also enabled us to compare the forecasted and experienced reactions of those participants who had not watched the speech at all with those who had just watched the speech live. The first group of participants (N = 104), whom we called "naïve" participants, forecasted their affect with no prior experience of the speech, and thus experienced the speech for the first time in the course of our study. This group showed a large affective forecasting error: M = -4.91 vs. M = -3.96, $t(103) = -4.13$, $p < .001$, mean difference = -0.95, Cohen's $d = 0.29$. Intriguingly, participants who had seen the speech live and now watched it for the *second* time during the study, whom we called "exposed" participants (N = 118), also showed a forecasting error, and one of a similar magnitude: M = -3.34 vs. M = -2.28, $t(117) = -5.43$, $p < .001$, mean difference = -1.05, Cohen's $d = 0.31$. As seen in Figure 1 (Panel A), the size of the error did not differ based

[2] When we repeat our analyses based on all participants who did not vote for Donald Trump (i.e., keeping participants who voted for third-party candidates or did not vote), our results remain consistent with those reported. We did not analyze data from any participants who failed the attention checks.
[3] The alphas on the affect scales ranged from 0.82 to 0.93 across studies.

on whether participants had previously watched the speech (M = 1.05 vs. M = .95, ns.). The main difference between the two groups was in the magnitude of the negative affect: participants who had watched the speech previously expressed less negative affect in both their forecasts (M = -4.91 vs. M = -3.34) and their reported experiences (M = -3.96 vs. M = -2.28).

Content Inferences. We then examined the accuracy of participants' content inferences by collapsing the percentage of the speech assigned to each category of agreement (as described in the Method section above). Participants anticipated experiencing high levels of disagreement with the inauguration speech (M = -1.12, SD = 0.82). However, their experience of the speech proved to be substantially more in line with their own beliefs (M = -0.74, SD = 1.12). A paired samples t-test showed that participants underestimated their agreement with the speech: $t(221)$ = -7.25, $p < .001$, mean difference = -0.37, Cohen's d = 0.38.

Mediation Analysis. An important question is whether incorrect inferences about the content of opposing views drove the affective forecasting error that we documented above. A key innovation in within-subjects mediation analysis has been the development of a path-analytic approach (Montoya & Hayes, 2017; c.f. Judd, Kenny, & McClelland, 2001). Compared to the classic causal-steps approach, this path-analytic approach has the advantages of estimating the indirect path (a test of joint significance) and providing an interval estimate for the indirect effect (see, for example, Cooney, Gilbert, & Wilson, 2017; Brown-Iannuzzi, Dotsch, Cooley, & Payne, 2017).

Thus, to test whether incorrect content inferences mediated the affective forecasting error, we conducted within-subjects mediation analysis with the MEMORE macro in SPSS with 10,000 bootstrapped samples (Montoya & Hayes, 2017). Consistent with predictions, the effect of forecast vs. experience on affect was significantly mediated by the indirect effect through

content inference, as indicated by the fact that the 95% Confidence Interval (CI) for the indirect path did not include zero, b = -.57, 95% CI = [-.78, -.38].

Selective Exposure. When we examined participants' reported willingness to engage with opposing views, we found the now well-documented pattern of selective exposure to belief-confirming information. The Clinton voters in our study were more willing to watch video speeches by President Barack Obama (M = 5.10), Senator Bernie Sanders (M = 5.05), and a generic Democratic voter (M = 4.50), than by President Donald Trump (M = 2.65), Senator Ted Cruz (M = 1.91), and a generic Republican voter (M = 3.24; all ts > 8, all ps < .001).

We next calculated an index of each participants' level of selective exposure by averaging their willingness to watch the Democratic President, Senator, and typical voter and subtracting their average willingness to watch the Republican President, Senator, and typical voter. Because all of our participants had voted for the Democratic presidential candidate, a positive score indicated greater willingness to consume belief-consistent information.

To examine whether participants' affective forecasting error predicted their unwillingness to consume content by holders of opposing views, we regressed participants' selective exposure score on the level of affect that they had forecasted in reaction to watching the inauguration speech. Participants' forecasted affect significantly predicted levels of selective exposure (b = -.28, SE = .034, $t(220)$ = -8.29, p < .001), such that the more negative affect participants anticipated experiencing during the speech, the less willing they reported being to watch speeches by opposing party members. This relationship remained strong even after controlling for experienced affect (b = -.23, SE = .060, $t(219)$ = -3.78, p < .001). This latter result suggested that participants' level of selective exposure was driven at least in part by a forecasting error.

Discussion

Study 1 provided initial evidence in support of the hypothesis that individuals overestimate the negative affect they will experience from consuming opposing views. The amount of media attention devoted to the Presidential campaign might suggest that voters would have accurate forecasts of their reactions to the new President. In reality, though, Democratic voters dramatically overestimated their negative affective reactions.

Participants further overestimated how much of the speech they were likely to disagree with and this difference in anticipated versus actual disagreement mediated the affective forecasting error. Finally, forecasted affect was a strong predictor of selective exposure, above and beyond actual experienced affect.

