

Does Political Affiliation Trump Outcome Bias?

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Abstract

Research in the field of judgment and decision making has consistently shown that information pertaining to the outcome of a decision has a significant impact on people's attitudes of the decision itself. This effect is referred to as outcome bias. Data was collected from approximately equal numbers of Republicans and Democrats. Participants were presented with descriptions and outcomes of decisions made by a hypothetical politician. The decisions concerned public policies in response to the Coronavirus (COVID-19) pandemic. Participants evaluated the quality of the thinking that went into each decision. Results showed that policies that yielded successful outcomes received significantly better evaluations than policies that yielded failures. Democrats exhibited this tendency to a greater extent compared to Republicans. Conversely, Republicans exhibited a greater bias toward their own political party than did Democrats. The findings of this project are discussed within the context of classic and contemporary findings in the field of judgment and decision making.

Keywords: Outcome Bias, Hindsight Bias, Political Affiliation

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Individuals make countless decisions every day. Some decisions are trivial (i.e. what to eat) while other decisions can impact many people (i.e. public policy decisions). But how do individuals decide what makes a good or bad decision? In explaining how individuals evaluate decision quality, expected utility theory (EUT) suggests that individuals are rational and deliberate in their estimates of the options available. Good decisions generally entail greater benefits than costs. In contrast, bad decisions entail more risk and costs than benefits. However, when evaluating decision quality, decision makers are not only driven by a deliberate calculation of costs, risks, and benefits but rather they are influenced by a host of factors. For instance, research shows that the outcome of the decision has a significant effect on evaluating overall decision quality. Baron & Hershey (1988) deemed this systematic departure from the normative model *outcome bias*. The current study will examine the interactive effects of outcome bias and political affiliation on individual judgments of public policy quality.

Automatic versus Controlled Processing

In any given day, we perform a multitude of tasks. Some actions require our full attention while others may not necessarily need us to explicitly think about them whatsoever. For instance, hand-writing notes requires us to think about what exactly to write down, while other behaviors (i.e. driving a car) seem to occur without much effortful thinking. This human ability has been extensively studied and summarized in the literature on dual-process models (Bargh & Chartrand, 1999). Essentially, the dual-process model enables both explicit and implicit behavioral and cognitive processes to be employed simultaneously. Behavior depends on both the circumstances and information that are characteristic of the situation or the surrounding environment (i.e. implicit behavioral reactions) and our individual intentions and objectives

within that context (i.e. explicit cognitive reactions) (Bargh & Chartrand, 1999; Bargh, 1989; Gollwitzer & Moskowitz, 1996; Kruglanski, 1996; Kunda, 1990; Wicklund & Steins, 1996; found in Bargh & Chartrand, 1999). As is often the case, we automatically obtain information that seems to fit with our explicit goal while implicitly ignoring other, potentially relevant information. For example, an individual will remember different aspects of a person after meeting them in the context of a date (i.e. attractiveness, warmth, etc.) than when meeting them in the context of a job interview (i.e. punctuality, professionalism, etc).

The duality of how we make sense of our surroundings creates for a complicated question: how much control do we have over our thoughts and behaviors? Logan & Cowan (1984) define control (i.e. explicit processes) as intentional acts that begin with an act of will and that we have the ability to end at any time. On the other hand, automaticity lacks such a precise definition; instead, a general consensus has been reached. The lack of a definition may be, in part, due to the greater range of behaviors that are dependent on automatic functioning (i.e., memory, impression formation, decision making, intergroup relations, etc.). Generally, automatic processes are behaviors and thoughts that occur without the criteria that define controlled processes. The most important of these criteria being an 'act of will'. Another important distinction between explicit and implicit processes is one's awareness and control of the process occurring. Despite the lack of specificity in the definition, the necessity of automatic cognitive abilities is rarely debated. Baumeister & Sommer (1997) found through ego depletion studies that intentional, explicit acts only occur in rare, short occurrences throughout one's day. These occurrences were so short that Baumeister & Sommer (1997) went as far as to estimate that only 5% of our daily cognitive activity is a controlled process. This estimate leaves the rest of daily cognitive activity to automaticity, thus making the ability to implicitly process information

essential. Although automaticity creates for faster information processing, it also has been observed to yield common, systematic errors which can be readily seen within a myriad of contexts such as attention, memory, emotional appraisal, attitudes, emotional disorders, as well as judgments and decision making.

Heuristics and Biases

Faster information processing, more often than not, creates cognitive advantages. This is especially true in the decision-making process. Decisions that one makes every day, no matter how trivial, are made significantly easier by automatic cognitive shortcuts known as heuristics. However, these cognitive shortcuts commonly yield significant systematic errors (Tversky & Kahneman, 1974). Perhaps one of the most widely studied is the representativeness heuristic. Essentially, the representativeness heuristic allows categorization of ideas, behaviors, and people under uncertain probabilities. For instance, if person A participates in a behavior that is characteristic of group X, we automatically assume that person A must belong to group X. This process occurs so fast that we do it regardless of any contrary odds. Say a fair coin is flipped six times. Would it be more likely to yield a sequence of H T T H T H or a sequence of H H H T T T? Intuitively, the first sequence seems more likely. However, upon some cognitive reflection, one may realize that both sequences are equally likely. This is because each coin flip has independent odds of being heads or tails (50/50) as the flip before and the upcoming flip. The first sequence intuitively seems more likely because of the random order of the flips. In other words, because a coin flip is inherently random, we assume that it is more likely to yield a random sequence.

Just as this heuristic can lead us astray when evaluating probabilities, it can do the same when making social decisions. Kahneman & Tversky (1973) presented participants with

personality descriptions of 100 fictional, yet realistic, individuals. Of the 100 fictional individuals, 30 were engineers and 70 were lawyers (proportions were flipped for the other experimental condition). For each individual's personality description, participants were asked to signal whether they believed the individual was an engineer or a lawyer. Results produced essentially the same judgements from both treatment conditions. That is to say that participants based their decisions solely on how much the individual's personality description represented the participants' already held stereotype of each profession (Kahneman & Tversky, 1973). Participants did this to the extent that they ignored mathematical probabilities during their decision process.

**“Life can only be understood backwards; but it must be lived forwards.”
-Søren Kierkegaard**

Some cognitive shortcuts that are specifically relevant to judgments and decision making are hindsight and outcome bias. The presence of outcome knowledge has been shown to have a significant effect on how participants estimate the likelihood that the same outcome will occur again. This false feeling of having been able to foresee the outcome has been deemed 'Hindsight Bias'. Fischhoff (1975) observed the effects of hindsight bias by presenting participants with brief descriptions of a historical or a clinical event. Participants were randomly assigned to one of two treatment conditions: *Before group* versus *After group*. The *Before group* and the *After group* read identical event descriptions. The only distinction being that the *After group* participants were presented with a final sentence that presented the potential outcome as 'true'. All participants were given four possible outcomes and asked to estimate the likelihood of each of the outcomes occurring. As hypothesized, those who were given knowledge of the outcome rated the given outcome as significantly more likely to occur than those who were not given information pertaining to the outcome (Fischhoff, 1975). When given knowledge pertaining to

the outcome, the evaluator had difficulty seeing any other outcome as more likely. In other words, participants could no longer ignore this information, and thus see the ‘true’ outcome as significantly more likely than those who do not have information about the outcome.

