Americans' Attitudes toward the Affordable Care Act: What Role Do Beliefs Play?

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How do people form their attitudes toward complex policy issues? Although there has long been an assumption that people consider the various components of those issues and come to an overall assessment, a growing body of recent work has instead suggested that people may reach summary judgments as a function of heuristic cues and goal-oriented rationalizations. This study examines how well a component-based model fits Americans' evaluations of the Patient Protection and Affordable Care Act of 2010, an important and highly contentious piece of legislation that contained several constituent parts. Despite strong partisan disagreement about the law, we find that Democrats and Republicans both appear to evaluate the law as a function of their beliefs and what the law would do as well as their confidence in those beliefs. This finding implies that correcting misperceptions and increasing awareness of the components of legislation have the potential to change attitudes.

Keywords: evaluations; belief updating; Affordable Care Act; misperceptions

For at least a century, scholars have worried that Americans lack the factual knowledge required to make informed decisions about voting and about public policy (e.g., Bartels 1996; Campbell et al. 1960; Craig, Kane, and Gainous 2005; Delli Carpini and Keeter 1996; Eveland et al. 2005; Zaller 1992). In recent years, particular concern has focused on what appear to

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be widely held, yet inaccurate, beliefs about important issues, such as climate change and vaccine risks (Benegal and Scruggs 2018; Larson 2018; van der Linden et al. 2017; Zimet et al. 2013). In the context of the coronavirus pandemic, members of the public health community have warned about an "infodemic," whereby inaccurate information about the risks, prevention, and treatment of COVID-19 could have deleterious effects (Krause, Freiling, and Scheufele, this volume; Lewandowsky et al., this volume). And these concerns have spawned a series of attempts to address misperceptions through inoculations (Traberg, Roozenbeek, and van der Linden, this volume), nudges (Pennycook and Rand, this volume), and other interventions.

But despite evidence that misperceptions are sometimes widespread, a growing scholarly focus on interventions designed to fix misperceptions is far from guaranteed to improve citizens' decision-making. Correcting misperceptions would only be expected to yield better decisions when incorrect beliefs are part of the decision-making calculus. And while it is certainly plausible that citizens are rendering evaluations by carefully weighing the available information (Lau and Redlawsk 2006; Sturgis 2003), a large body of literature suggests that heuristic cues and cognitive shortcuts often allow individuals to make decisions without relying on a thorough optimization process (e.g., Druckman 2005; Lau and Redlawsk 2001; Lodge, Steenbergen, and Brau 1995; Lupia 1994). To the extent that preferences are guided by intuitive (Type 1) processes, misperceptions may not be a source of one's attitudes or could even be a rationalized product thereof (Taber and Lodge 2006). Hence, in the context of specific governmental policies, individuals might

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dislike the 2010 Patient Protection and Affordable Care Act (ACA), based, in part, on the inaccurate belief that the law contains "death panels" (i.e., groups of bureaucrats that would decide who deserves coverage) or, in contrast, opposition might be derived from awareness of the fact that the law was overwhelmingly supported by Democrats and opposed by Republicans. In the latter context, misinformation about "death panels" might be of little consequence.

In this article, we pit these two possibilities against each other. To do so, we propose and test a model of an optimization process whereby (accurate and inaccurate) beliefs about components of a legislation might shape overall evaluations of that legislation. The model proposes that overall evaluations reflect a combination of a person's attitudes toward what he or she believes to be the components of the legislation, with each component weighted by (1) the importance of the component and (2) the degree to which the individual is certain that the component is indeed in the legislation. We also explore the counterintuitive notion that overall evaluations of a piece of legislation might be influenced by beliefs about what is not part of the law (i.e., that people might like the legislation less if they believe that a component that should be included is not). We compare this model to an alternative possibility that individuals may use their partisan affiliations to guide their assessments of a law, irrespective of their beliefs about the law's components and the appeal of those components. Thus, one might view this effort as exploring whether misperceptions matter.