Study 2

Study 2 tested participant reactions to content produced by voters instead of a professionally authored speech. It also used written, rather than spoken, content and broadened our solicitation to anyone who did not vote for Donald Trump. In addition to again examining the role of incorrect inferences about the content of opposing views, we also examined inferences about the characteristics of the authors of the opposing views. It may be the case that these inferences are also erroneous, and that the belief that disagreeing others are lacking in good judgment and moral character leads individuals to anticipate that exposure to their ideas will be an emotionally fraught experience.

Method

We solicited participation by 200 Mturk workers (127 males, 73 females, mean age = 34 years, age range = 19-74) who voted for someone besides Donald Trump to participate in a 10-minute study of political opinions. We paid participants $1.00 for the 10-minute study.

Identical to in Study 1, participants first reported their overall political ideology on a 7-point scale anchored at 1: "Very Liberal" and 7: "Very Conservative." Participants then reported the extent to which they agreed with, liked, and approved of President Donald Trump on 7-point scales anchored at 1: "Strongly Oppose" and 7: "Strongly Support." All participants were then given the following directions:

> *"After the election, the Washington Post invited readers to share why they voted for Donald Trump. They collected reader responses written in their own words. We would like you to take a moment to imagine, as vividly as possible, what it would be like to read three of these responses written by Trump voters explaining why they voted for Donald Trump."*

We measured forecasted affect in the same way as in Study 1. Participants filled out the same set of affect scales, including five negative and five positive items. As in Study 1, we subtracted the mean of the negative affect items from the mean of the positive affect items, obtaining a single score for each participant where higher numbers meant more positive affect.

We also measured content inferences in the same way as in Study 1. Participants reported the percentage of the written content with which they expected to strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree. We again created a single measure by multiplying the percentages in each of the five categories by -2 (strongly disagree), -1 (somewhat agree), 0 (neither agree nor disagree), +1 (somewhat agree), and +2 (strongly agree).

Next, participants answered three new questions used to measure their inferences regarding the characteristics of the voters who wrote the responses. We asked participants to think about the people who would write the statements they just imagined and answer how

intelligent, objective, and moral these individuals were likely to be on 7-point scales anchored at 1: “Extremely unintelligent,” “Extremely biased,” and “Extremely immoral” and 7: “Extremely intelligent,” “Extremely objective,” and “Extremely moral.” We averaged these three measures to obtain a single measure of the inferences participants made with regard to the authors of the target paragraphs.

Participants then actually read three written responses by Trump voters. We used all 29 responses in the published *Washington Post* article, and each study participant saw a randomly selected set of three responses; all 29 responses are given in the Supplementary Online Materials. After the reading task, participants again filled out the same affect, content inference, and author inference items.

Participants again indicated their willingness to watch videos featuring a variety of individuals on both sides of the political divide (including Presidents Trump/Obama, Senators Cruz/Sanders and a generic Republican/Democratic voter). Unlike Study 1, we collected selective exposure items *after* the forecasts and experiences in order to allow for a stronger test of whether inaccurate affective forecasts predict selective exposure above and beyond experienced affect. All participants then completed an attention check (asking about the purpose of the study) and demographic measures, including indicating who they voted for in the 2016 Presidential election.

Results

As in Study 1, we eliminated from analysis 3 participants who answered the attention check incorrectly. Consistent with our Mturk solicitation, we also eliminated from analysis 24 participants who did not vote for Donald Trump, leaving a total of 180 participants.[4]

Affect. A paired samples t-test showed that participants again forecasted their reactions to the written explanations of Trump voters to be substantially more negative than what they reported experiencing just minutes later when they read the responses, M = -3.01 vs. M = -2.19, $t(179) = -4.89$, $p < .001$, mean difference = -0.82, Cohen's d = 0.26. As seen in Figure 1 (Panel B), this pattern replicated the results of Study 1 despite the fact that participants were no longer reacting to professionally-authored content and that the medium of communication had shifted from video to text[5].

Content Inferences. Next, we examined whether participants' inferences regarding the contents of the responses remained consistent after exposure. We first collapsed the percentage of the speech assigned to each category of agreement (identical to Study 1). A paired samples t-test showed that participants marginally underestimated their agreement with the written responses, M = -1.05 vs. M = -.94, $t(179) = -1.77$, $p = .079$, mean difference = -0.10, Cohen's d = 0.11.

Author Inferences. We then examined whether participants' inferences regarding the authors of the responses remained consistent after exposure. Both the forecast and experience scales achieved an acceptable level of reliability (alphas = .71 and .85, respectively). A paired samples t-test showed that participants inferred that the authors of the paragraphs possessed

[4] As in Study 1, when we repeat our analyses based on different subsets of our sample (e.g., keeping only participants who voted for Hillary Clinton), our results remain consistent with those reported. As in Study 1, we did not analyze data from any participants who failed the attention check.

[5] Table 1 presents the statistics around specific forecasted and experienced affect items in Studies 1 & 2. Individuals consistently mis-predicted almost every item, but more of the error is accounted for by over-prediction of negative items, rather than under-prediction of positive ones.

significantly more negative characteristics before (vs. after) reading the paragraphs in question, M = -0.89 vs. M = -0.50, $t(179) = -4.44$, $p < .001$, mean difference = -0.39, Cohen's $d = 0.29$. This finding demonstrated that the inaccurate inferences regarding disagreeing views were not limited to the evaluations of the communication content; they also generalized to broader evaluations of the (largely unfamiliar) authors.