In a subsequent demonstration, Slovic and Fischhoff (1977) observed how participants consistently created the false notion that they ‘knew it all along’ once they learned of the findings of scientific studies. Slovic and Fischhoff (1977) had participant read descriptions of studies in multiple disciplines. Some participants were told that the study will be done in the future (*foresight condition*) and others were told that the study has already been conducted (*hindsight condition*). Participants in the *foresight condition* were given two outcome options while *hindsight participants* were given two outcomes and told which had been observed as a result of the study. As hypothesized, a significant effect for hindsight bias was observed. Specifically, participants in the *foresight condition* estimated significantly lower replicability of scientific finding than those in the *hindsight condition*. Additionally, *foresight* participants estimated the probability of the ‘true’ outcome occurring significantly lower than did participants with hindsight knowledge. Slovic and Fischhoff (1977) explain how participants who were told that a study had ‘worked once before’ expected the results to be replicated. These results show that *hindsight* participants were not able to ignore the outcome knowledge. Once given information about the outcome, it seems that the participants were unable to direct their attention solely to the scientific study itself. Instead, their evaluations of the methodological quality of the study were confounded by their newfound knowledge of the results.

Exposure to the outcome of uncertain events can also influence how individuals evaluate the decision-making process itself. This effect is referred to as outcome bias (Baron & Hershey, 1988; Hawkins & Hastie, 1990). For instance, placing bets on low-probability odds would be an

objectively bad decision, even when the outcome of that decision is desirable. Take someone who places a bet on rolling snake-eyes on a pair of dice and wins. If this person were to be asked to place a similar bet again, that person is likely to want to do so because of the desirable outcome of the last wager. However, a good decision-maker would realize the odds of rolling snake-eyes a second time are still very low and would pass on the second bet. That is to say, that when one allows the outcome of a previous decision to alter their perception on their future probabilities of success, they are making a bad decision. The low probability of winning is still true despite the previous win. During the decision-making process, the deciders lack the same amount of information that is available once the consequence (i.e. outcome) of the decision has been observed. In other words when judging the quality of the decision-making process, one ought not consider whether the outcome of that decision is a success or a failure (Hammond, Keeney, & Raiffa, 1999). However, research in the field of judgement and decision-making has consistently shown that evaluators take into consideration the outcome of a decision, and not just the process of reaching said decision.

Yates, Veinott, & Patalano (2003) observed outcome bias in how participants evaluated their own past decisions. Participants were asked to remember four hard decisions they made in the past year. Specifically, they were asked to recall two good decisions and two bad decisions. Then, participants were asked *why* each decision was categorized as either 'good' or 'bad.' Overwhelmingly, the primary determinant of goodness and badness of each decision were the consequences enacted by the decision. 95% of good decisions yielded good outcomes while 89% of bad decisions yielded bad outcomes (Yates et al., 2003).

Outcome bias has been observed in contexts such as medical decisions and monetary wagers. Baron and Hershey (1988) gave participants the task of acting as an evaluator of the

decisions of others. The researchers utilized two fictional contexts: medical decisions and monetary gambling. The outcome of the decision was manipulated to be either a success or a failure. The researchers also manipulated the decision-maker: the doctor or the patient. Participants were asked to rate the quality of the decision on a seven-point scale from 'clearly correct' to 'clearly incorrect'. When the decision resulted in a successful outcome, participants evaluated the decision-making process as significantly better and rated the competence of the decision-maker higher than participants who were exposed to decisions that resulted in failure, regardless of the quality of the decision-making process itself. (Baron & Hershey, 1988). Low-quality decisions (e.g., low probability of success) can be rated as a good decision and/or good decision-making process if the outcome produced was desirable (e.g., the risk paid off). On the other hand, when a high-quality decision (e.g., high probability of success) is made that does not pay off, the decision is rated as significantly worse. Participants' ratings of the competence of the decision-maker in this condition were significantly lower, and participants were significantly less likely to be willing to allow the decision-maker to make decisions on their behalf. This effect was observed even when participants reported that the outcome should not matter.

Previous literature has examined outcome bias in a variety of contexts, such as medical decisions and monetary gambling decisions (Baron & Hershey, 1988); however, the literature has neglected to investigate how political affiliation interacts with outcome bias. For example, how might a Republican evaluator judge success and failures of a Democrat decider, and vice versa?

Political Affiliation and Ideology

The political affiliation of a policy maker ought to be irrelevant when evaluating the quality of the decision itself. However, the contemporary political environment in the United

States is highly polarized (Pew Research Center, 2017). The difference in the political attitudes between democrats and republicans has been steadily increasing. Therefore, individuals' political affiliation may shape how they evaluate policy decisions. This possibility is supported by the differing responses to the COVID-19 pandemic by Republicans and Democrats. Democrats have been observed to participate in pro-social behaviors significantly more so than Republicans. These prosocial behaviors include washing hands more often, avoiding contact with others, and self-quarantining (Gadarian, Goodman, & Pepinsky, 2020). With these findings in mind, it is an open question whether those who evaluate the potential risks and rewards, associated with political decisions, base their judgment on the decision-making process, its outcome, or the political affiliation of the decider.

The selective attention to different kinds of information, known as a bias, has been a popular subject of investigation in contemporary psychology. Broadly defined, bias refers to the tendency for people to explicitly or implicitly think in a manner that favors their own group. Viewing one's own political group in a better light is enabled by three different, yet similar, ways of utilizing information: First, people tend to focus only on information that supports their preconceived attitudes (Iyengar & Hahn, 2009; Stroud, 2008; found in Ditto et al., 2019); secondly, people tend to only remember information in support for one's preferred political group (Frenda, Knowles, Saletan, & Loftus, 2013; found in Ditto et al., 2019); and lastly, people tend to skew one's evaluations of information in a fashion that enhances one's preferred political group (Lord, Ross, & Lepper, 1979; found in Ditto et al., 2019).

Bias has been observed to be available and present in a myriad of contexts including the political realm (Ditto et al., 2019). This is especially true when determining one's favoring of a specific public policy. Participants displayed their political biases when asked to evaluate the

methodological validity of fictitious, yet realistic, studies that examined the efficacy of capital punishment in deterring future crimes. Two treatment conditions were created: one where the studies supported the efficacy of capital punishment and one where the efficacy was not supported, and rather suggested that capital punishment increased the prevalence of crime. Additionally, participants were told whether the majority of congressional Democrats or the majority of congressional Republicans were in favor of the policy. Results showed that participants evaluated the methodological validity of the study higher when it had the majority support from their own political party as compared to when the policy had the majority support of the opposing party (Lord et al., 1979). Similarly, Cohen (2003) observed that participants saw a specific welfare policy in a better light when it had the support of members from their own political party.