We compare these competing models in the context of how people formed their attitudes toward the ACA, a large-scale overhaul of the U.S. health care system that became law in 2010. We offer a theoretical account of how evaluations of the ACA might have been formed, describe the data that we collected, and present the results of our analysis. The results are consistent with the notion that people are considering what they believe is in the law when making their summary assessments. And differences in the overall attitudes between Democrats and Republicans are not merely a reflection of partisans adopting these conclusions without regard for the evidence but, instead, reflect differences in what members of these groups believe about the ACA.

From Beliefs to Attitudes

How do people assess complex policies such as the ACA? One might imagine an ideal process, with individuals learning about the components of a law, evaluating those components, and aggregating those evaluations to render a summary judgment by creating a linear combination (Ajzen 1991). According to this account, individuals decide what they think about a particular piece of legislation as a function of what they expect that legislation to accomplish and how much they like or dislike those expected outcomes.

Such a process is articulated by the expectancy value theory (Atkinson 1964; Vroom 1964) and its more recent iteration, the reasoned action approach (Fishbein and Ajzen 2010), which posits that attitudes develop from the beliefs people hold about different attributes of an object. The attributes might be valued either

positively or negatively based on whether a desirable or undesirable consequence is associated with that attribute and what people believe the likelihood is that that consequence will occur. One's attitude toward the object should then be proportional to the sum of the products of the subjective evaluation of each attribute and the strength of each belief, that is, the subjective probability that an outcome will occur (Ajzen 1991). Therefore, for complex legislation like the ACA, people might develop overall judgments of the appeal of the law based on how they evaluate the likely consequences of those provisions. Overall attitudes toward the law should be a function of subjective evaluations of provisions that are in the law.

People may also assign unequal weights to various components of legislation when constructing overall evaluations of it. Specifically, for a particular individual, one component might be extremely important and get heavy weight, whereas another component might be less important and therefore receive less weight. In the case of the ACA, limits on the ability of insurance companies to deny coverage was relevant to large swaths of the population, whereas changes to how those same companies report information to the government were unlikely to impact many people. Weights can also be determined by considerations other than the amount of personal impact that a component will have on an individual. But regardless, due to differences in the importance of the different provisions to different individuals, we should expect to see different weights attached to different provisions.

Similarly, the certainty of Americans' beliefs about the ACA should play a regulatory role in determining the relative weight of the evaluations of different components. Individuals seem likely to vary in the confidence with which they hold beliefs about whether each of various possible constituents are indeed in a bill. When individuals hold a belief confidently, that belief is likely to weigh heavily on the judgments they make. In contrast, uncertainly held beliefs should have less of an effect on decision-making. That is, people who are confident that a component is in the law are presumably more likely to base evaluations of the law on their evaluations of that component. Psychological research has shown that people who hold a belief with minimal confidence are unlikely to use it during decision-making (for a review, see Petty and Krosnick 1995). In contrast, people who hold a belief with confidence are inclined to use it when making relevant decisions.

Gauging the certainty with which people hold their beliefs has a second advantage. Kuklinski and colleagues (2000) have shown that information has not one but two dimensions—how much someone knows and how confident they are in that knowledge. If an individual attaches zero certainty to her or his belief about whether a component is or is not part of a law, that can be considered an instance of being uninformed. If a person holds a correct belief about whether a component is in the law with high certainty, that can be considered an instance of being maximally knowledgeable in that regard. And if a person holds an incorrect belief with maximal certainty, that can be considered an instance of being misinformed. This distinction might be particularly relevant for legislation like the ACA, where some information circulated about the law was substantively inaccurate and pushed aggressively by advocates (Kaiser Family Foundation 2017; Pasek, Sood, and Krosnick 2015).

In this article, we test how beliefs, confidence in those beliefs, and the favorability of those beliefs relate to overall attitudes. We pay particular attention to

whether the relationship linking beliefs to overall attitudes is maintained when we take political partisanship into account. More specifically, we ask, Do accurate and inaccurate beliefs matter? Does the certainty with which those beliefs are held shape the impact of those beliefs? Is the relation between beliefs and attitudes robust to partisanship? And does partisanship moderate the relations between beliefs and attitudes? Answers to these questions collectively reveal the extent to which misinformation correction is likely to shape individuals' judgments.

