Information Valence and Evaluations of Congress and Individual Legislators: Experimental Evidence Regarding Negativity Bias in Politics*

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NOTE: Please do not quote without permission. This draft is very rough!

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Abstract

Our judgments of others are based largely upon how we perceive the valence of their actions. People tend to place more weight upon negative information when evaluating the world around them. This asymmetry leads to people requiring a lesser amount of negative information (versus positive) about an individual to conclude that said individual has officially changed for the worse (better). While this asymmetric effect appears to be prevalent in the realm of mundane interpersonal evaluation, it remains less clear whether, and to what extent, this phenomenon applies to relatively impersonal political contexts where politicians and political institutions are the object of evaluation. To address this gap, this paper features multiple experimental studies designed to assess the extent to which negativity bias may be operable in politics. Results indicate that less negative information is required to reach a judgement than is positive information. Similarly, our evidence suggests that voters are quicker to punish politicians for negative behavior than to reward them for positive behavior. In most cases, these effects are moderated by partisanship, with negativity bias being more severe against members of the partisan out-group. Overall, we argue that negativity

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bias is a powerful force in shaping public opinion and one that is relevant to many contemporary issues in American politics.
Introduction

With the widespread proliferation of the internet and a wide array of increasingly affordable computing devices available that make accessing those online networks increasingly easy, Americans are exposed to higher volumes of information than ever before. Furthermore, a higher proportion of information than at any point in recent memory is likely to feature a political dimension. For instance, even sports, once considered to be a great unifying force in society has recently become overtly politically charged. While forces associated with seemingly ever deepening levels of partisan polarization have likely contributed to the politicization of an increasing proportion of our social lives, whatever the cause, what it means practically is that regular political news has become virtually inescapable in the contemporary United States.

Considering that most news stories are negative (e.g., Just et al. 1996) and that, on average, people are more likely to opt-in to reading negative news (e.g, Meffert et al. 2006), it is crucial that we understand fully the ramifications of ubiquitous negative political news media. In particular, if negative events are more likely to be reported on and brought to the attentions of voters, we need to understand the differential effects that negative information has upon the public opinion formation process relative to positive information. In this paper, we present the results of several experimental studies to further advance our knowledge of information valence in politics and opinion formation.

Partially due to the central role afforded to it within the American constitutional system, and perhaps due partially to the high frequency at which elections are held to determine its membership, Congress, as well as the individual legislators that comprise it, regularly dominate political headlines. Moreover, as with much of the rest of politics, much of the reporting pertaining to Congress is negative.\footnote{See, for example, this summary report regarding news coverage of Congress: http://www.dirksencenter.org/print_expert_media2.htm} Owing to these attributes, we elect to
use fictional information about Congress as a backdrop to studying negativity bias in politics. In our experiments, we provide respondents with information about the overall performance of either Congress or a fictional legislator over a recent period spanning several years, and vary randomly whether markers of partisan identity are shown as well as whether recent behaviors have trended in a negative or positive direction. We find strong evidence across six survey experimental studies indicating that there is a negativity bias in the processing of political information, with respondents being quicker to draw conclusions about and punish politicians—both individually and as a collective—when exposed to negative information than to reward them when exposed to positive information. We also find, however, that, in a majority of studies, negativity bias is moderated by partisanship, with respondents being less biased by negative information when evaluating a legislator or Congressional body of the opposite partisan identity. Overall, our findings comport with a recent push in political science questioning the rational and judicious citizen (who presumably would not demonstrate a negativity bias in their information processing) assumed by many democratic theorists and also reaffirms the importance of group based attachments, such as partisan identity (Achen & Bartels 2016).

The information we consume is of chief importance to the formation of the opinions we come to hold. For example, as the large literature on framing effects can attest, which aspects of a story are emphasized and others downplayed can impact significantly the attitude formation process. Similarly our results illustrate that the valence of information also figures significantly in the opinion formation process, where a noteworthy asymmetry emerges in the evaluative weight enjoyed by negative information vis a vis positive or neutral information. There are potentially severe implications for democracy when voters are quicker to punish and characterize as “bad” politicians and institutions in light of negative information than they are to reward or regard as “good” those same politicians and institutions when instead confronted by logically equivalent (in terms of degree) positive information. Likewise, that negativity bias operates differently (i.e., stronger) when partisan out-group members are
the object of evaluation is concerning as it suggests that citizens respond differently to the actions of elites based upon their group (i.e., partisan) affiliations above and beyond the actual substance of their actions. We argue that negativity bias is a too often overlooked process that shapes our opinions and, likely, election outcomes.

**Negativity Bias**

The first social scientist to document the asymmetry between negative and positive information was political scientist Nehemiah Jordan (1965). Responding to a number of his contemporaries who envisioned the struggle for commanding a majority of mass public opinion as a “push and pull” between symmetrical “like and dislike” or “positive and negative” considerations, Jordan’s presentation of several studies suggested for the first time that “the custom of finding an arithmetic average of attitude and opinion ratings now seems unjustifiable” (p. 322). Since Jordan’s study, many other social scientists have addressed this phenomenon. Within social psychology, the primacy of negative information in evaluation has been dubbed “negativity bias.” Under this principle, negative events are in general “more salient, potent, dominant...and efficacious” than are positive ones (Rozin & Royzman 2001, p. 297). Within their taxonomy of negativity bias, Rozin and Royzman delineate four distinct bias types: negative potency, greater steepness of negative gradients, negativity dominance, and negativity differentiation. A “greater steepness of negative gradients” refers to the effects of negative events being more powerful the nearer in time or space one is to them whereas the same is untrue for positive events (e.g., Cacioppo, Gardner & Bernston 1997). Negativity dominance refers to the phenomenon first described by Jordan (1965) wherein a combination of positive and negative events produces more negative evaluations than an arithmetic average would suggest (e.g., Rokeach & Rothman 1965; Rozin & Royzman 2001). Negative differentiation, meanwhile, refers to greater variation and sophistication (in terms of vocabulary) in responses to those negative stimuli relative to positive ones (Peeters 1971).
The fourth category, and the one in which this paper is concerned with is negative potency, which refers to the principle that “given inverse negative and positive events of equal objective magnitude, the negative event is subjectively more potent and of higher salience than its positive counterpart” (Rozin & Royzman 2001, p 298). Negative potency is a powerful phenomenon and can be seen as foundational in peoples’ aversion to losses (negative) above and beyond their enthusiasm for gains (positive), which is also at the heart of prospect theory (Kahneman & Tversky 1979).