The Current Study

The current study will assess how the political affiliation of the evaluator interacts with outcome bias. Participants will be presented with a policy proposed either by a republican or democratic policymaker. Participants will be given all information that would be both essential and available to the policymaker in the time before the decision, including probabilities of the policy working. These policies will have either successful or not successful outcomes. It will be the participants' job to evaluate the quality of the thinking that went into the decision itself. The goal of the current study is to identify in what contexts participants succumb to outcome bias and in which they view their preferred political party in a better light, regardless of the outcome. Specifically, we hypothesize that if the political affiliation of the target policymaker matches that of the participant, outcome bias will be overpowered.

Method

Participants

Participants ($N=104$; 37 females, 1 non-disclosed) were recruited via Cloud Research, an online data collection platform, and they were compensated \$2.00 for their participation. Participants' Ages ranged from 18 to 67 years ($M = 34.62$) and majority identified as White ($N=81$). Data was only collected from United States residents due to the political context of the study and were all 18 years or older. Participants were specifically recruited based on their political affiliation via Cloud Research; however, participants were naïve of such targeted recruitment. 58 Republicans and 46 Democrats completed the study. Participants were excluded if they spent less than four minutes on the study and/or if the standard deviation (SD) of their decision evaluations was less than 3.00. Therefore, the final analyses were conducted with 92 participants; 47 Republicans and 45 Democrats.

Materials

The study was programmed online in Qualtrics XM. Stimuli contained hypothetical vignettes that were based on real-life situations and current events. Specifically, the vignettes described a public policy decision in the context of the Coronavirus pandemic of 2020. The vignettes began with information pertaining to the COVID-19 pandemic, current consequences, and potential consequences if unaddressed. The vignette then described government agencies whose aim is to aid these consequences of the pandemic. Immediately following, the vignette provided an overview of a potential public policy in response to the pandemic. For example, one vignette context describes the closure of all non-essential businesses. In addition to policy information, participants were also provided with likelihoods of the policy backfiring, thus creating an undesirable consequence. The likelihood of backfiring was kept constant through all vignettes at 8% based of pilot data collected by Baron & Hershey (1988). We manipulated the

political affiliation of the policy maker to be either Republican or Democrat, and the Outcome to be either a success or failure. Additionally, the aim of the policy was manipulated. Policies were specifically geared to help either public health or the economy. Policies could either aid in health aspects while harming economic aspects or vice versa. Control conditions were created by composing scenarios that dealt with one aspect (i.e. Health or Economic) of the pandemic and were inherently neutral to other problems. Specifically, one policy favored health issues while having no direct influence on economic issues. For instance, the facemask mandate directly benefits public health while being independent of the economy. Conversely, another vignette was geared toward aiding economic consequences while having no direct influence on public health (i.e. Stimulus checks). For a full breakdown of experimental conditions, see Table 1. For a full list of vignettes, see appendix A.

Table 1. *Experimental Conditions*

Case	Policy	Aim	Decision Maker	Outcome
1	Business Closure	Health +/Econ -	Republican	Success
2	Business Closure	Health +/Econ -	Republican	Failure
3	Business Closure	Health +/Econ -	Democrat	Success
4	Business Closure	Health +/Econ -	Democrat	Failure
5	Face Masks	Health +/Econ 0	Republican	Success
6	Face Masks	Health +/Econ 0	Republican	Failure
7	Face Masks	Health +/Econ 0	Democrat	Success
8	Face Masks	Health +/Econ 0	Democrat	Failure
9	Stimulus Checks	Health 0/Econ +	Republican	Success
10	Stimulus Checks	Health 0/Econ +	Republican	Failure
11	Stimulus Checks	Health 0/Econ +	Democrat	Success
12	Stimulus Checks	Health 0/Econ +	Democrat	Failure
13	Bail Out Airlines	Health -/Econ +	Republican	Success
14	Bail Out Airlines	Health -/Econ +	Republican	Failure
15	Bail Out Airlines	Health -/Econ +	Democrat	Success
16	Bail Out Airlines	Health -/Econ +	Democrat	Failure

Note: The 'aim' of each experimental condition refers to the focus of the vignette itself. The focus of the policy can aid (i.e. +), harm (i.e. -), or be neutral (i.e. 0) in regard to health and economic aspects.

Cases 2-4 differed from case 1 only in so that either a Republican or Democrat made the decision and the desirability of the outcome was either a 'success' or 'failure'.

Cases 5-8 paralleled the political affiliation and outcome manipulations but instead in the context of a different policy context: mandatory facemasks.

Cases 9-16 continued with this manipulation pattern in the contexts of government-funded stimulus checks and government bailouts of airline companies respectively.

The cases were presented to participants in a within-subject design. Cases were presented in an order to best separate similar contexts. The order presented was 1, 16, 6, 11, 4, 13, 10, 7, 2, 15, 12, 5, 3, 14, 9, and 8.

Procedure

Participants were tasked with acting as an evaluator of a decision in terms of public policy. Participants were given specific instructions to evaluate the decision itself and the quality of thinking that was utilized.

Upon receiving participants' informed consent, they were presented with the vignettes, one at a time. After reading each vignette, participants were asked to evaluate the decision on the following 60-point scale adapted from Baron & Hershey (1988):

- 30 = *clearly correct; the opposite decision would be inexcusable*
- 20 = *correct, all things considered*
- 10 = *correct, but the opposite decision would also be reasonable*
- 0 = *the decision made and the opposite decision are equally good*
- 10 = *incorrect, but not unreasonable*
- 20 = *incorrect, all things considered*
- 30 = *clearly incorrect; the opposite decision would be inexcusable*

Following the evaluation of all 16 decision summaries, participants were presented with three Cognitive Reflection Test (CRT) questions. These questions were used from Frederick (2005). Each question of the CRT is designed to illicit an intuitively incorrect answer that is then realized to be incorrect upon simple cognitive reflection. One of the questions read: "A bat and a ball costs \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost?"

The intuitive answer most think to the question above is 10 cents. However, upon even minor cognitive reflection, one may realize that the difference here is only 90 cents, not one dollar.

Thus, the correct answer is 5 cents.

Following completion of the CRT measure, participants were tasked with completing a Social and Economic Conservatism Scale (SECS) used from Everett (2013). The scale presents participants with a list of 14 topics, such as abortion, taxes, governing style, etc. Each topic is central to core conservatism values and ideology (for full list, see appendix B). For each topic, the participant was tasked with indicating how ‘warm’ their feelings are toward the topic on a scale of 0-100, with 0 being indicative of no warm feelings whatsoever and 100 being indicative of extremely warm feelings. Thus, a higher SECS score is indicative of higher conservative ideology, with 50 being the mid-point. This scale allows for a systematic measure of political ideology across both social and economic attitudes as opposed to self-reports.

Lastly, participants were asked to provide demographic information, including age, race, sex, income, and education via self-report.

Results

Experimental Approach

In order to test the hypothesis that political affiliation interacts with outcome bias to shape participants’ decision evaluations, the data were submitted to a 4 (Policy Type: Business Closure, Facemasks, Stimulus Checks, Government Bailout) \times 2 (Decision Maker Affiliation: Republican, Democrat) \times 2 (Outcome: Success, Failure) mixed model ANOVA, where policy type, decision maker affiliation, and outcome were within subject factors, and participants’ political affiliation was entered as a between-subjects factor.