Mediation Analysis. As in Study 1, we conducted a within-subjects mediation analysis with the MEMORE macro in SPSS with 10,000 bootstrapped samples (Montoya & Hayes, 2017). Building upon Study 1, we used a parallel multiple mediator model to simultaneously assess the complementary mechanisms of content and author inferences.

Taken together, the total aggregated indirect effect across both mediators reached significance, $b = 0.28$, 95% CI = [0.11, 0.51]. However, while the author inference indirect path significantly mediated the affective forecasting error, $b = .24$, 95% CI = [0.09, 0.42], the content inference indirect path did not, $b = 0.04$, 95% CI = [-0.01, 0.18]. A pairwise contrast between the two indirect effects revealed that the indirect path through author inference was significantly larger than the indirect path through content inference, $b = .19$, 95% CI = [0.38, 0.00]. Thus, in the case of fellow citizens, it appeared that incorrect inferences regarding the authors of the communication served as a stronger mechanism underpinning the affective forecasting error than did incorrect inferences regarding the content.

Selective Exposure. As in Study 1 we found clear evidence of selective exposure. Individuals who didn't vote for Donald Trump were more willing to watch video speeches by Senator Bernie Sanders ($M = 4.68$), President Barack Obama ($M = 4.59$), and by a generic Democratic voter ($M = 3.73$), than by Senator Ted Cruz ($M = 1.79$), President Donald Trump ($M = 2.38$), and by a generic Republican voter ($M = 3.04$) (all $ts > 4.00$, all $ps < .001$). We again

calculated participants' selective exposure score by averaging their willingness to watch the Democratic President, Senator, and typical voter and subtracting their average willingness to watch the Republican President, Senator, and typical voter.

We then regressed participants' selective exposure score on the level of affect that they had forecasted in reaction to reading the articles. Participants' selective exposure score was strongly and negatively predicted by the level of affect they forecasted from reading the articles (b = -.32, SE = .039, $t(178)$ = -8.13, $p < .001$). This relationship again remained significant when we regressed selective exposure on both forecasted and experienced affect (b = -.17, SE = .057, $t(177)$ = -2.93, $p < .01$).

Discussion

Study 2 replicated and extended Study 1 by demonstrating that people overestimate their negative affective reactions to the opposing views of other citizens (not just professional politicians) in a way that is mediated by their biased inferences about the authors of those views. We also showed that this error generalized to written as well as to video content.

Study 3

Study 3 builds upon Studies 1 and 2 in several ways. First, Study 3 used a between-subjects design. Second, participants evaluated targets from both sides of the political spectrum. Third, we examined affective forecasts regarding both disagreeing and agreeing views. Fourth, we tested whether the affective forecasting error is moderated by a relevant individual difference measure, namely one's tendency to be receptive to opposing views (Minson, Chen, & Tinsley, 2017).

Method

We recruited 803 Amazon Mechanical Turk workers for a short study of political opinions

(447 males, 356 females, mean age = 37 years, age range = 19 – 75 years).

We randomly assigned participants to one of four experimental conditions. In the two "Forecast" conditions, we asked participants to imagine what it would be like to watch a short video of Senator Ted Cruz (or Senator Bernie Sanders) talk about his views on immigration (or democratic socialism). Half of the individuals in the "Forecast" condition forecasted a video of a Senator from their own political party (Forecast/Agreement), whereas half forecasted a video of a Senator from the opposite political party (Forecast/Disagreement). Participants then filled out the same set of scales reporting expectations of their own affect.

By contrast, participants in the two "Experience" conditions actually viewed the videos that we had described to the participants in the Forecast conditions. Half watched a video of a Senator from their own political party (Experience/Agreement), whereas half watched a video of a Senator from the opposite political party (Experience/Disagreement). They then reported their actual affect immediately after watching the video clip. Across all conditions, we used the same affect items as in prior studies and calculated the same single affect score.

We measured our two potential mechanisms in an identical way to Study 2. To measure content inferences, participants in all four conditions reported the percentage of the content with which they strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, and strongly agree. To measure author inferences, participants answered the same three questions used in Study 2 measuring how moral, intelligent, and objective they believed Senator Ted Cruz (or Senator Bernie Sanders) to be.

All participants then reported their political ideology and how much they support versus oppose Senators Cruz and Sanders. We used participants' stated party affiliation as our indicator

of whether they were watching a senator they agreed with or disagreed with. We did not analyze data from participants who self-identified as "Middle of the Road."[6]

Participants then completed the Receptiveness to Opposing Views Scale (Minson, Chen & Tinsley, 2017), an 18-item self-report measure of one's tendency to expose oneself to and consider opposing political opinions in an impartial manner.

Finally, all participants then completed an attention check (asking about the purpose of the study) and demographic measures, including indicating who they voted for in the 2016 Presidential election.

Results

We planned a priori to eliminate from analysis 13 participants who failed an attention check and 158 participants who identified as "Middle of the Road." This left a total of 632 participants. Of these, 160 were in the Forecast/Disagreement condition, 168 were in the Experience/Disagreement condition, 152 were in the Forecast/Agreement Condition, and 152 were in the Experience/Agreement condition.