It is quite evident that negativity bias is a powerful force in shaping interpersonal evaluation and, as noted above, there is a preponderance of evidence to support this. For instance, previous research has shown that people are not only more likely to detect negative information (Ohman, Lundqvist & Esteves 2001), but are also more likely to process negative information in a more thorough manner (Clore, Schwarz & Conway 1994). Moreover, negative information increases the speed at which negative stereotypes and impressions are formed (Klein & O’Brien 2016) and, furthermore, such negative impressions are more resistant to change (Riskey & Birnbaum 1974). These findings are problematic as they suggest that first impressions based on negative interactions stemming from contextual circumstances may have strong staying power—a phenomenon known as correspondence bias (e.g., Gilbert & Malone 1995).

Recent research on negativity bias has begun to investigate the quantity of negative information versus positive information required before an opinion can be formed. Results reveal a negativity bias in the amount of evidence necessary to arrive at judgments of character (Klein & O’Brien 2016). In other words, “across five experiments...participants were quicker to diagnose decline but slower to diagnose improvement” (Klein & O’Brien, p. 161). Moreover, evidence also suggests that people are quicker to punish historically good individuals than they are to reward historically bad individuals.

In the realm of politics, research related to negativity bias has been somewhat scat-
tered, with only sporadic attention from scholars over the last seventy years. The most developed area of the literature regarding negative information is that which focuses on the effects of negative information in political advertising, while consensus remains unrealized regarding some of the effects of negative advertising, such as whether negativity depresses or mobilizes turnout (Ansolabehere & Iyengar 1997; Freedman & Goldstein 1999; Lau et al 1999), previous research has made clear some other facets of negative ads. For instance, there is no question that the volume of negative ads has increased steadily over time (Geer 2006; Fridkin & Kenney 2004). Additionally, information transmitted via negative ads is more likely to be remembered than that relayed via positive ads (Babbit & Lau 1994; Kahn & Kenney 1999), which can perhaps be attributed to people’s greater activation and attentiveness when watching negative ads (Daignault et al. 2013).

Beyond campaign ads, evidence also suggests that negative information plays a significant role in other political communication processes. Regarding news media, one descriptive fact is that negative news stories are more common than positive ones (Diamond 1978; Just et al. 1996; Sabato 1991). In fact, recent work analyzing major newspapers in the U.K., U.S.A., and Canada has found that negatives news stories outnumber positive stories at a ratio of 2:1 (Soroka 2014). Other research suggests that this higher volume of negative news is driven by consumer preferences, as, for instance, most people consistently choose to consume more negative stories than positive ones while perusing online news media (Meffert et al. 2006)—including even those who claim to prefer positive stories (Trussler & Soroka 2014). Regarding media effects, news stories about negative economic events (i.e., downturns) more strongly impact public opinion that do stories about positive economic events (Soroka 2006). Moreover, negative news stories also elicit stronger and more durable responses than do positive ones (Soroka & McAdams 2015).

Aside from political communication studies, evidence also exists of negativity bias.

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2Though, recently, Stuart Soroka (e.g., Soroka 2014) has paid sustained attention to the role of negative valence in politics.
pertaining to other dimensions of politics. Regarding candidate choice, for instance, traits upon which respondents rated U.S. Presidential candidates as being unfavorable were much more predictive of overall candidate preference than were positively evaluated traits (Klein 1991; Klein 1996; Lau 1982; Soroka 2014). Some research has also focused more specifically on voter evaluations of incumbent candidates. One defense of democratic norms in the face of staggering evidence that the public is generally uninformed politically has focused on citizens’ consideration of the past performance and actions of elected officials when choosing whether to retain politicians. This idea is normatively pleasing from the standpoint of traditional democratic theory in that it asserts that the electorate can hold elected officials accountable by accounting for trends in macro-level indicators, such as the state of the economy, since the last election. This phenomenon, which has been dubbed “retrospective voting,” was originally assumed to operate primarily through citizens taking account of political and economic concerns that “hit close to home,” such as their own income, employment status, health and other outcomes, as well as those of their family, friends, and neighbors (e.g., Fiorina 1981; Key 1966). The primary potential problem the logic of retrospective voting is that, even if voters are adept at detecting changes in their personal circumstances, changes in personal circumstance may not be any fault of incumbent politicians and, if indeed it is not, then holding politicians accountable for such circumstance is wholly unreasonable—a situation that others studies have found evidence of at multiple points in American political history (Achen & Bartels 2012; Bartels 2014). Directly related to negativity bias and retrospection, Bloom and Price (1975) find that short-term economic downturns reduce the vote share of the incumbent party in American presidential elections, but economic upturns have no discernible effect. As the authors themselves note, this finding is consistent with the observation made in *The American Voter* that “changes in the party balance are induced primarily by negative rather than positive attitudes toward the party controlling the executive branch of federal government. ... A party already in power is rewarded much less for

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3For a review, see Achen & Bartels (2016) ch. 4.
good times than it is punished for bad times” (Campbell et al. 1960, pp. 554-555).

As our necessarily brief overview of the literature related to negativity bias in interpersonal evaluation attests, negative information—particularly behavior—plays a powerful and well documented role in influencing evaluation of others. Additional evidence from political science, though somewhat less developed than the psychological literature on interpersonal evaluation, also suggests that citizens are prone to negativity biases when processing political information. Below, we conduct a series of experimental studies to investigate further the effects of information valence upon citizen evaluations of incumbent legislators and Congress as whole. The studies provide background information pertaining to the behavioral trends of either Congress or a legislator, and are designed to assess the differential effects of information valence in evaluation and judgement (a more detailed presentation of our experimental design can be found below, under the ”Research Design” sub-heading). Based upon prior research findings in this area, especially those studies showing that voters are more likely to utilize negative information pertaining to the economy to evaluate candidates (Bloom & Price 1975; Kiewiet 1983; Claggett 1986), and in myopic fashion (Achen & Bartels 2016), we expect that:

**Hypothesis 1:** Those assigned to read about recent negative behaviors committed by either Congress or a single hypothetical legislator will require a *lesser* amount of time of the persisting behavior before concluding that Congress or the actor has “officially” changed for the worse than will those exposed to positive behaviors to conclude that a change for the better has occurred.