The data revealed a significant difference in decision ratings across the four policy contexts, $F_{(3,270)} = 18.742, p < .001, \eta^2 = .172$. A significant interaction between policy and participants' own political affiliation was observed, $F_{(3,270)} = 11.699, p < .001, \eta^2 = .115$, with Democrat participants exhibiting a greater difference in decision evaluations as compared to Republican participants.

The data revealed no significant main effect for decision maker affiliation, $F_{(1,90)} = 1.066, p = .305$. No significant interactions were observed.

The data revealed a significant main effect for outcome in so that policies that resulted in successes ($M = 15.068; SE = .831$) received greater decision evaluations than did policies that resulted in failures ($M = 10.475; SE = 1.018$), $F_{(1,90)} = 25.216, p < .001, \eta^2 = .219$. Additionally, a significant interaction between outcome and participants' own political affiliation was observed, $F_{(1,90)} = 4.757, p = .032, \eta^2 = .050$ with Democrat participants exhibiting a greater difference in decision evaluations between successes and failures as compared to Republican participants.

The data revealed a significant three-way interaction between Policy, Outcome, and participants' own political affiliation, $F_{(3,270)} = 3.185, p = .024, \eta^2 = .034$. Additionally, a marginally significant three-way interaction between Policy, Outcome, and Decision Maker affiliation was observed, $F_{(3,270)} = 2.154, p = .094, \eta^2 = .023$.

Due to the observed three-way interaction between Policy, Outcome, and Participant political affiliation, decision evaluations across all four policy contexts were collapsed and another repeated measures ANOVA was conducted with the experimental design being 2 (Target Affiliation: Republican, Democrat) \times 2 (Outcome: Success, Failure).

The data revealed no significant main effects, including a lack of significant outcome bias, $F_{(1,86)} = 3.350, p = .071$. However, outcome did significantly interact with participants' own

political affiliation, $F_{(1,86)} = 4.800$, $p = .031$, $\eta^2 = .053$ with Democrats displaying a stronger tendency to take the outcome into consideration than are Republicans.

Table 2

Descriptive Statistics of Decision Evaluations

Case	Policy	Decision Maker	Outcome	<i>M</i>	<i>SD</i>
1	Business Closure	Republican	Success	17.55	9.51
2	Business Closure	Republican	Failure	12.87	12.99
3	Business Closure	Democrat	Success	15.03	13.26
4	Business Closure	Democrat	Failure	12.78	14.27
5	Face Masks	Republican	Success	16.88	11.77
6	Face Masks	Republican	Failure	12.62	14.26
7	Face Masks	Democrat	Success	16.63	13.21
8	Face Masks	Democrat	Failure	11.70	15.16
9	Stimulus Checks	Republican	Success	15.61	12.19
10	Stimulus Checks	Republican	Failure	13.23	13.72
11	Stimulus Checks	Democrat	Success	15.59	12.63
12	Stimulus Checks	Democrat	Failure	11.56	14.56
13	Bail Out Airlines	Republican	Success	10.56	13.31
14	Bail Out Airlines	Republican	Failure	15.03	13.26
15	Bail Out Airlines	Democrat	Success	9.31	14.01
16	Bail Out Airlines	Democrat	Failure	6.21	16.72

Table 3

Descriptive Statistics of Measures

Measure	Republican	Democrat
CRT	1.26 (.181)	1.53 (.190)
SECS	60.31 (1.92)	49.48 (2.10)
Social Conservatism	67.61 (2.78)	54.64 (2.72)
Economic Conservatism	57.13 (1.64)	51.10 (1.64)

Note: Mean (Standard Error)

Planned Contrasts

The data was grouped according to different policy types in order to analyze the planned contrasts within participants' political affiliation across different policy focuses. Specifically, the focus of each policy refers to whether the policy favored either health or economic aspects of the pandemic. Half of the policies were designed to aid its primary focus while containing adverse consequences to the other focus (i.e. Business closures). The other half of policies were designed

to aid its primary focus while having no direct effect on the other focus (i.e. Facemasks). Please refer to Table 1 for the full list of the aim of policies.

This grouping called for two separate repeated measures mixed model ANOVAs. The experimental design of the first being 2 (Policy Focus: Favors Health-Hurts Economy, Hurts Health-Favors Economy) \times 2 (Decision Maker Affiliation: Republican, Democrat) \times 2 (Outcome: Success, Failure) whereas the second experimental design was 2 (Policy Focus: Favors Health-Neutral to Economy, Neutral to Health-Favors Economy) \times 2 (Decision Maker Affiliation: Republican, Democrat) \times 2 (Outcome: Success, Failure).

Favor Health, Adverse to Economy versus Favor Economy, Adverse to Health

In order to analyze effects between policies that aided its primary focus while containing adverse effects on the other, a 2 (Policy Focus: Favors Health-Hurts Economy, Hurts Health-Favors Economy) \times 2 (Decision Maker Affiliation: Republican, Democrat) \times 2 (Outcome: Success, Failure) repeated measures ANOVA was conducted with Participant Affiliation entered as a between-subject factor.

The data revealed a significant main effect for policy focus, $F_{(1,90)} = 28.943$, $p < .001$, $\eta^2 = .243$, with policies that favor health aspects ($M = 14.833$, $SE = .922$) being evaluated higher than did policies favoring economic aspects ($M = 6.916$, $SE = 1.267$). The data also revealed a significant main effect for outcome, $F_{(1,90)} = 24.529$, $p < .001$, $\eta^2 = .214$, with policies yielding successes ($M = 13.314$, $SE = .879$) receiving higher evaluations than policies yielding failures ($M = 8.434$, $SE = 1.123$).

The data revealed a number of interactions. The focus of the policy interacted significantly with participants' own political affiliation, $F_{(1,90)} = 19.110$, $p < .001$, $\eta^2 = .175$, with Democrat participants evaluating policies that favor economic aspects lower as compared to

policies that favor health aspects. This effect was observed in Republican participants at a significantly lesser magnitude. Participants' own political affiliation also significantly interacted with policy outcome, $F_{(1,90)} = 7.869, p = .006, \eta^2 = .081$. Specifically, while Republican participants evaluated policies yielding failures lower than policies yielding successes, Democrat participants' decision evaluations differed significantly more between success and failures. The policy focus significantly interacted with the political affiliation of the target decision maker, $F_{(1,90)} = 4.613, p = .034, \eta^2 = .049$. Specifically, Republican decision makers received higher evaluations than did Democrat decision makers when they proposed policies that favored health aspects; this trend was flipped for policies that favored economic aspects. Lastly, the political affiliation of the target decision maker significantly interacted with the outcome, $F_{(1,90)} = 5.768, p = .018, \eta^2 = .060$, with Republican decision makers receiving higher evaluations than Democrat decision makers when the policy yielded a success but lower evaluations than Democrat decision makers when the policy yielded a failure.

Two significant three-way interactions were observed. Firstly, the policy focus, decision maker political affiliation, and participant political affiliation significantly interacted, $F_{(1,90)} = 5.227, p = .025, \eta^2 = .055$. Secondly, policy focus, outcome, and participant political affiliation significantly interacted, $F_{(1,90)} = 6.108, p = .015, \eta^2 = .064$.