Methods

Data

To answer these questions, we used data from a 2012 survey conducted by the Associated Press and Stanford University. Respondents consisted of a nationally representative sample of 1,344 American adults who were drawn via stratified random sampling from GfK's KnowledgePanel® (now part of IPSOS), a group of people who were recruited via address-based probability sampling to regularly complete online surveys. The cumulative response rate for the survey was 9.9 percent (CUMMRR3; Callegaro and DiSogra 2008). Respondents completed the questionnaire between August 3 and 13, 2012. GfK provided a set of raked weights correcting for unequal probability of selection and poststratifying to match the population in terms of demographics, as measured by the most recent Current Population Survey at the time of administration. All descriptive analyses were conducted with weights.

Measures

Attitudes toward the ACA. The survey asked respondents, "In general, do you favor, oppose, or neither favor nor oppose the law changing the health care system that the U.S. Congress passed in March 2010?" Response options were "favor strongly" (coded: 1), "favor somewhat" (.5), "neither favor nor oppose" (0), "oppose somewhat" (–.5), and "oppose strongly." (–1).

Beliefs about the ACA components. Respondents answered questions about eighteen different things that a law like the ACA might do (hereafter: provisions). Twelve of these provisions reflected principal components of the ACA and were selected carefully to cover most of the central elements of the plan. These were based off a Kaiser Family Foundation (2015) report that provided a "summary of the law and changes made to the law by subsequent legislation." The remaining six provisions in the quiz were not in the law but had been frequently discussed in public debate. These provisions were identified by experts at the Associated Press and researchers at Stanford University. A list of these provisions can be found in the online appendix.

For each of the eighteen provisions, the survey measured respondents' beliefs by asking them, "Do you think that the new law will or will not do the following after the law is fully in effect?" Respondents could answer either that "the law will do this" or "the law will not do this" for each item. We created a dummy variable to index whether respondents thought each provision was something the law would do.

Certainty of beliefs. After answering the belief question about each provision, respondents were then asked, "How sure are you about that?" Response options were "extremely sure" (coded: 1), "very sure" (.75), "moderately sure" (.5), "slightly sure" (.25), and "not sure at all" (0).

Favorability of the ACA components. Following all of the belief and certainty questions, respondents answered, for each possible provision, "Do you favor or oppose this change?" Response options were "strongly favor" (coded: 1), "somewhat favor" (.5), "neither favor nor oppose" (0), "somewhat oppose" (–.5), and "strongly oppose" (–1).

Partisanship. The research team created two dummy variables to distinguish Republicans and Democrats from people without a party affiliation. Respondents were coded as a Democrat or a Republican if they answered "Democrat" or "Republican" to the question, "Do you consider yourself a Democrat, a Republican, an independent, or none of these?" All other respondents were treated as independents. Twenty-seven respondents refused to answer this question, and we treated them as missing in analyses using this variable.

Demographics. We coded age to range from 0 to 1. Dummy variables distinguished among White, Black, and Hispanic respondents and those who indicated they belonged to either another racial/ethnic group or to multiple groups. Variables indicating education separated people with a high school degree or less from people who indicated having attended some college education but no degree and people who graduated from college. Finally, dummy variables distinguished three equally large groups of people who indicated having low income (less than $39,999 per year), moderate income (between $40,000 and $84,999), or high income (more than $85,000).