**Hypothesis 2:** When reading about individual recent behaviors committed by Congress or an individual legislator, those reading about negative behaviors will require knowledge of *fewer* instances of behavior to indicate a willingness to punish Congress or a legislator than those reading about positive behaviors will require to indicate a willingness to reward them.

**Hypothesis 3:** After reading about a legislator or Congress that has in recent years been
“average” in terms effectiveness (i.e., productivity), the difference in average overall evaluation of effectiveness between those learning that Congress has recently become less effective will be greater than the difference in average overall evaluation of effectiveness as compared to the baseline group who did not read about any such recent change in the effectiveness of Congress/legislator.

Partisan Identity and Affective Polarization

Since the groundbreaking insights of Campbell et al. (1960) and Converse (1964), political scientists have understood partisanship to be the key driver of political behavior by channeling not ideological preferences, but rather, more primal expressions of group attachment and loyalty. Since those early works, a host of scholarship has been undertaken in order more fully flesh out the psychology of partisanship, with the predominant view today being that partisanship functions as a social identity (Green, Palmquist & Schickler 2002; Huddy, Mason, & Aaroe 2010). What “partisanship as a social identity” means is that the mere act of identifying with one party engenders positive feelings toward one’s in-group (co-partisans) and negative feelings toward the out-group(s) (those identifying with opposing political parties). A major implication of partisanship as social identity is that the animus between partisans is not one chiefly based upon ideological disagreements, but rather one driven by tribal-like group attachments. This perspective is corroborated by a multitude of evidence illustrating that partisans are largely unaware of the various ideological positions and debates preoccupying political elites (Bennett 2003; Delli Carpini & Keeter 1996) and a low level of ideological consistency in the political preferences of the typical partisan (Converse 1964).

The most important development in American politics regarding partisanship in recent decades has been the growing disagreement, heightened animus, and shrinking common-ground between the two parties—a phenomenon commonly referred to as political polariza-
tion. While much of the initial debate surrounding polarization centered upon deepening
fissures pertaining to issue positions between political elites (McCarty, Poole, & Rosenthal
2008) and within the electorate itself (Abramowitz & Saunders 1998; Fiorina 2009; Ahler
2015; Hill & Tausanovitch 2015), more recent work focusing on polarization in the mass
public has adopted a social identity approach. Being among the first to adopt this approach,
Iyengar, Sood and Lelkes (2012) argued that political polarization is primarily an affective
phenomenon (i.e., affective polarization) driven by a dislike of ones partisan opponents rather
than disagreements over ideas and policy prescriptions.

A large amount of compelling evidence has accumulated demonstrating the extent of affective polarization in the electorate. Iyengar, Sood and Lelkes (2012) demonstrate using over-time partisans have grown to increasingly dislike members of the opposite party whereas feelings toward members of their own party have remained relatively stable, indicating that affective polarization driven primarily by growing disdain for the out-group. The authors also find that the percentage of respondents opposed to their children marrying members of the opposite party have sky-rocketed—from less than 5% among both Republicans and Democrats in 1960 to over 1/3 of Democrats and over 1/2 of Republicans in 2010. These survey data are corroborated by real-world behavior, as Huber and Maholtra (2017) have found that partisan agreement predicts reciprocal communication between people utilizing online dating platforms. Experimental evidence utilizing both implicit and explicit measures demonstrates that partisanship elicits even more extreme evaluations of in-group and out-group members than does racial identity (Iyengar & Westwood 2015). Mason (2015) demonstrates that an alignment of partisan and ideological identities leads to significantly higher levels of animosity toward opponents than does ideological disagreement alone. Based upon these prior studies and consistent with affective polarization, we hypothesize that:

**Hypothesis 4:** Negativity bias will be accentuated when evaluating individual leg-
islators of the opposite political party or a Congress wherein the majority of its members are affiliated with the opposite party.

**Research Design**

In order to investigate further negativity bias in political information processing, six between-subjects experimental studies were conducted. Each of the experiments presents respondents with information about either a fictional congressman or about Congress as an institution. In total, 2,242 respondents were recruited using Amazon’s Mechanical Turk online labor market service and the studies conducted in spring of 2017. Like many studies utilizing Mechanical Turk, our sample is younger, better educated and more racially diverse (see Table A1 in the Appendix). Though our results, presented below, are, as always, confined to the sample, multiple recent studies suggest that for most types of research questions, Mechanical Turk samples yield results that are not significantly different than those uncovered utilizing the best probability based representative samples (Berinsky, Huber & Lenz 2012; Clifford & Jerit 2014; Mullinix, Leeper & Druckman 2015). Furthermore, because our intervention is designed to measure unconscious psychological processes that we possess no priors to suggest would be operationally different based upon different demographic criteria—aside from perhaps partisan identity, which our design already accounts for—we are confident that our results would hold across multiple samples, including those fully representative of the U.S. population. This, combined with the large number of experiments we present here triangulating on the effects of negativity bias, leads us to believe that our findings provide valid evidence regarding this phenomenon.

As discussed briefly in the introduction, we chose to construct our experimental vignettes around congressional politics based upon two criteria: 1. Congress’s role in American politics, and, 2. the type of information commonly available about Congress and its members.
Congress is an ideal institution upon which to frame our studies as it enjoys a preeminence in American politics, including the proportion of coverage it receives in the news media, second only to the Presidency. This is ideal for our purposes as we can expect most Americans (including our respondents) to at least have a cursory understanding of what it is that Congress does and to being accustomed to, at least occasionally, hearing about its activities. Second, because a plurality of news coverage about Congress is negative, it is an important case to study regarding negativity bias.