Republican Evaluations

Republicans' decision evaluations did not significantly differ between health and economic aimed policies, $F_{(1,46)} = 0.698, p = .408$. However, Republican participants' decision evaluations for different policy types interacted significantly with the political affiliation of the target decision maker, $F_{(1,46)} = 7.651, p = .008, \eta^2 = .143$ with Republican decision makers receiving higher evaluations on health-related policies while evaluations in economic-related

policies did not significantly differ. The political affiliation of the target decision maker also significantly interacted with the outcome, $F_{(1,46)} = 4.271, p = .044, \eta^2 = .085$ with Republican successes receiving higher evaluations whereas Republican failures, Democrat successes, and Democrat failures all did not significantly differ from one another.

Within the context of health-related policies, Republican participants assigned the highest decision evaluations to Republican successes ($M = 16.23, SE = 1.54$) followed by Republican failures ($M = 12.21, SE = 2.07$), Democrat successes ($M = 10.74, SE = 2.32$), and Democrat failures ($M = 9.45, SE = 2.38$).

Within the context of economic-related policies, Republican participants assigned the highest evaluations to Republican successes ($M = 12.298, SE = 1.813$) followed by Democrat failures ($M = 11.234, SE = 2.162$), Democrat successes ($M = 10.617, SE = 1.837$), and Republican failures ($M = 8.553, SE = 1.931$). See figure 1.

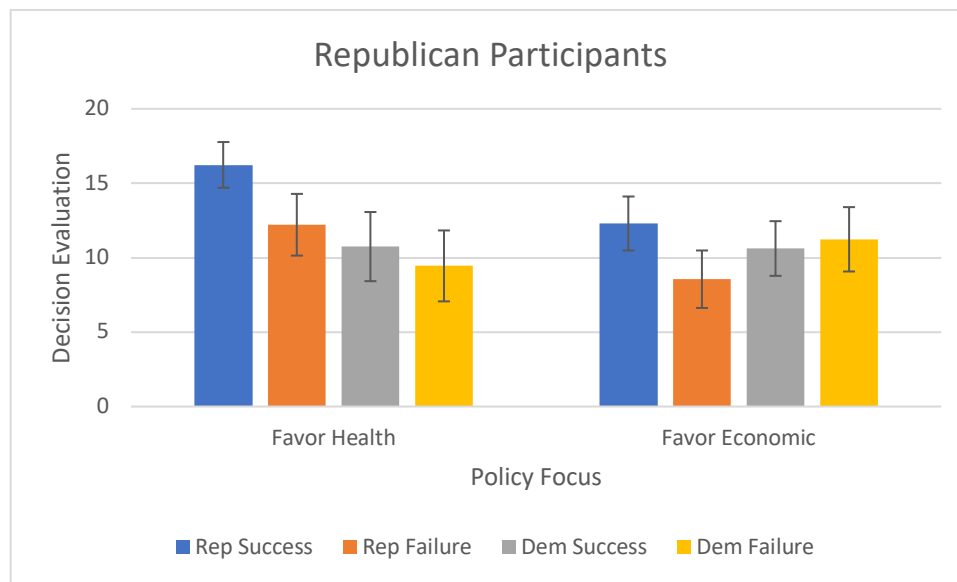


Figure 1: Mean decision evaluations as a function of policy focus and outcome of Republican participants.

Democrat Evaluations

A main effect for policy was observed with policies regarding health aspects receiving significantly greater evaluations than economic-based policies, $F_{(1,44)} = 36.746, p < .001, \eta^2 = .455$. A main effect was observed for outcome with policies that yielded successes receiving significantly greater evaluations than policies that yielded failures, $F_{(1,44)} = 26.939, p < .001, \eta^2 = .380$. The aim of the policies significantly interacted with the outcome, $F_{(1,44)} = 8.293, p = .006, \eta^2 = .159$ with failures receiving significantly lower evaluations than successes in the context of economic-related policies as compared to health-related policies.

Within the context of health-related policies, Democrat participants assigned the greatest decision evaluations to Republican successes ($M = 20.40, SE = 1.00$), followed by Democrat successes ($M = 19.99, SE = 1.31$), Democrat failures ($M = 15.40, SE = 1.84$), and Republican failures ($M = 14.24, SE = 1.71$).

Within the context of economic-related policies, Democrat participants assigned the greatest decision evaluations to Republican successes ($M = 8.78, SE = 2.17$) followed by Democrat successes ($M = 7.47, SE = 2.37$), Democrat failures ($M = -0.93, SE = 2.62$), and Republican failures ($M = -2.69, SE = 2.69$). See figure 2.

Figure 2.

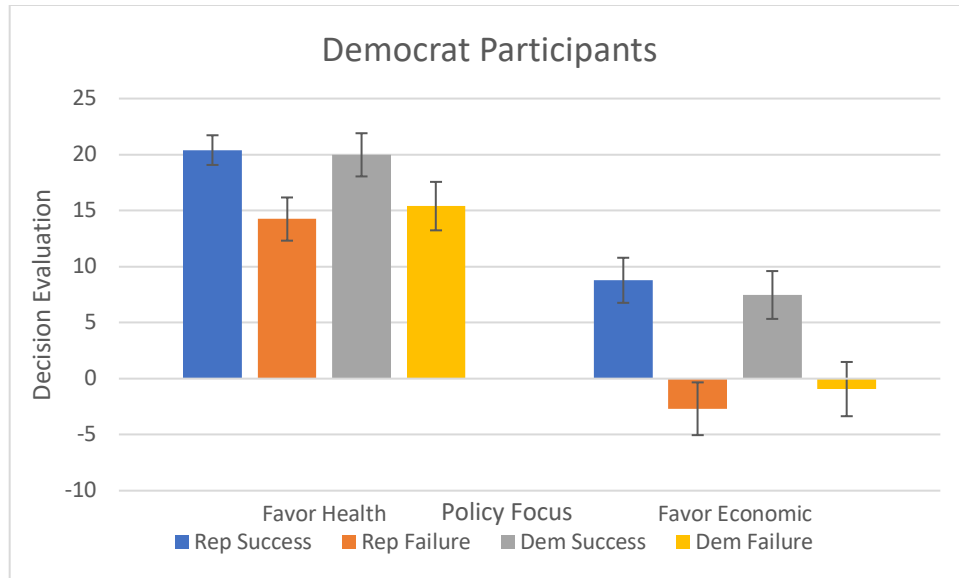


Figure 2: Mean decision evaluations as a function of policy focus and outcome of Democrat participants.

Favor Health, Neutral to Economy versus Favor Economy, Neutral to Health

In order to analyze effects between policies that aided its primary focus while containing no direct effect on the other, a 2 (Policy Focus: Favors Health-Neutral to Economy, Neutral to Health-Favors Economy) \times 2 (Decision Maker Affiliation: Republican, Democrat) \times 2 (Outcome: Success, Failure) repeated measures ANOVA was conducted with Participant Affiliation entered as a between-subject factor.