Affect. As seen in Figure 1 (Panel C), we replicated our results from Studies 1 and 2 with respect to opposing views. Individuals in the Forecast/Disagreement condition expected listening to opposing views to be more negative than individuals in the Experience/Disagreement condition reported it to be (M = -2.35 vs. M = -0.62, $t(322) = 5.98$, $p < .001$, mean difference = -1.73, Cohen's d = 0.66). On the other hand, individuals in the Forecast/Agreement condition reported equal levels of positive affect as individuals in the Experience/Agreement condition (M = 2.66 vs. M = 2.42, $t(302) = 0.76$, $p > .40$, mean difference = -0.24, Cohen's d = 0.09). This interaction between the timing of the affective evaluation (forecast vs. experience) and

[6] Results and conclusions remain similar when participants are split based on their ratings of specific politicians, rather than political party. As in Study 1 and Study 2, we did not analyze data from participants who failed the attention check.

perspective with regard to the content (agree vs. disagree) proved to be significant, $t(786) = 4.56$, $p < .001$.

Content Inferences. We next examined participants' inferences regarding the content of both disagreeing and agreeing speeches. For disagreeing speeches, individuals in the Forecast/Disagreement condition expected to disagree with more of the speech than individuals in the Experience/Disagreement condition reported ($M = -1.12$ vs. $M = -0.65$, $t(293) = 4.06$, $p < .001$, mean difference = 0.47, Cohen's $d = 0.44$). Interestingly, we observed a parallel pattern for the agreeing speeches: participants agreed with more content than they expected ($M = 0.64$ vs. $M = 1.29$, $t(299) = 5.72$, $p < .001$, mean difference = 0.65, Cohen's $d = 0.66$).

Author Inferences. We then examined participants' inferences regarding the authors of the speeches. For opposing views, individuals again expected authors of opposing views to be less moral, intelligent and objective than they found them to be after brief exposure ($M = -0.71$ vs. $M = -0.33$, $t(320) = 2.70$, $p < .01$, mean difference = 0.38, Cohen's $d = 0.30$). This pattern was again similar for the participants who agreed with the senator whose speech they watched ($M = 1.27$ vs. $M = 1.65$, $t(302) = 2.75$, $p < .01$, mean difference = 0.38, Cohen's $d = 0.32$).

Mediation Analysis. We focus our mediation analysis on the 328 participants who either forecasted or experienced disagreeing views. We conducted a between-subjects mediation analysis with the PROCESS macro in SPSS with 10,000 bootstrapped samples (Preacher & Hayes, 2004). As in Study 2, we used a parallel multiple mediator model to simultaneously assess the complementary mechanisms of content and author inferences on the dependent variable of the affective forecasting error.

Taken together, the total aggregated indirect effect across both mediators reached significance, $b = .77$, 95% CI = [.39, 1.16]. Additionally, both the author inference indirect path,

b = .14, 95% CI = [.03, .31], and content inference indirect path, *b* = .63, 95% CI = [.33, .96], reached significance. However, a pairwise contrast between the two indirect paths revealed that the indirect path through content inferences was significantly larger, *b* = .49, 95% CI = [.23, .84]. Thus, as in Study 1, when participants examined a speech by a professional politician, inaccurate inferences about the content of the communication served as a stronger mechanism underpinning the affective forecasting.

Receptiveness Moderation. As in our mediation analysis we focus our moderation analysis on the 328 participants who either forecasted or experienced disagreeing views. Prior research on receptiveness to opposing views suggests that people who score highly on this self-reported tendency are less prone to selective exposure (Minson, Chen & Tinsley, 2017). We tested whether greater willingness to expose oneself to counter-attitudinal information made individuals more accurate in forecasting their affect with respect to disagreeing views. Although both forecasted and experienced affect were positively related to self-reported receptiveness (Forecast/Disagreement: $b = .63$, $t(158) = 2.87$, $p < 0.01$; Experience/Disagreement: $b = .53$, $t(166) = 2.76$, $p < 0.01$), we found no evidence that self-reported receptiveness to opposing views attenuated the gap between forecasted and experienced affect. In other words, more receptive individuals forecasted *and* experienced less negative affect with regard to opposing views, but the gap between their forecasted and experienced affect did not indicate that they were any more accurate.

Discussion

Study 3 builds on Studies 1 and 2 by showing the affective forecasting error in a between-subjects design, and being committed with respect to both liberal and conservative targets by both liberal and conservative participants.

Study 4

Studies 1, 2, and 3 offer correlational evidence for the theory that selective exposure is driven by an affective forecasting error. In Study 4, we directly test causality by improving the accuracy of people's affective forecasts. We then examined the effect of this manipulation on participants' information consumption choices.

Method

We recruited 1,002 Amazon Mechanical Turk workers for a short study of political opinions.[7] Participants first reported their political ideology on the same scale as previous studies and read instructions summarizing the study as having to do with thinking about, reading about, and watching politicians from across the political spectrum.