To help facilitate logical equivalency in our experimental studies across conditions, we rely the language of “legislative effectiveness” to frame our vignettes. Beyond better ensuring logical equivalency, this choice facilitates our studies’ engagement with recent attention in the literature on political institutions to characteristics that make legislators effective lawmakers. Volden and Wiseman (2014) define legislative effectiveness as “the proven ability to advance a member’s agenda items through the legislative process and into law” (18). This operational definition intersects with two well-established goals of members of Congress: credit-claiming behavior and the policy goal. The credit-claiming perspective (Mayhew 1974) proposes that members care about passing policy, but primarily as a vehicle for their re-election. That is, they “claim credit” (or relatedly “effectiveness”) for successful lawmaking, particularly when they are able to secure some sort of distributive benefit for their district. Fenno (1978), on the other hand, explicitly allows for the possibility that legislators may seek to pass good public policy outside of their pursuit of re-election, while also emphasizing that legislators

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5To confirm that Volden and Wiseman’s (2014) conceptualization of what makes an effective legislator comports reasonably with the American public’s conceptualization of legislative effectiveness, we fielded a survey question with potential definitions, as well as leaving a write in space. Results (see Table A2 of the Appendix) stemming from this question suggest that Volden and Wiseman’s conceptualization is roughly consistent with layman notions of effectiveness (45% of respondents chose the definition approximating theirs, while 46% chose the option comporting with what is commonly known as the “delegate” model of representation). Upon sifting through the write-in responses, we note that many such responses focused on a legislator’s ability to work across the aisle and compromise, which, while this might be indirectly related to Volden and Wiseman’s measure, it seems to us that many favored this as an end in itself as opposed to a mere means of passing one’s bills into law. Overall, we believe that further research is needed to validate Volden and Wiseman’s measure as it pertains to public opinion, but our single survey item here provides tentative evidence that it is capturing something that many citizens care about.

13
want to claim credit in order to buttress their re-election odds. To support his argument, Fenno offer a number of detailed case studies which reinforce the importance of actually passing legislation to MCs.

Due to the paramount importance of group attachments (for a review, see Achen & Bartels 2016) in shaping our thoughts, opinions, and actions, we felt it obligatory to study whether and how the effects of information valence are moderated by partisan identity. To do so, we randomly assign some participants to read information in which partisan identifying information is included. For instance, in those studies whose stimuli feature descriptions of Congress as a whole, participants randomly assigned to be exposed to information including partisan identifying cues read statements about “the Republican majority Congress.” To maintain an appropriate level of realism, participants read only about either a generic Congress (devoid of any partisan labels) or about a Republican majority Congress—since, as of the time that these studies were conducted and of this writing, Democrats do not hold either house of Congress and have not held both houses since 2010. Those assigned to read about an individual legislator, on the other hand, either read about a Republican, Democrat, or legislator sans partisan labeling. Each of the first four studies described below (1A, 1B, 2A, and 2B) are analyzed in such a way as to identify the moderating influence of partisan identity—the details of this procedure are provided below in the “Results” section. Finally, before moving onto a presentation of the results, we first provide additional information on each of the experiments. All experimental stimuli are provided in the Appendix.

Study 1: Negativity Bias and Reputation Change

Experiments 1A and 1B are designed to assess potential valence associated biases in reputation/impression change. Participants in experiment 1A read about a fictional U.S. Representative Davis, who is described as having previously served six terms in office. Participants were informed that, over the course of his congressional career, Representative Davis’s

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6See also Yiannakis (1982), who expands on the conditions for credit-claiming by a member’s electoral focus.
record has been consistently average in terms of legislative achievement/effectiveness. In addition, partisan identifying information (e.g., “Democratic Congressman Gary Davis”) was also randomly assigned in order to assess whether negativity bias operates differently when evaluating partisan in-group members versus those of the out-group. Participants were then, based upon random assignment, asked to imagine that Representative Davis seems to have been more ineffective by introducing and passing less bills (bad) lately than usual or that he seems to have become more effective by introducing and passing more bills (good). Additionally, whether and which partisan identity is ascribed to the candidate was randomized. Then, as our primary dependent measure, participants reported how many consecutive congressional terms (from 1 to 6+) of such consistent legislative activity would be necessary in order to convince them that the legislator’s overall effectiveness had officially changed—as opposed to a chance, happenstance, or fluke change.

Experiment 1B is highly similar in design to 1A—the main difference being that it is conducted in order to investigate the evaluative negativity bias in evaluations of reputation change of the institution of U.S. Congress as a whole. Participants in this experiment read a fictional account of the general trend of Congressional output over the past six sessions. Participants were informed that during this time Congress has been moderately effective in its output as an institution, passing an average number of bills per session over the past six years identical to that of the previous ten. Next, based upon the condition to which they are randomly assigned, participants were asked to imagine that, in recent months, Congress becoming especially ineffective—passing a lower number of bills in areas deemed important by the public—(bad) or especially effective—passing a higher volume of bills deemed important by the public—(good). Additionally, whether participants are informed of the partisan distribution of the members of Congress was randomized. For the primary dependent measure, participants were asked to report how many consecutive legislative sessions (from 1 to 6+) of the sort of behaviors they read about would be required in order for them to conclude that the institution of Congress has officially changed for better or worse.
Study 2: Negativity Bias and the Willingness to Punish or Reward

Going beyond study 1, an important potential consequence of a negativity bias in impression formation may be a similarly asymmetrical willingness to punish negatively valenced actions than to reward positive actions. To test this, in Study 2A we presented respondents with information about a fictional legislator, telling them that the congressman has in the past been either especially weak or strong in terms of legislative effectiveness. Respondents were then presented with up to six individual legislative behaviors of either a positive or negative valence and instructed that they should indicate a willingness to vote for (against) the individual legislator once they believe that the new behaviors are enough outweigh the past behavioral trend presented in the first part of the vignette. After each behavior is presented, participants were asked whether or not the sum of information presented thus far was enough for them to vote for (against) the legislator or whether more information was required. The DV is the number of behaviors needed to make a determination (1-6+).