The data revealed a significant main effect for outcome, $F_{(1,90)} = 16.669, p < .001, \eta^2 = .156$, with policies yielding successes receiving higher decision evaluations than policies yielding failures.

Discussion

The current study found that outcome bias interacted significantly with participants' political affiliation. The outcome of a public policy decision mattered more so to Democrats than to Republicans, whereas the political affiliation of the decision maker mattered more so to Republicans than to Democrats. Democrats exhibited outcome bias tendencies to a far greater

degree than did Republican participants. Specifically, we observed that the mean difference between Democrat participants' evaluations of policies yielding successes as compared to policies yielding failures was far greater than that for Republican participants. On the other hand, Republican participants more so exhibited political bias than did Democrat participants. In other words, both self-identified Republican and Democrat participants evaluated decisions made by a decision maker of the same affiliation as themselves higher than decisions made by a decision maker of the opposing party. However, Republican participants did this to a greater magnitude than did Democrat participants.

This pattern of results replicates the findings of Baron & Hershey (1988) showing that people take the outcome into consideration when evaluating decision quality. Specifically, when participants were presented with decision summaries that yielded successful outcomes, they rated the decision quality significantly higher as compared to decision summaries that yielded failures. Participants demonstrated this behavior despite identical probabilities of success across all 16 cases. The results and findings were consistent with Baron & Hershey (1988) in so that we observed a significant effect of outcome bias. Additionally, the current study extended these findings into a novel context: Public policy decisions.

As previously discussed, a significant effect of outcome bias was observed; consistent with the findings of Baron & Hershey (1988). However, contrary to Baron & Hershey (1988), an overwhelming majority of participants (75 of 92 participants) stated that the outcome *should* matter when evaluating decision quality. This suggest that outcome bias may not be an unintentional deviation from the normative model (i.e. EUT), as are most biases, but rather a lack of awareness of the logical fallacy involved with taking the outcome into consideration during decision evaluations.

Generally, participants rated the Business Closure ($M = 14.77$), Stimulus Check ($M = 14.27$), and Facemasks mandate ($M = 14.97$) policies similar. However, participants rated the Airline Bailout ($M = 6.99$) policy much lower. It is readily apparent that both Democrat and Republican participants did not like the idea of a government-funded bailout of a private company. The type of policy interacted with participants' own political affiliation in so that the ratings of different policies depended on the affiliation of the participant, with Democrats rating all four policies significantly higher than did Republicans.

In this sample, we found no evidence to support the hypothesis that political ideology influences how we evaluate public policy decisions. SECS scores, including subscales, yielded no significant correlations with the combined factors of Republican Success, Republican Failure, Democrat Success, and Democrat Failure. This suggests that our evaluations of political decisions are influenced more so by in-group political preferences (i.e. Republican or Democrat) rather than political ideology (i.e. Conservative or Liberal).

Overall, we observed that the outcome mattered much more to Democrats than it did to Republicans. However, Republicans cared more so about *who* made the decision than did Democrats. In other words, Democrats succumbed to outcome bias more so than Republicans while Republicans displayed behaviors more so consistent with political bias.

The policy summaries were presented to participants as hypothetical scenarios. Nonetheless, the contexts of each scenario were based upon real events and public policy decisions. The consequences of which the majority of the general public had already experienced either directly or indirectly. This leaves the possibility of participants' prior knowledge of policies, and their respective results, influencing their decision summaries more so than the summary presented to them during the study. The only policy that has not been put in place in

reality is the airline bail out. All others have been implemented in response of the Coronavirus (COVID-19) pandemic and commonly discussed among major news outlets.

Additionally, the current study did not include an attention/accuracy check. Future research may benefit from utilizing a form of attention/accuracy checks, especially if such study is conducted via an online data collection platform as was the current study.

Covariate measures such as CRT, Social Conservatism, and Economic Conservatism were collected. General linear models including such measures produced several significant interactions with independent factors such as outcome and participant affiliation. However, due to limitations in power, these results are not reported. Thus, covariates in the current study are mostly for exploratory purposes.

Future research may benefit from utilizing these covariate measures as a form of targeted recruitment to examine more granular effects within political affiliation groups. For instance, examining the effect of outcome bias between those who score one out of three on the CRT measure and those who score three out of three, and performing these analyses within the bounds of specific political affiliations.

A within-subject design was chosen in order to mimic Baron & Hershey (1988) for replication purposes. However, as Baron & Hershey (1988) mention, a within-subject design limits the magnitude of our findings due to the inherent possibility of participants remembering similar public policy decisions. With this, future research may benefit from a between-subject design. Despite the increased cost due to the need for a greater sample size and the decreased probability of distinguishing small effects from random error (Baron & Hershey, 1988), the increased magnitude of potential findings may be beneficial. Additionally, future research may benefit from avoiding the use of public policies that have recently been implemented in real-

world situations. By using older, yet relevant, policies or possibly even policies that are fictional altogether, future research may be able to decrease the possibility of participants allowing their already held attitude toward the policy to influence their decision evaluations. Lastly, due to the lack of importance of political ideology in the current study, future research may benefit from targeted recruitment of participants in terms of political ideology instead of political affiliation.

The current findings also carry practical implications. Here we provide evidence of how cognitive factors (i.e. evaluating decision-making) may influence citizens' impressions of political figures. This study joins others in offering understanding of how people's impressions of politicians can be shaped. Similarly, Kinder (1978) found that voters' sentiment toward political figures was a significant predictor of their attitudes toward that particular politician. Specifically, those who viewed a politician positively also viewed that same politician as enabling public policy that aligned with the participants' views. This same effect was true when the politician was viewed negatively; however, at a lesser magnitude. This being said, the decisions politicians make on a daily basis could have an indirect effect on overall approval ratings and their likeliness for re-election through the mediating variable of sentiment.

The current study replicated the observed effects of outcome bias in a novel context: public policy decisions. These findings suggest that we are susceptible to logical fallacies not only in trivial decisions, but also when evaluating extremely consequential choices. Additionally, we observed that one's political affiliation seems to serve as an in-group preference and has a meaningful influence on our decision evaluations. These logical fallacies observed provide additional evidence of the limitations of Expected Utility Theory and current theories of how we make, and evaluate, decisions.