Analytic strategy

To test the extent to which people's beliefs about the components of the ACA shaped their summary evaluations of the law, we leveraged the random-intercept random-slope multilevel modeling technique to predict respondents' overall attitudes toward the ACA using their beliefs about whether each component was or was not in the law, the certainty with which they expressed each of those beliefs, and their favorability toward each of the components. We allowed the intercepts

and coefficients to vary across provisions of the law and across partisan identities of the respondents. The coefficients of the interaction term between beliefs about each provision and favorability of each provision capture the importance of each component. The structure of the model is presented in Equation 1. Coefficients of all terms in the model were allowed to vary across (1) provisions and (2) partisan groups, with each treated as a random effect; we do not show coefficients for demographic variables, but they are controlled for in the analysis.

$$\begin{aligned} Attitude = {} & Belief + Favorability + Certainty + Belief \\ & \times Favorability + Belief \times Certainty + \\ & Favorability \times Certainty + Belief \times Favorability \times Certainty \end{aligned} \quad . \qquad (1)$$

For each provision, we regressed respondents' reported support for the ACA on beliefs about whether that provision was in the law, their reported certainty of that belief, and their favorability assessments of that provision, along with interactions between those three predictors. A separate model also interacted these predictors with partisanship to determine how partisan identities may have modified the relations between beliefs and overall judgments. The regressions controlled for age, gender, race/ethnicity, education, and income.[1]

If advocates of corrective information are correct that individuals use beliefs about policy attributes to render their overall judgments, this would show up in positive and significant coefficients for the influence of favoring items that a person believes are in the bill or, more importantly, favoring items that the person believes are in the legislation with high confidence. In contrast, the overall effect of favoring a provision that respondents are certain is not in the legislation should be zero or negative.

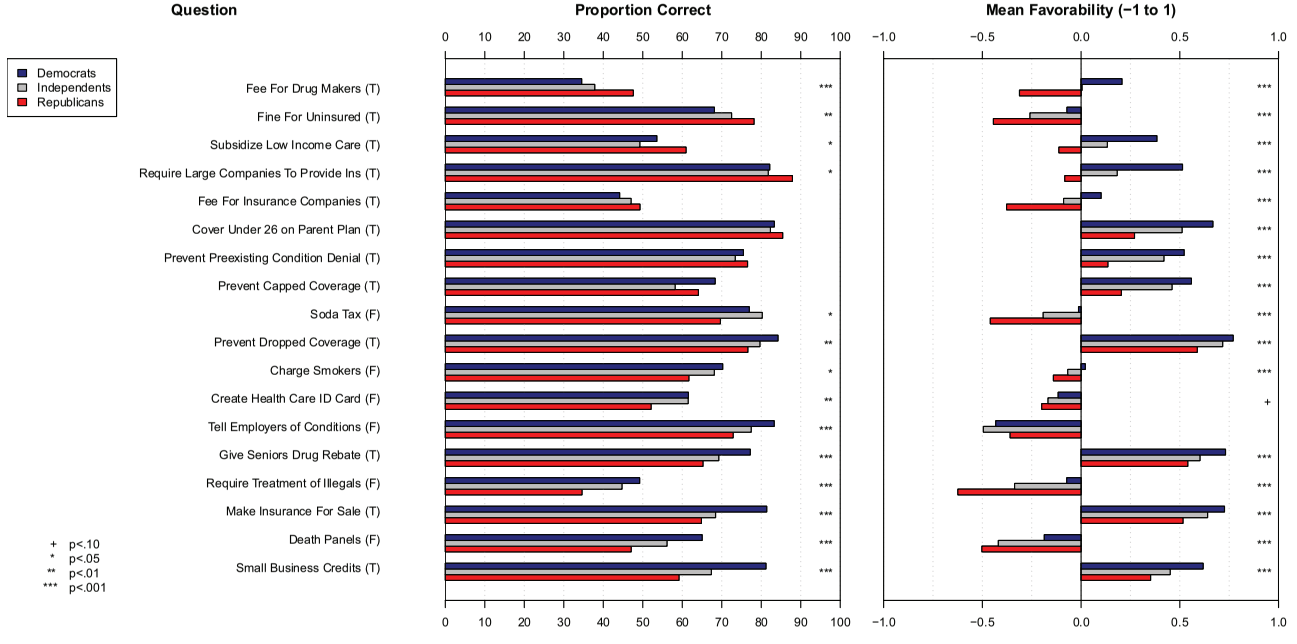
Evidence that partisan group membership shapes the evaluation process would be apparent if members of different groups manifest different overall levels of support for the bill, even after accounting for their beliefs about the components of the bill, and if the relations predicted above are notably weaker among partisans than among nonpartisans.