Study 2B is highly similar to 2A, with the exception again being that study 2B focuses on Congress as a whole as opposed to an individual legislator. As with study 2A, participants either read about a very effective or non-effectual Congress, and are then presented with individual congressional behaviors and asked whether they new information is enough cause to reward or punish the Congress by indicating approval or disapproval of the institution. While citizens do not have the discretion to replace institutions in wholesale fashion (as they do with individual legislators through the voting mechanism), a substantial body of research findings have illuminated an apparent relationship between public approval ratings and inter-institutional power dynamics, namely that institutions can be constrained by public discontentment (e.g., Clark 2009; Gibson, Caldeira & Baird 1998; Mondak & Smity 1997) and, because of this, certain institutions are very concerned with tracking the public’s approval of their job performance (Druckman & Jacobs 2015). As with study 2A, the dependent variable is is the number of behaviors needed to a make determination
Study 3: Negativity Bias and Evaluation of Legislative Effectiveness

Studies 3A and 3B are designed to investigate negativity bias in performance evaluation. Participants were presented with information about either an individual legislator (study 3A) or Congress (study 3B) and were told that their performance was average over 80% of the duration under consideration but that, in the final 20%, their performance had either become above or below average (by equivalent amounts) or stayed average. Then, respondents rated the overall legislative effectiveness using a 5 pt Likert measure. A greater difference in effectiveness ratings between the negative condition and the baseline (remaining average) versus that between the positive condition and the baseline would be indicative of a negativity bias in retrospective evaluation of legislative performance. Due to an oversight on behalf of the researchers during the phase of conducting the research, a complete analysis of the moderating effects of partisanship is not possible, though below we do discuss what our data are able to suggest regarding this question.

Results & Discussion

In studies 1A and 1B, we are interested in the differential effects of information valence upon reputation updating. Specifically, in study 1A we investigate whether there is a significant difference in the duration of consistently negative legislative behavior necessary to conclude that a legislator known formerly to be effective has “officially” become ineffective versus the duration of consistently positive legislative behaviors required to conclude that a previously known ineffective legislator has officially transformed into an effective legislator. In study 1B we investigate the same question except, rather than focusing on an individual fictional legislator, we focus on respondents’ evaluation of Congress as a whole. To address this question, we utilize ordinary least squares (OLS) regression, regressing the duration
(measured in U.S. House terms in study 1A and congressional sessions in study 1B) indicated by the respondent upon the valence of the information that the respondent read about and whether the partisanship of the respondent matched that of the labels included in the vignette, as well an interaction term of valence and partisanship.

Results, which are presented in Table 1, indicate that in both studies 1A and 1B, there is a significant and negative main effect for valence. In other words, when presented with negative information regarding both Congress and legislators known previously to be effective, the average duration of negative behaviors required by respondents to conclude that Congress and legislators had officially changed for the worse (i.e., becoming less effective) is significantly less than the duration of positive behaviors required to conclude that a previously ineffective Congress or legislator had become definitively effective. Moreover, the magnitude of this main effect is substantial, accounting for nearly an entire U.S. House ($\beta = -.88$, $p = .001$) term for legislators and nearly two sessions of Congress ($\beta = -1.74$, $p < .001$). Overall, this is clear evidence of negativity bias in how citizens perceive behavioral change of political elites and institutions. Directing our attention to the interaction effects in study 1A, we can see that the effects of negative information upon the reputation change of legislators is not moderated by congruence in partisan identity between the respondents and the legislator being evaluated. This is not the case, however, regarding Congressional reputation change (Study 1B), as results indicate that when presented with negative information about the Republican majority Congress, Republican respondents were willing to tolerate over 1.5 more sessions of negative behavior before concluding that Congress had officially become worse. Investigating this interesting result further, Figure 1 displays a marginal effects plot that shows the impact of negative information (versus positive information) on the required duration until reputation change at different levels of partisan congruency.

\[7\] All analyses were conducted in Stata 14. We utilized Stata’s full factorial regression command feature to analyze the interaction effect of information valence and partisanship (in)congruence between respondents and the object under evaluation (either Congress or a fictional legislator). This statistical tool is highly beneficial as it makes discerning main effects and interaction effects very straightforward. Marginal effects were calculated utilizing Stata’s “margins” command. Graphics, however, were constructed in R.
between respondents and Congress. Consistent with the literature on affective partisanship, respondents whose partisan identity is incongruent (Democrats in this case) with the Republican Congress require a significantly shorter duration to come to a conclusion regarding an official change in legislative effectiveness when the behavioral change in question is negative than those whose partisan identity is congruent with Congress or in non-partisan contexts.

Table 1: Study 1 Regression Results - Negativity Bias and Reputation Updating

<table>
<thead>
<tr>
<th>Valence (main effect)</th>
<th>Study 1A</th>
<th>Study 1B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valence (main effect)</td>
<td>-0.88***</td>
<td>-1.74</td>
</tr>
<tr>
<td>(0.26)</td>
<td>(0.38)</td>
<td></td>
</tr>
<tr>
<td>Party-Match (main effect)</td>
<td>-0.10</td>
<td>-0.59</td>
</tr>
<tr>
<td>(0.27)</td>
<td>(0.41)</td>
<td></td>
</tr>
<tr>
<td>Valence*Party-Match</td>
<td>0.43</td>
<td>1.69***</td>
</tr>
<tr>
<td>(0.37)</td>
<td>(0.10)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>3.10</td>
<td>4.19</td>
</tr>
<tr>
<td>(0.19)</td>
<td>(0.26)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>322</td>
<td>210</td>
</tr>
</tbody>
</table>

Note: DV is the duration (measured in house of representatives terms in 2A and congressional sessions in 2B) of time that the new behaviors would need to continue before an “official” change in effectiveness would be cemented.