References

- Bargh, J. A. (1989). Conditional automaticity: Varieties of automatic influence in social perception and cognition. In J. S. Uleman & J. A. Bargh (Eds.), *Unintended thought* (pp. 3-51), New York: Guilford Press.
- Bargh, J. A., & Chartrand, T. L. (1999). The Unbearable Automaticity of Being. *American Psychological Association*, 54(7), 462-479,
- Baron, J., & Hershey, J. C. (1988). Outcome bias in decision evaluation. *Journal of Personality and Social Psychology*, 54(4), 569–579.
- Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology*, 74, 1252-1265.
- Baumeister, R. F., & Sommer, K. L. (1997). Consciousness, free choice, and automaticity. In R. S. Wyer, Jr. (Ed.), *Advances in social cognition* (Vol. X, pp. 75-81). Mahwah, NJ: Erlbaum.
- Cohen, G. L. (2003). Party over policy: The dominating impact of group influence on political beliefs. *Journal of Personality and Social Psychology*, 85, 808-822.
- Ditto, P. H, Liu, B. S., Clark, C. J., Wojcik, S. P., Chen, E. E., Grady, R. H., Celniker, J. B., & Zinger, J. F. (2019). At least bias is bipartisan: A meta-analytic comparison of partisan bias in liberals and conservatives. *Perspectives on Psychological Science*, 14, 2, 273-291.
- Fischhoff, B. (1975). Hindsight is not equal to foresight: The effect of outcome knowledge on judgment under uncertainty. *Journal of Experimental Psychology: Human Perception and Performance*, 1(3), 288-299. <https://doi.org/10.1037/0096-1523.1.3.288>
- Frenda, S. J., Knowles, E. D., Saletan, W., & Loftus, E. F. (2013). False memories of fabricated

- political events. *Journal of experimental social psychology*, 49, 280-286.
- Gollwitzer, P. M., & Moskowitz, G. (1996). Goal effects on thought and behavior. In E. T. Higgins & A. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 361-399). New York: Guilford Press.
- Hammond, J. S., Keeney, R. L., & Raiffa, H. (1999). *Smart choices*. Boston: Harvard Business School Press.
- Hawkins, S. A., & Hastie, R. (1990). Hindsight: Biased judgments of past events after the Outcomes are known. *Psychological Bulletin*, 107(3), 311-327.
doi:10.1037/0033-2909.107.3.311
- Iyengar, S., & Hahn, K. S. (2009). Red media, blue media: Evidence of ideological selectivity in media use. *Journal of Communication*, 59, 19-39.
- Kahneman, D. & Tversky, A. (1973). On the psychology of prediction. *Psychological Review*, 80, 237.
- Kinder, D. R. (1978). Political person perception: The asymmetrical influence of sentiment and choice on perceptions of presidential candidates. *Journal of Personality and Social Psychology*, 36, 859-871.
- Kruglanski, A. W. (1996). Motivated social cognition: Principles of the interface. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 493-520). New York: Guilford Press.
- Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin*, 108, 480-498.
- Kushner Gadarian, S. Goodman, S. W., & Pepinsky, T. B. (2020). *Partisanship, Health Behavior, and Policy Attitudes in the Early Stages of the COVID-19 Pandemic*. Rochester, NY: Social Science Research Network; 2020.

- Lord, C. G., Ross, L., & Lepper, M. R. (1979). Biased assimilation and attitude polarization: The effects of prior theories on subsequently considered evidence. *Journal of Personality and Social Psychology, 37*, 2098-2109.
- Logan, G. D., & Cowan, W. B. (1984). On the ability to inhibit thought and action: A theory of an act of control. *Psychological Review, 91*, 295-327.
- Muraven, M., Tice, D. M., & Baumeister, R. F. (1998). Self-control as limited resource: Regulatory depletion patterns. *Journal of Personality and Social Psychology, 74*, 774-789.
- Pew Research Center (2017). The shift in the American public's political values: Political Polarization, 1994-2017. Doi: <https://www.pewresearch.org/politics/interactives/politicalpolarization-1994-2017/>.
- Rogers, C. (1951). *Client-centered therapy: Its current practice, Implications, and theory*. Boston: Houghton-Mifflin.
- Siovic, P., Fischhoff, B. (1977). On the Psychology of Experimental Surprises. *J. Exp. Psychol. Human Perception Performance 3*:544-5 1
- Stroud, N. J. (2008). Media use and political predispositions: Revisiting the concept of selective exposure. *Political behavior, 30*, 341-366.
- Tverski, A. & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases. *Science, 185*, 4157, 1124-1131.
- Wicklund, R. A., & Steins, G. (1996). Person perception under pressure: When motivation brings about egocentrism. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action* (pp. 511-528). New York: Guilford Press.
- Yates, J. F., Veinott, E. S., & Patalano, A. L. (2003). Hard decisions, bad decisions: On decision

quality and decision aiding. In S. L. Schneider & J. C. Shanteau (Eds.), *Emerging perspectives on judgment and decision research* (pp. 13-63). New York: Cambridge University Press.

Appendix A: Vignettes

Case 1: The U.S. is currently experiencing the outbreak of Coronavirus Disease 2019 (COVID-19). The pandemic has infected 2.15 million people and killed more than 118 thousand individuals, as of the middle of June 2020. If unaddressed, the pandemic is likely to affect more than 290 million Americans, of which 16 million are likely to die from the disease. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at containing and eradicating the virus. One of the policies under consideration is the closing of all non-essential businesses, such as bars, restaurants, sport events, concerts, and retailers. Doing so is expected to greatly reduce the spread of the virus until a vaccine is discovered. However, it is estimated that there is an 8% chance that adopting these measures will fail to reduce the spread of the virus, and it will nonetheless damage the economy for years to come. A Republican politician, Cameron Jones, is a strong proponent of this policy. Based on these analyses and recommendations, the Task Force went ahead with closing the economy. The policy succeeded. The spread of the virus was greatly reduced while researchers worked on inventing a vaccine.

Case 2: The U.S. is currently experiencing the outbreak of Coronavirus Disease 2019 (COVID-19). The current outbreak brought severe negative consequences for the economy. Domestic and International air travel have been most adversely affected during the pandemic, leaving airline companies on the verge of bankruptcy. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is financially bailing-out the airlines. Doing so is expected to save the airline companies and stimulate the economy, because the airlines employ a lot of people. However, it is estimated that there is an 8% chance that bailing out the airlines and allowing them to operate will drastically increase the spread of the virus while also leading to significant budget deficits and increases in the national debt. A Democrat politician, Cameron Jones, is a strong proponent of this policy. Based on these analyses and recommendations, the U.S. government went ahead with a full bail-out for airline companies. The policy failed. Airline companies continued with financial troubles and several went bankrupt anyway while also increasing the spread of the virus.

Case 3: The U.S. is currently experiencing the outbreak of Coronavirus Disease 2019 (COVID-19). The pandemic has infected 2.15 million people and killed more than 118 thousand individuals, as of the middle of June 2020. If unaddressed, the pandemic is likely to affect more than 290 million Americans, of which 16 million are likely to die from the disease. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is creating a mandate to wear face coverings while inside public spaces. Doing so is expected to greatly reduce the spread of the virus until a vaccine is discovered. However, it is estimated that there is an 8% chance that adopting these measures will fail to reduce the spread of the virus, and it will lead to the public panic-buying facemasks, thus decreasing the supply for doctors, nurses, and first responders. A Republican politician, Cameron Jones, is a strong proponent of this policy. Based on his analyses and recommendations, the Task Force went ahead with a mandate for face coverings. The policy failed. The spread of the virus was not greatly reduced while researchers worked on inventing a vaccine.