Next, we randomly assigned participants to one of two experimental conditions. Participants in the "Treatment" condition were given the de-biasing message reproduced below. Participants in the "Control" condition read no such de-biasing message.

> *"Think about listening to a politician who holds opposing views to your own. Most people expect that experience to be very unpleasant. Surprisingly, it turns out that listening to or reading opposing perspectives can be pretty interesting. Most people are glad to better understand why the other side supports different policies. In our previous studies we've found that* ***participants don't end up disliking listening to the other side as much as they expect.*** *In one study we asked Clinton voters to watch the Trump inauguration speech. Although they anticipated it to be very unpleasant, it turned out to be more pleasant than expected. Interestingly, many of the Clinton voters agreed with*

[7] We initially collected 500 participants and obtained directionally predicted but marginally significant results. We then doubled our sample, and report results from both combined waves of data collection.

some of the points President Trump made. Conservative voters listening to Liberal politicians have told us the same thing. (emphasis in original)"

We then instructed all participants to forecast their affective reaction to watching a speech by a senator from the opposing side of the political aisle: either Bernie Sanders (for conservatives) or Ted Cruz (for liberals). Participants used the same affect items as in prior studies. In the next part of the study, we presented all participants with the following instructions:

"Later in the study, you will have the opportunity to read the press pages of several current members of the United States Senate. Below is a list of senators along with their party affiliation and their state. For each Senator, there is also a score of how liberal or conservative their voting record is. The scores range from -1 (extremely liberal) to +1 (extremely conservative). The senators are presented in order of their voting records."

We instructed participants to select at least five of the senators from the list. The list included ten well-known Democratic Senators (e.g., Elizabeth Warren, Al Franken, Chuck Schumer) and ten well-known Republican Senators (e.g., Marco Rubio, Mitch McConnell, John McCain). The name of each Senator was presented along with their state, party, and DW-Nominate score. DW-Nominate scores are a widely-used metric of legislative roll-call behavior derived by applying multidimensional scaling to provide a single quantitative estimate of political ideology (Poole & Rosenthal, 1985, 2000). Order was counterbalanced so that half of the participants saw senators ordered from most conservative to most liberal, whereas the other half saw the reverse order.

We considered two measures of selective exposure: 1) The average DW nominate scores of the senators each participant chose; and 2) the number of Senators chosen from the opposing political party of the participant.

After a brief filler task involving reading an unrelated marine biology article, participants then actually watched and reported their affective reaction to a short video speech (by either Ted Cruz or Bernie Sanders) that they had forecasted earlier in the study.

Finally, all participants then completed an attention check (asking about the purpose of the study) and demographic measures, including indicating who they voted for in the 2016 Presidential election. At the end of the study, the survey routed participants to the press pages of the senators they had selected earlier.

Results

Using an identical process to Study 3, we eliminated from analysis 218 participants who failed an attention check or who identified as "Middle of the Road," leaving a total of 784 partisans.

Affect. In line with the results from our previous studies, we found that, overall, forecasters expected listening to opposing views to be more negative than experiencers reported it to be (M = -1.98 vs. M = -0.93, $t(783) = 12.60$, $p < .001$, mean difference = -1.04, Cohen's d = 0.36). Importantly though, participants in the treatment condition reported more positive affective forecasts than participants in the control condition (M = -1.77 vs. M = -2.20, $t(780) = 2.20$, $p = .028$, mean difference = -0.43, Cohen's d = 0.16). Thus, simply informing participants regarding the results of our prior research led them to amend their expectations. Interestingly, participants in the treatment condition also reported experiencing less negative affect than those in the control condition (M = -0.59 vs. M = -1.29, $t(781) = 3.17$, $p = .002$, mean difference = -

0.70, Cohen's $d = 0.23$). Most importantly for our purposes however, our manipulation brought the forecasted affect of the treated participants more in line with the experienced affect of the untreated participants (Figure 1, Panel D).

Selective Exposure. We instructed participants to select at least 5 of the senators whose webpages they wished to view during a later part of the study, from the list of 20 that we presented them with. Most participants selected exactly five, although 43 participants selected more than five.

To create a mean DW-Nominate score for the choices made by each participant, we simply averaged the DW-Nominate scores of the senators that each participant selected. These scores are bounded between -1 and +1, where positive scores indicated more conservative choices and negative scores indicated more liberal choices. Then, to create an index of selective exposure, we re-coded the DW-Nominate scores so that scores closer to 1 indicated high levels of selective exposure (i.e., choosing more senators from one's own party rather than the opposing party), and scores below zero indicated "reverse" selective exposure (i.e., choosing more senators from the opposing party rather than one's own party).

As with the self-report measures in Studies 1 & 2, we found clear evidence of selective exposure using this behavioral measure. Overall, individuals were much more likely to visit press pages of Senators from their own, rather than the opposing, political party (M = 0.19, SD = 0.30). However, our primary interest is in whether participants assigned to the treatment condition would demonstrate lower levels of selective exposure. Participants in the control condition showed high levels of selective exposure ($M = 0.21$, $SD = 0.29$). However, as seen in Figure 2 (Panel A), participants in the treatment condition showed considerably less selective exposure ($M = 0.16$, $SD = 0.31$). A paired samples t-test showed that this difference was

statistically significant (M = 0.21 vs. M = 0.16, $t(780) = 2.36$, p = .019, mean difference = 0.05, Cohen's d = 0.17).