Next, in studies 2A and 2B, we investigate the differential effects of information valence in citizens’ willingness to punish and reward individual legislators as well as Congress itself. To do so in study 2A, we regress the number of behaviors—either positive or negative in valence depending on random assignment—that respondents felt was sufficient to either or punish or reward (i.e., vote for or against) the legislator on the valence of the behaviors, degree of partisan congruence between the legislator and respondent, and an interaction term of these two variables. Results, presented in Table 2, indicate that there is no significant main effect for valence, which does not support our second negativity bias hypothesis (Hypothesis
2) Furthermore, results indicate a significant interaction effect whereby, in comparison to those who were evaluating a legislator of the opposite party, those whose partisanship is congruent with the legislator being evaluated were willing to excuse an additional 1.74 negative behaviors on average before expressing a willingness to vote against him. Exploring this result further by shifting our attention to the the marginal effects plot displayed in Figure 2, we can see that this result is truly being driven by an information valence effect asymmetry in co-partisan evaluation, for, while a shift from positive to negative information leads to a 1.5 increase (p < .001) in the pieces of information needed on average to reach a decision regarding a co-partisan, there is no significant difference when evaluating candidates of the opposite party[9]. This result, while unexpected, is in some sense intriguing as it suggests that partisans require a statistically significant and substantially lesser amount of positive

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8 Though failing to reach conventional levels of statistical significance, it is worth noting, however, that the coefficient is in the hypothesized direction.
9 As with the main effect of negative information, though failing to reach statistical significance, the coefficient (-.23) is in the direction we would expect given the affective partisanship hypothesis.
information to vote for a co-partisan candidate than they do negative information to vote against a co-partisan candidate, which is a pattern consistent with confirmation bias. When evaluating candidates from the opposite party, however, the volume of information necessary to reach a decision does not differ significantly as a function of the valence of that information.

Table 2: Study 2 Regression Results - Negativity Bias and the Calculus to Punish or Reward

<table>
<thead>
<tr>
<th></th>
<th>Study 2A</th>
<th>Study 2B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ind. Legislator</td>
<td>Congress</td>
</tr>
<tr>
<td>Valence (main effect)</td>
<td>-0.23</td>
<td>-1.47**</td>
</tr>
<tr>
<td></td>
<td>(0.39)</td>
<td>(0.51)</td>
</tr>
<tr>
<td>Party-Match (main effect)</td>
<td>-1.05</td>
<td>-1.61**</td>
</tr>
<tr>
<td></td>
<td>(0.40)</td>
<td>(0.56)</td>
</tr>
<tr>
<td>Valence*Party-Match</td>
<td>1.74**</td>
<td>2.30***</td>
</tr>
<tr>
<td></td>
<td>(0.56)</td>
<td>(0.79)</td>
</tr>
<tr>
<td>Constant</td>
<td>3.48</td>
<td>4.13</td>
</tr>
<tr>
<td></td>
<td>(0.27)</td>
<td>(0.36)</td>
</tr>
<tr>
<td>N</td>
<td>305</td>
<td>214</td>
</tr>
</tbody>
</table>

Note: DV is the number of behaviors (either positive or negative) respondents required before deciding to reward or punish the legislator/Congress.

While neither of our hypotheses were supported in study 2A, we find support for both in study 2B. Directing our attention once again to Table 2, we see that there is a large and statistically significant main effect for negative valence. Specifically, this coefficient indicates that, on average, those who read about instances of Congressional legislative failure require nearly 1.5 fewer pieces of information to punish Congress than do those reading about instances of Congressional legislative success before deciding to reward Congress, which supports our second negativity bias hypothesis (Hypothesis 2). Bearing in mind the descriptive fact that news coverage of Congress (as well as news coverage in general) tends to be disproportionately negative, the implications of this finding are rather dramatic. Indeed, if most news about Congress is negative and if citizens on average demonstrate a negativity bias in processing information about Congress, then public job approval ratings of Congress are especially prone to being low—perhaps unfairly so. If this is the case, then the
consequences for the functioning of American government may be considerable, especially regarding inter-branch relations. For instance, since low approval ratings may undermine Congresses ability to “check” the other branches (as prior research informs us is the case for other institutions, e.g., Mondak & Smithey 1997), a consequence may be the potential emboldening of the executive (e.g., executive orders) and judicial (e.g., legislating from the bench) branches. If this is the case, it may help us to make more complete sense of other empirical observations, such as president’s heightened ability to unilaterally influence policy during periods of Congressional gridlock (Howell 2003) since, ostensibly, gridlock would receive negative coverage and perhaps make unilateral presidential action more palatable to the public as a result.

Inspecting the interaction effects of study 2B presented in Table 2, we find clear evidence in favor of the affective polarization hypothesis (Hypothesis 4). Specifically, results indicate that, when reading about negative actions (i.e., legislative failings) carried out the
Republican majority Congress, Democratic respondents allow 2.3 fewer negative behaviors (p = .004) on average before disapproving of Congress than do Republican respondents. The marginal effects plots presented in Figure 3 help to further clarify this relationship. As Figure 3 illustrates, for those Democratic leaning respondents randomly assigned to evaluate the Republican Congress (the opposing party condition), those reading about negative behaviors reached a decision to punish Congress after exposure to 1.5 behaviors fewer, on average, as compared to those deciding to reward the Congress after reading about positive behaviors. Meanwhile, for those randomly assigned to the party match condition or to the non-partisan condition, there is no significant difference in in the average number of negative behaviors necessary to punish Congress versus the number of positive behaviors needed to reward Congress. Building upon our discussion of the implications of these findings for inter-branch relations, it is worth considering here our results in light of the partisan distribution of Congress. It is a well established fact that Republicans are over-represented in Congress when compared to the percentage of American citizens who identify with the Republican Party. The reasons for this over-representation are numerous, but include gerrymandering (GOP hold a majority of state legislatures where favorable Congressional district lines can be drawn), equal state representation in the U.S. Senate, asymmetrical political mobilization, and political geography—i.e., liberal Democratic voters tend to be concentrated in cities. Because of these reasons and others, it is probable that the GOP will remain over-represented in Congress in the foreseeable future—these structural advantages also making GOP Congressional majorities easier to maintain than they otherwise would be. With GOP over-representation in Congress in mind, as well the fact that most news about Congress is negative, our results, namely that negativity bias in Congressional approval ratings is moderated by partisan identity, may help to explain why Congressional approval ratings are oftentimes low, and particularly so in our own hyper-polarized political climate.