Results

Attitudes toward the ACA and attitudes toward the individual provisions of the law were closely associated with partisanship. Democrats were much more likely than Republicans to favor the ACA and to favor the provisions that were in the law. When we coded favorability on a –1 to 1 scale, average favorability among Republicans was –.51. Among Independents, it was –.09. And among Democrats, it was .29. Figure 1 presents awareness of the provisions in the law and favorability of those provisions by partisanship.

The belief-based model effectively predicted who would support the ACA. The influence of favoring or opposing a particular provision was far stronger

FIGURE 1
Partisan Differences in Accuracy and Favorability of Beliefs about ACA Components



NOTE: Items that were in the final law are marked with "(T)," and items not in the law are marked with "(F)."

FIGURE 2
Estimates of All Fixed and Random Effects from Linear Mixed Models

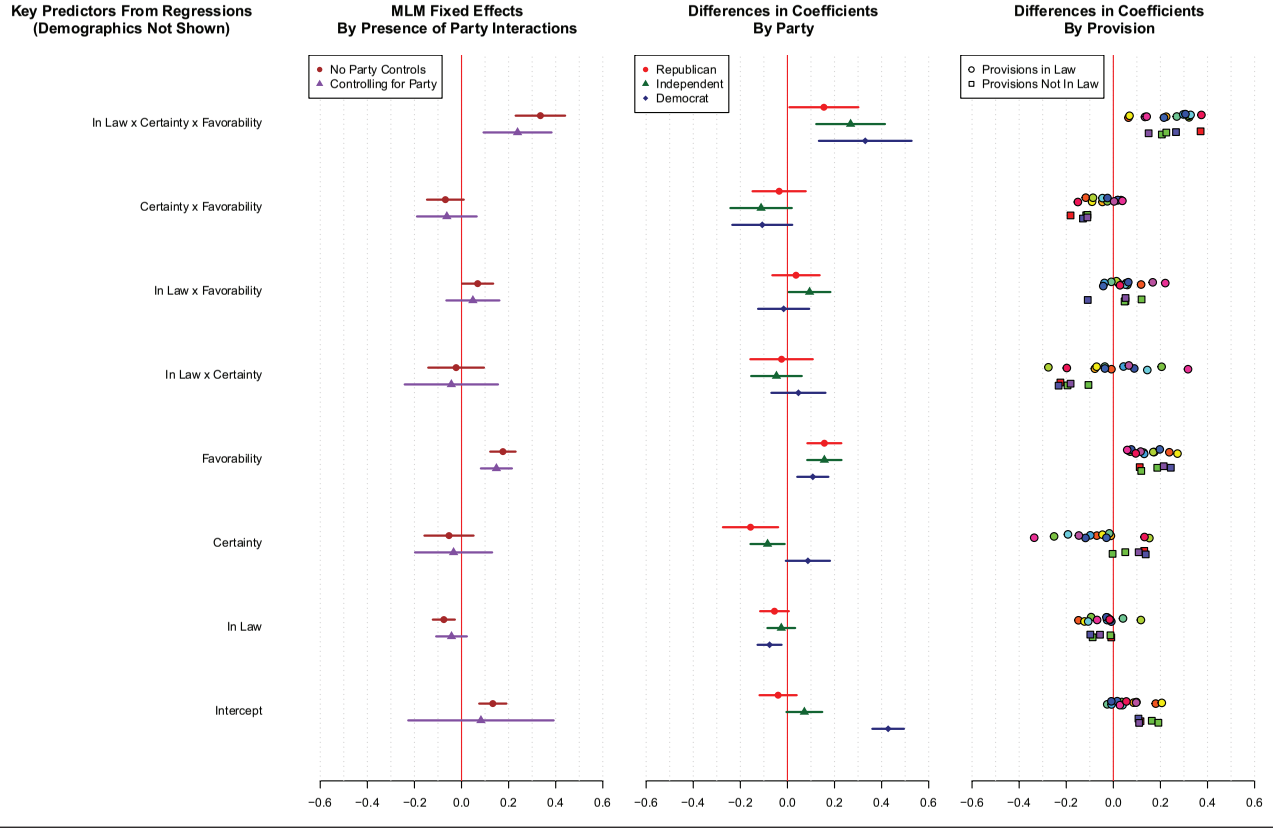
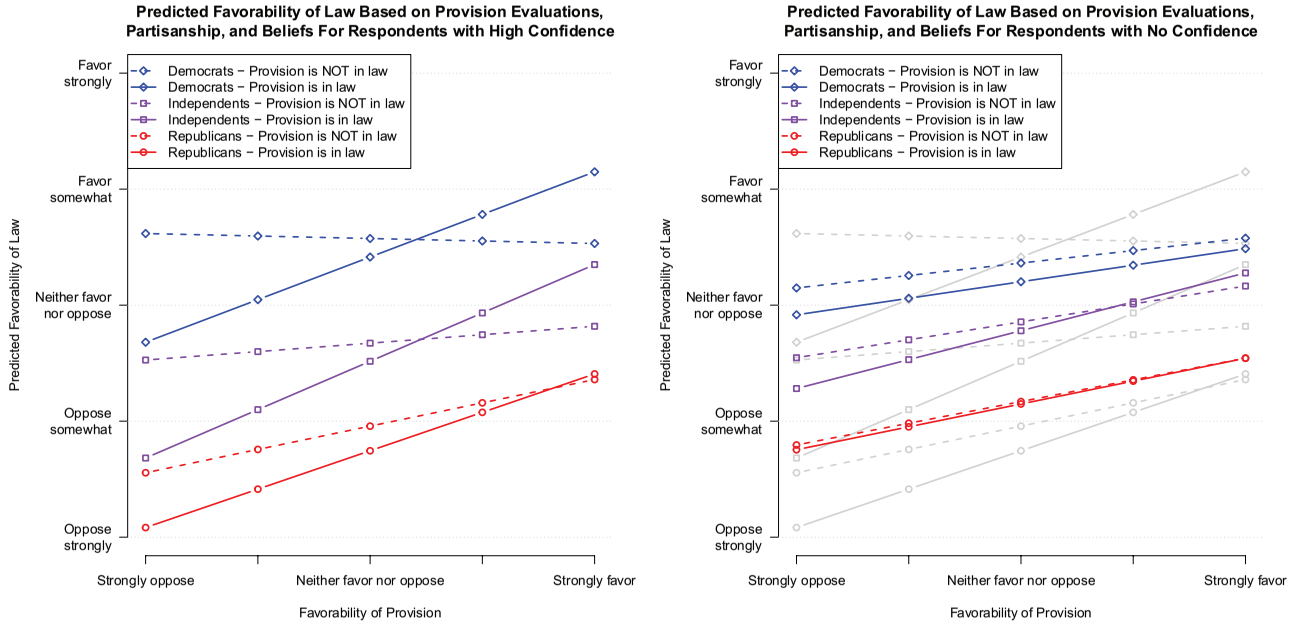


FIGURE 3
Predicted Attitudes toward the ACA Depending on Beliefs about the Content of the Law, Evaluations of Provisions of the Law, and Partisanship



when individuals were confident that that provision was in the law (Figure 2, column 1). In contrast, among individuals who thought that a provision might be in the law but were uncertain about this, the relations between the favorability toward this provision and attitudes toward the law were far weaker. Similarly, among individuals who believed that a provision was not in the law with confidence, the influence of that belief on overall attitudes toward the law was minimal. That is, respondents' evaluations about what they believed was in the law had sizable effects, whereas their evaluations of components they believed were not in the law were not particularly important.

Although partisanship shaped overall attitudes toward the law (apparent from the different intercepts in Figure 2, column 2), the roles of provision favorability, belief certainty, and beliefs about whether a particular provision was in the law were similar across partisan groups. This finding suggested that evaluations and beliefs about the components of the law had an effect that was independent of partisanship.