One explanation for the pattern of data we described above is that individuals in the treatment condition were simply choosing less extreme Senators from their own party, rather than actually "crossing the aisle." To examine this possibility, we calculated the average number of Senate press pages from the opposing party that each participant selected. Participants in the control condition selected an average of 1.51 press pages from the other side (SD = 1.16). By contrast, participants in the treatment condition selected 1.81 opposing press pages (SD = 1.30), a 20-percentage-point increase. As seen in Figure 2 (Panel B), this increase in willingness to consume opposing views in the treatment condition proved to be statistically significant, $t(782) = 3.38$, $p < .001$, mean difference = 0.30, Cohen's d = 0.24.

Mediation Analysis. A key question was whether the change in affective forecasts was the driver of the change in participants' changes in selective exposure. To address this question, we conducted a between-subjects mediation analysis with the PROCESS macro in SPSS with 10,000 bootstrapped samples (Preacher & Hayes, 2004). Consistent with predictions, changes in affective forecasts mediated changes in selective exposure, b = -.0063, 95% CI = [-.0146, -.0011].

Discussion

Study 4 draws a causal link between individuals' affective forecasts and their willingness to consume opposing views. A short and truthful report of our research findings led participants to amend their affective forecasts and increase their willingness to read information by an opposing party senator by 20%.

General Discussion

Across four experiments we demonstrate a robust error in individuals' affective forecasts when faced with the prospect of consuming opposing political views. Specifically, participants find exposure to opposing views to be substantially less negative than expected. We document this phenomenon across a variety of stimuli, communication modalities, and the political spectrum.

Importantly, we find both correlational and causal evidence that this error exacerbates selective exposure. It seems that political partisans' choices of which information to consume are at least partly based on erroneous predictions regarding their own feelings. Importantly, we also found that a short de-biasing message can increase partisans' engagement with information from the other side of the aisle.

Why do people mis-predict their own feelings? Our studies provide insight with regard to psychological mechanisms by demonstrating that people expect opposing views to be less agreeable than they turn out to be, and holders of those views to possess fewer positive characteristics. It may be the case that both of these kinds of errors stem from people engaging in biased sampling from memory: when asked to imagine our feelings regarding material we typically avoid, we most readily recall extreme instances (Morewedge, Gilbert, & Wilson, 2005; see also Gennaioli & Shleifer, 2010) that in turn bias predictions of the future.

Another intriguing possibility is that selective exposure is both cause and consequence of the affective forecasting error: To the extent that individuals avoid opposing views, they are less accurate in predicting their own reactions when confronted with them because of simple lack of familiarity. And although our findings suggest that people exaggerate the negativity of consuming opposing views, the actual experiences are still, on average, negative. Thus, simply

increasing exposure would be unlikely to lead individuals to voluntarily consume more opposing content.

The insight that the experience of consuming opposing views is not as negative as individuals imagine it to be suggests several interventions for decreasing the prevalence of selective exposure. To the extent that consumers can be educated about the relative harmlessness of consuming contrary ideas, the quality of public discourse and democratic processes can likely be improved. This task can be readily undertaken by policy makers, and educators, as well as media outlets interested in diversifying their audience.