Lastly, in studies 3A and 3B, we investigate whether negativity bias is present in retrospective evaluations of overall legislative effectiveness. Recall that, in study 3A, re-
respondents read about a congressman who, for the first five of his six terms, had been of average effectiveness, proposing an average of 13 bills per term. Then, prior to rating the legislator’s effectiveness over his entire career, respondents either learned that, conditional on random assignment, the congressman had been more effective (proposing 18 bills), less effective (proposing 8 bills), or had stayed the same (proposing 13 bills again) in his final term. To distinguish whether there was an asymmetry in the impact of negative information versus positive information upon retrospective evaluations of legislative effectiveness, a one-way ANOVA was run (N = 339). Unsurprisingly, results indicate that information valence has a significant effect on evaluations of legislative effectiveness F= 4.35, p = .012). Post-hoc comparisons utilizing Tukey’s test reveals that evaluations of legislative effectiveness for those assigned to the negative condition were significantly lower than the neutral condition (Δ = -.24, p < .05). Meanwhile, however, no significant difference in effectiveness ratings emerged between the positive and neutral conditions (Δ = .11, p < .53).10

10These results are robust to multiple post-hoc comparison tests. We present Tukey’s here because of its
These results represent clear evidence in favor of our third negativity bias hypothesis ("Hypothesis 3"). Indeed, while respondents rated as significantly less effective the legislator who passed 5–or 39%–fewer bills than his average in his most recent term (compared to a legislator who remained average in the most recent term), respondents did not rate significantly more effective the legislator who showed an equivalent improvement (5 more bills). The negativity bias illustrated here is all the more notable considering the minute difference in average bills proposed throughout the legislator’s career across the three conditions–12.17 in negative condition, 13 in the neutral condition, and 13.83 in the positive condition. Overall, these results comport with recent findings that citizens on average tend to be myopic in their retrospection (Achen & Bartels 2016)–that our evidence suggests they also tend to be prone to being biased toward giving disproportionate weight to negative information is all the more troubling.

Study 3B follows a nearly identical structure to 3A, the only differences of course pertaining to the fact that it is designed to assess whether negativity bias is present in evaluations of Congress as a whole as opposed to a single legislator. As such, statistical procedures are also identical. Unlike study 3A, however, results of study 3B do not provide strong of evidence in favor of Hypothesis 3. One-way ANOVA results indicate that information valence does not significantly affect retrospective evaluations of the legislative effectiveness of Congress at conventional thresholds (F = 2.26, p = .10). Moreover, while the magnitude of the negativity bias in study 3B appears to be slightly larger in this study–the difference in means between the negative and neutral conditions being -.27–(and the relevant pairwise comparisons appearing as statistically significant utilizing the Student-Neuman-Keuls and Duncan methods), pairwise comparisons utilizing Tukey’s method are insignificant. Because these results are lacking in statistical clarity, we cannot with confidence reject the null hypothesis, though we do note that, p-values aside, because the estimates are in line with those in study 3A, this question merits further attention in future research.

ubiquitousness in the literature.)
Conclusion

In total, the results of the six studies presented in this paper shed light on the extent to which negativity bias pervades evaluations of legislative politics in the United States, both as it pertains to individual legislators and Congress as a whole. Our evidence shows convincingly that negativity bias is to some extent present in three distinctive areas of Congressional evaluation, including retrospective evaluation of overall legislative effectiveness, reputation formation, and the psychological calculus to punish and reward. Furthermore, our evidence suggests that negativity bias may be moderated—indeed, amplified—by group based attachments and social identities, such as partisanship, in many contexts. Far from being trivial, these relationships appear relevant to several of the most defining aspects of American politics.

While negativity bias may be considered a heuristic that leads to more efficient judgments (in terms of costs and resources expended in reaching them), it can hardly be considered a rational strategy. Indeed, the fact that people systematically place more subjective weight on negative acts even under objectively equal conditions suggests that negativity bias is likely to result in suboptimal outcomes at a rate greater than chance in the context of day-to-day interactions. For instance, imagine a scenario where the performance of a moderate to highly effective politician overall dips in the run-up to an election, our evidence suggests that citizens are especially likely give undue weight to this negative information, thereby increasing the probability of voting out of office quality and experienced public servants. In other words, while prior research has established that the specter of myopic retrospection remains ever lurking, our evidence suggests that negative events are particularly likely to influence the recency bias thought process.

As prior research has documented, the amount of negative news coverage pertaining to Congress and its members far outpaces that which is positive or neutral. When combined with this descriptive fact, our results indicating that respondents were influenced
significantly more strongly by negative information pertaining to Congress than they were positive information may help explain why Congressional approval ratings have often been so low in recent decades. Moreover, our evidence that the effects of negativity bias are amplified by partisan attachments seems especially pertinent to our contemporary hyper-polarized political climate wherein Congressional approval ratings have dipped to historic lows. If this is the case, then there may be implications for the balance of power between the branches of U.S. government. Indeed, low approval ratings for Congress may weaken the institution’s standing relative to the other branches, such as by increasing public support for unilateral executive power to tackle issues wherein Congress is perceived as being feckless and ineffectual.

While the studies presented in this paper advance our understanding negativity bias in politics and demonstrate its relevancy and potential importance to Congressional politics, there are a number of important questions which it does not address. For instance, because the framing of our studies is based upon the legislative effectiveness framework (Volden & Wiseman 2014), our studies focus rather narrowly on legislative action. However, as we are nearly continually reminded, much of politics—especially concerning individual politicians—deals with personal actions, such charitable giving or scandal, that we perhaps would not consider to be related to the conventional job description and official duties of public officials. Future research should investigate potential negativity biases within citizen evaluations of such non-official behavior and determine the impact of such behaviors upon overall evaluations of public officials vis a vis information pertaining directly to the performance of official job duties. Additionally, other potential moderators of negativity bias should be investigated. Recent research in other areas of social scientific inquiry, such as a study finding that gender biases influence teaching evaluations (Mengel, Sauermann & Zolitz 2017), suggest that an important and potentially fruitful area of research in this area regards potential moderation of negativity bias by the gender of the person (e.g., political candidates) under evaluation.
Overall, this paper adds to a growing body of evidence illustrating that negativity bias is widespread in information processing about politics. Furthermore, the evidence presented and discussed in this paper joins others (e.g., Soroka 2014) in furthering our understanding of how cognitive biases have potential to be detrimental to the overall wellbeing of democracy and republican styled government. While the role of negativity bias in politics may be partially diminished by changing journalistic norms and incentives—recalling that the disproportionate amount of negative news is in part a function of consumer demand—because the phenomenon appears to be so ingrained in our psyche, and may even be evolved, it is likely to remain an enduring feature of our politics and, thus, merits further research regarding its effects and implications thereof for democratic society.
References


Babbitt, P. R., & Lau, R. R. (1994). The impact of negative political campaigns on political knowledge. In annual meeting of the Southern Political Science Association, Atlanta.