Figure 3 illustrates the strength of the relations between evaluations of provisions and overall attitudes, with relations for confidently held beliefs plotted on the left side and relations for beliefs that were not confidently held plotted on the right. The slopes of the solid lines on the left side show strong positive relations between provision favorability and overall assessments of the law when respondents reported high confidence that a provision was indeed in the law. The dashed lines illustrate the much weaker relations between provision favorability and overall attitudes when respondents were confident that the provision was not in the law. The lines on the right side show how these relations were far weaker when respondents were not confident (the grayed-out lines on the right side allow for direct comparisons with the high-confidence respondents).

Finally, we explored whether the results that we observed varied depending on whether each particular provision was or was not in the law. In the third column of Figure 2, we present estimates of the variation by provision derived from a series of random effects by provision. These results indicate that the relations between attitudes and summary judgments were not notably different depending on whether beliefs in question were accurate or inaccurate. The square points, denoting provisions that were not in the ACA (e.g., the square corresponding with beliefs and attitudes about purported "death panels") largely fell within the range of the coefficients observed for items that were in the ACA.

Discussion

The evidence reported here suggests that beliefs about the presence of provisions of laws, evaluations of those provisions, and the certainty with which these beliefs are held are helpful to understanding people's summary judgments. Individuals who hold favorable evaluations about what they believe is in the ACA are more likely to favor the law, especially so when a person holds a favorable belief with confidence.

These data are consistent with the notion that public support for or opposition to a public policy is a function of what people think that policy will and/or will not

do. People's beliefs about the components of the ACA closely corresponded with their attitudes toward the law, over and above partisanship. As beliefs about legislation attributes originate from information that people obtain from various sources (Fishbein and Azjen 2010), possessing accurate information and avoiding misinformation seems consequential in shaping public attitudes toward governmental policies.

Our model further highlights the importance of certainty in this process of attitude formation. Past studies that found beliefs about policy attributes played limited roles in affecting attitudes toward policies might have overlooked how the influence of beliefs is conditional on the certainty with which people hold them. As Figure 3 shows, beliefs held with and without confidence manifested very different patterns in terms of their relations with overall summary judgements. Future studies should, therefore, consider certainty of beliefs as an important factor when examining the role of beliefs in attitude formation.

This study also highlights a curious void in the literature on belief updating. Most studies on correcting misperceptions have focused on whether the action of belief updating itself was successful, that is, whether the misperception was corrected (e.g., Flynn, Nyhan, and Reifler 2017; Nyhan and Reifler 2010). Relatively few studies have looked into whether corrections altered more general attitudes associated with the updated beliefs. Because the reason for correcting misperceptions is presumably to mitigate a deleterious impact on attitude formation, future studies should investigate these downstream processes.

All research has its limitations, and our study is no exception. First, the cross-sectional nature of the data limits our ability to make causal claims. Although our results fit nicely with the notion that people use beliefs to derive summary evaluations of policies, we cannot rule out the possibility that these beliefs reflect post hoc rationalizations guided by attitudes. This seems unlikely, however, given the complexity of the model, with many moving parts, and the finding that the observed data fit well with the proposed optimization process based on a weighted linear combination of three-way multiplicative terms for eighteen distinct provisions. Second, because of the data structure, we were not able to perform the analysis with a respondent-level random effect. Future studies should leverage longitudinal data and Bayesian methods to further validate the model.

In summary, the current study provides an information-based model that enriches our understanding of the formation of attitudes toward public policy. Evidence reflecting the expectations of this model suggests that accurate information is consequential when rendering summary judgments and forming complex policy attitudes. The results thereby bolster the scientific work attempting to correct misperceptions, as doing so is likely to influence policy attitudes.

Notes

1. Because outcome measures were static for each respondent, it would be impossible to fit this model with a respondent-level random effect. For this reason, the question is one of how beliefs and attitudes

about those beliefs relate to summary judgments and whether that operates similarly across measures and partisan groups.

Supplemental Material

Supplemental material for this article is available online.

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