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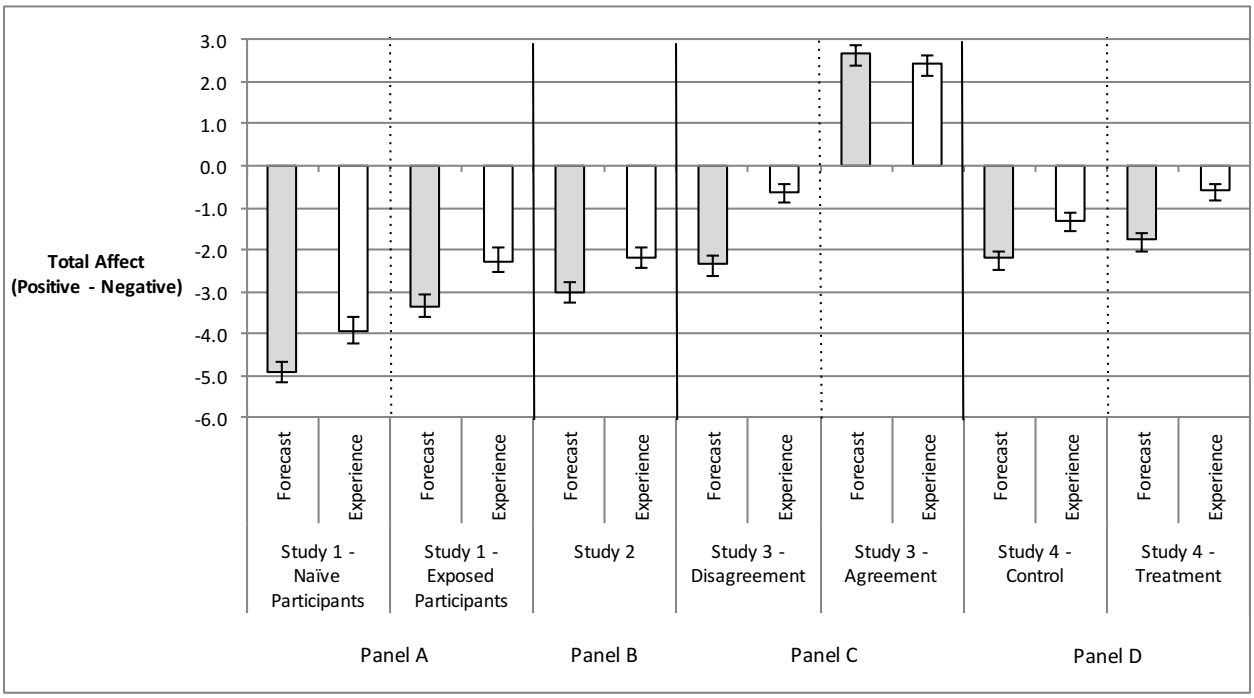
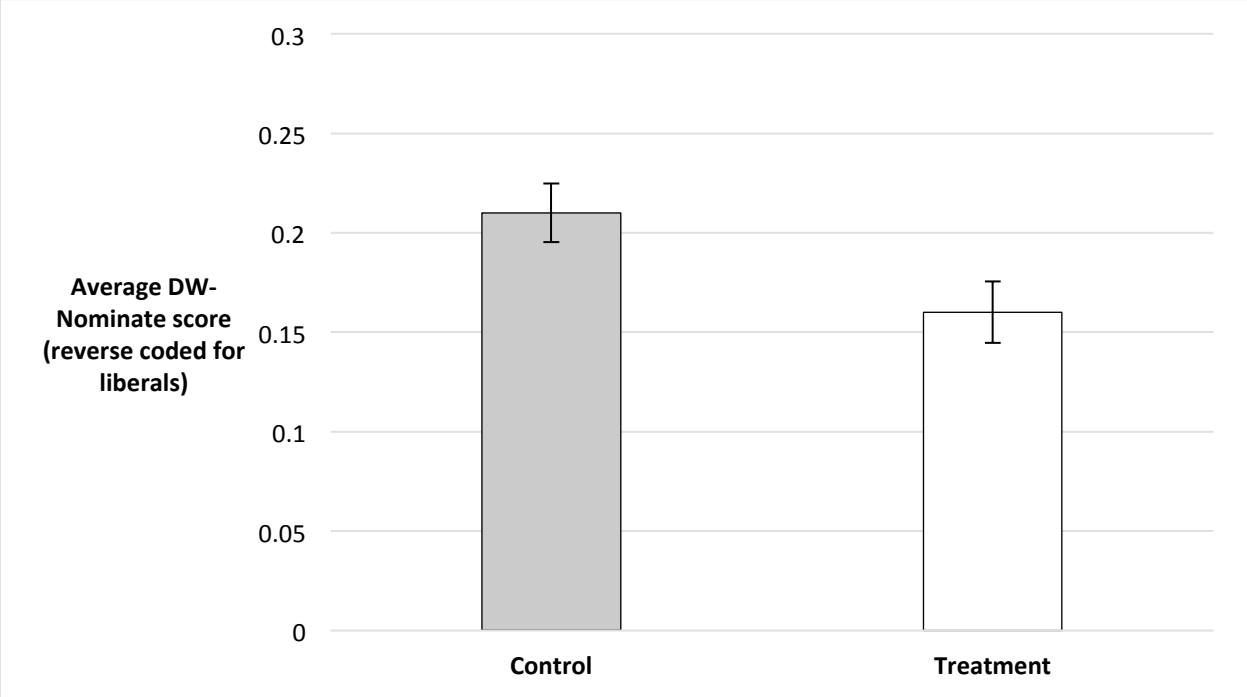
Figure 1. Forecasted and experienced total affect (Studies 1-4).



Note: Dotted black lines separate conditions within studies and solid black lines separate studies (Studies 1-4).

Figure 2. Levels of selective exposure by condition (Study 4).