Appendix

Experimental Stimuli

The stimuli for each of the experimental studies are provided below. Italicized words indicate which components of the text were randomized, and forward-slashes separate the potential values.

Study 1A: Gary Davis [, a Republican/Democrat,] has been serving in the U.S. House of Representatives for six terms (12 years). According to an official measure developed by political scientists, Representative Davis has been of overall average or mediocre effectiveness in Congress so far, passing an average of 2 bills into law in each of his first five terms (10 years). As a comparison, in recent congresses the average legislator has passed 2 bills into law per congressional term (every 2 years).

In his most recent term, Representative Davis [(R/D)] has shown signs of becoming a less/more effective representative by introducing 1/3 bills that were successfully signed into law, which is 1 less/more than his average over his first five terms, and one less/more than the average legislator in Congress.

Question: How many consecutive terms of this behavior would it take for you to officially conclude that Representative Davis [(R/D)] has become an (in)effective legislator? Remember, each term lasts 2 years.

Study 1B: Over the past six sessions since 2010 (6 years), according to an official measure developed by political scientists, [Republican majority] Congress has been of overall average or mediocre effectiveness, passing an average of 336 bills into law in each of the first five of the last six terms. As a comparison, since the year 2000, the average number of bills passed into law by other congresses was 335, or about the same.

In the most recent session, [the Republican controlled] Congress has shown signs of becoming a less/more effective legislative institution by passing 252/420 bills, which is 84 less/more than their average over the other five sessions since 2010, and eighty five less/more bills than the average since 2000. Question: How many consecutive sessions of this behavior would it take for you to officially conclude that [Republican majority] Congress has become an (in)effective institution? Remember, there is one session per year.

Study 2A: [Republican/Democratic] Representative Ted Richardson has been in Congress for five years. He will be facing reelection soon. During these five years in Congress, Richardson has been a(n) below/above average legislator in terms of effectiveness. In fact, Richardson has introduced several bills and none/each of them successfully became laws.

While Representative Richardsons past record has been bad/good and (in)effective, voters should still/refuse (to) vote for him if he shows signs of officially declining/improving and becoming an (in)effective legislator. In other words, voters should refuse to vote for Representative Richardson only if his change in legislative effectiveness seems to be real and here to stay, rather than a mere fluke.
We now ask you to consider some behaviors that Representative Richardson ([R/D]) has engaged in recently. After considering the behavior, please indicate whether you would vote for/against Richardson based on such behavior(s), or whether you would require more information.

Study 2B: Over the past three years, [Republican majority] Congress has failed/succeeded in passing many pieces of legislation. This failure/success has upset/satisfied many of the nation's citizens.

While Congress record of passing important pieces of legislation over the past three years has been poor/good, citizens should still (dis)approve of Congress if Congress shows signs of officially improving/worsening and becoming a more/less effective institution incapable of passing major pieces of legislation. In other words, citizens should (dis)approve of Congress only if the institutions negative behavior seems to be real and here to stay rather than a mere fluke.

We now ask you to consider some behaviors that [the Republican] Congress has engaged in recently. After considering each behavior, please indicate whether you would (dis)approve of Congress based on such behaviors, or whether you would require more information to (dis)approve of their performance.

Study 3A: Gary Davis [, a Republican/Democrat,] has been serving in the U.S. House of Representatives for 6 terms (12 years). In his first 5 terms (10 years), Representative Davis [(R/D)] proposed an average of 13 bills each term. As a comparison, the average legislator in Congress proposed about 13 bills per 2-year term.

In his most recent term, Representative Davis [(R/D)] proposed 5/13/18 bills (five below/above average for Rep. Davis and less/the same number of/more proposals than the average legislator in Congress). In your opinion, how effective or ineffective of a legislator has Representative Davis been during his career?

Study 3B: From 2010 to 2014 (4 years), [Republican majority] Congress passed an average of 336 bills per year (about average). But over the past two years, 2015 and 2016, Congress has passed an average of 252/420 bills (below/above average).

In your opinion, how effective or ineffective has [Republican majority] Congress been during the last 6 years, from 2010-2016?
Table A1: Survey Sample Statistics

<table>
<thead>
<tr>
<th></th>
<th>MTurk Sample</th>
<th>ANES 2016 Pilot Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>38.35</td>
<td>48.06</td>
</tr>
<tr>
<td>% Male</td>
<td>54.68</td>
<td>47.50</td>
</tr>
<tr>
<td>% White</td>
<td>74.82</td>
<td>72.91</td>
</tr>
<tr>
<td>% College Degree</td>
<td>54.78</td>
<td>35.83</td>
</tr>
<tr>
<td>% Republican</td>
<td>24.63</td>
<td>32.08</td>
</tr>
<tr>
<td>N</td>
<td>1807</td>
<td>1200</td>
</tr>
</tbody>
</table>

Table A2: What Best Describes an Effective Legislator?

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voting in a way that is consistent with the opinion of their constituents.</td>
<td>46.36%</td>
</tr>
<tr>
<td>The ability to secure federal funds for use in the legislators district</td>
<td>74.82%</td>
</tr>
<tr>
<td>The ability to get legislation passed that is important for the country and district</td>
<td>54.78%</td>
</tr>
<tr>
<td>Other</td>
<td>24.63%</td>
</tr>
</tbody>
</table>

Note: Percentage of respondents who selected each answer to the question “Which of the following qualities best represents the most important quality that an effective legislator should have? If another quality comes to mind other than those listed below, please choose “other” and write in the quality you have in mind next to your choice.” Question order was randomized.