PANEL A



PANEL B

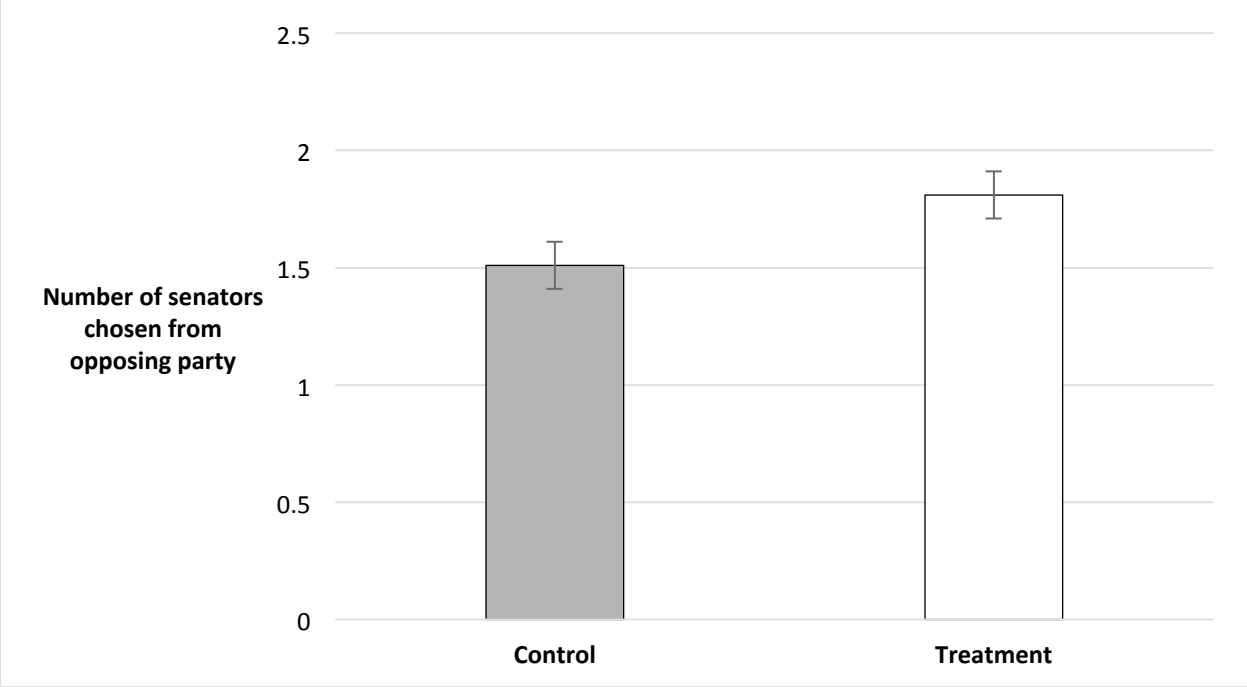


Figure 3. The effects of treatment condition on average DW-Nominate Score as mediated by affective forecasts (Study 4).

Note: *p < .05, **p < .01

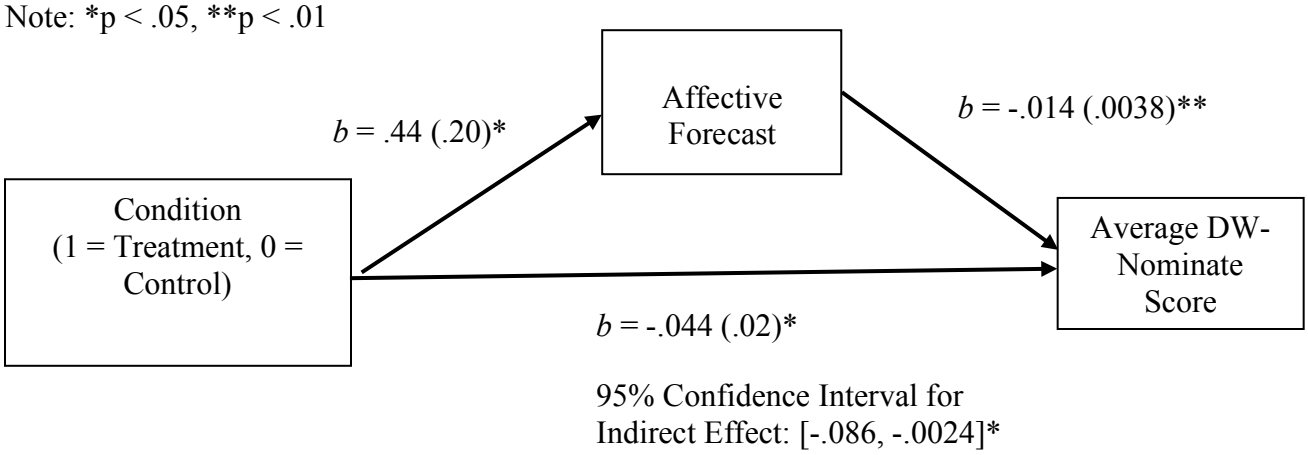


Table 1. Means and standard deviations of affect ratings (Studies 1 & 2).

Affect Items	Study 1 Forecast	Study 1 Experience	Study 2 Forecast	Study 2 Experience
Annoyed	5.88 (2.29)	5.25 (2.80)	5.08 (2.50)	4.66 (2.83)
Resentful	5.18 (2.56)	4.79 (2.91)	4.09 (2.68)	3.84 (2.80)
Nervous	4.67 (2.53)	3.84 (2.81)	3.31 (2.69)	2.47 (2.56)
Angry	5.00 (2.65)	4.50 (2.93)	4.24 (2.76)	3.56 (2.81)
Afraid	4.37 (2.44)	3.71 (2.80)	3.40 (2.78)	2.36 (2.62)
Enthusiastic	0.80 (1.53)	1.28 (2.06)	1.19 (1.85)	1.39 (2.14)
Relaxed	1.59 (2.03)	1.97 (2.28)	2.23 (2.26)	2.78 (2.66)
Happy	0.75 (1.35)	1.23 (2.04)	1.24 (1.95)	1.29 (1.99)
Excited	0.82 (1.43)	1.16 (1.94)	1.21 (1.77)	1.25 (2.02)
Cheerful	0.76 (1.47)	1.12 (1.93)	1.13 (1.79)	1.26 (2.06)