Case 4: The U.S. is currently experiencing the outbreak of Coronavirus Disease (COVID-19). The current outbreak brought severe negative consequences for the economy, where 38.6 million Americans have filed for unemployment benefits since March. As a result, the entire economy has slowed down significantly. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is administering \$1200 stimulus checks to individuals who are not claimed as dependents. Doing so is expected to greatly reduce the financial burden for citizens and stimulate the economy. However, it is estimated that there is an 8% chance that adopting these measures will fail to stimulate the economy, and it will lead to significant budget deficits and increases in the national debt. A Democrat politician, Cameron Jones, is a strong proponent of this policy. Based on these analyses and recommendations, the U.S. government went ahead with distributing stimulus checks. The policy succeeded. Those impacted by negative financial burdens were greatly helped by the stimulus checks, thus stimulating the economy.

Case 5: The U.S. is currently experiencing the outbreak of Coronavirus Disease 2019 (COVID-19). The pandemic has infected 2.15 million people and killed more than 118 thousand individuals, as of the middle of June 2020. If unaddressed, the pandemic is likely to affect more than 290 million Americans, of which 16 million are likely to die from the disease. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is the closing of all non-essential businesses, such as bars, restaurants, sport events, concerts, and retailers. Doing so is expected to greatly reduce the spread of the virus until a vaccine is discovered. However, it is estimated that there is an 8% chance that adopting these measures will fail to reduce the spread of the virus, but, nonetheless, it will damage the economy for years to come. A Democrat politician, Cameron Jones, is a strong proponent of this policy. Based on his analyses and recommendations, the Task Force went ahead with closing the economy. The policy failed. The spread of the virus was not greatly reduced while researchers worked on inventing a vaccine.

Case 6: The U.S. is currently experiencing the outbreak of Coronavirus Disease 2019 (COVID-19). The current outbreak brought severe negative consequences for the economy. Domestic and International air travel have been most adversely affected during the pandemic, leaving airline companies on the verge of bankruptcy. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is financially bailing-out the airlines. Doing so is expected to save the airline companies and stimulate the economy, because

the airlines employ a lot of people. However, it is estimated that there is an 8% chance that bailing out the airlines and allowing them to operate will drastically increase the spread of the virus while also leading to significant budget deficits and increases in the national debt. A Republican politician, Cameron Jones, is a strong proponent of this policy. Based on these analyses and recommendations, the U.S. government went ahead with a full bail-out for airline companies. The policy succeeded. Airline companies were able to stay in business without increasing the spread of the virus.

Case 7: The U.S. is currently experiencing the outbreak of Coronavirus Disease (COVID-19). The current outbreak brought severe negative consequences for the economy, where 38.6 million Americans have filed for unemployment benefits since March. As a result, the entire economy has slowed down significantly. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is administering \$1200 stimulus checks to individuals who are not claimed as dependents. Doing so is expected to greatly reduce the financial burden for citizens and stimulate the economy. However, it is estimated that there is an 8% chance that adopting these measures will fail to stimulate the economy, and it will lead to significant budget deficits and increases in the national debt. A Republican politician, Cameron Jones, is a strong proponent of this policy. Based on these analyses and recommendations, the U.S. government went ahead with distributing stimulus checks. The policy failed. Those impacted by negative financial burdens were not helped by the stimulus checks, thus not stimulating the economy.

Case 8: The U.S. is currently experiencing the outbreak of Coronavirus Disease (COVID-19). The current outbreak brought severe negative consequences for the economy, where 38.6 million Americans have filed for unemployment benefits since March. As a result, the entire economy has slowed down significantly. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is administering \$1200 stimulus checks to individuals who are not claimed as dependents. Doing so is expected to greatly reduce the financial burden for citizens and stimulate the economy. However, it is estimated that there is an 8% chance that adopting these measures will fail to stimulate the economy, and it will lead to significant budget deficits and increases in the national debt. A Republican politician, Cameron Jones, is a strong proponent of this policy. Based on these analyses and recommendations, the U.S. government went ahead with distributing stimulus checks. The policy failed. Those impacted by negative financial burdens were not helped by the stimulus checks, thus not stimulating the economy.

Case 9: The U.S. is currently experiencing the outbreak of Coronavirus Disease 2019 (COVID-19). The pandemic has infected 2.15 million people and killed more than 118 thousand individuals, as of the middle of June 2020. If unaddressed, the pandemic is likely to affect more than 290 million Americans, of which 16 million are likely to die from the disease. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is the closing of all non-essential businesses, such as bars, restaurants, sport events, concerts, and retailers. Doing so is expected to greatly reduce the spread of the virus until a vaccine is discovered. However, it is estimated that there is an 8% chance that adopting these measures will fail to reduce the spread of the virus, but, nonetheless, it will damage the economy for years to come. A Republican politician, Cameron Jones, is a strong proponent of this policy. Based on his analyses and recommendations, the Task Force went ahead with closing the economy. The policy failed. The spread of the virus was not greatly reduced while researchers worked on inventing a vaccine.

Case 10: The U.S. is currently experiencing the outbreak of Coronavirus Disease 2019 (COVID-19). The pandemic has infected 2.15 million people and killed more than 118 thousand individuals, as of the middle of June 2020. If unaddressed, the pandemic is likely to affect more than 290 million Americans, of which 16 million are likely to die from the disease. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is the closing of all non-essential businesses, such as bars, restaurants, sport events, concerts, and retailers. Doing so is expected to greatly reduce the spread of the virus until a vaccine is discovered. However, it is estimated that there is an 8% chance that adopting these measures will fail to reduce the spread of the virus, but, nonetheless, it will damage the economy for years to come. A Republican politician, Cameron Jones, is a strong proponent of this policy. Based on his analyses and recommendations, the Task Force went ahead with closing the economy. The policy failed. The spread of the virus was not greatly reduced while researchers worked on inventing a vaccine.

Case 11: The U.S. is currently experiencing the outbreak of Coronavirus Disease (COVID-19). The current outbreak brought severe negative consequences for the economy, where 38.6 million Americans have filed for unemployment benefits since March. As a result, the entire economy has slowed down significantly. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is administering \$1200 stimulus checks to individuals who are not claimed as dependents. Doing so is expected to greatly reduce the financial burden for citizens and stimulate the economy. However, it is estimated that there is an 8% chance that adopting these measures will fail to stimulate the economy, and it will lead to significant budget deficits and increases in the national debt. A Democrat politician, Cameron

Jones, is a strong proponent of this policy. Based on these analyses and recommendations, the U.S. government went ahead with distributing stimulus checks. The policy failed. Those impacted by negative financial burdens were not helped by the stimulus checks, thus not stimulating the economy.

Case 12: The U.S. is currently experiencing the outbreak of Coronavirus Disease 2019 (COVID-19). The pandemic has infected 2.15 million people and killed more than 118 thousand individuals, as of the middle of June 2020. If unaddressed, the pandemic is likely to affect more than 290 million Americans, of which 16 million are likely to die from the disease. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is creating a mandate to wear face coverings while inside public spaces. Doing so is expected to greatly reduce the spread of the virus until a vaccine is discovered. However, it is estimated that there is an 8% chance that adopting these measures will fail to reduce the spread of the virus, and it will lead to the public panic-buying facemasks, thus decreasing the supply for doctors, nurses, and first responders. A Republican politician, Cameron Jones, is a strong proponent of this policy. Based on his analyses and recommendations, the Task Force went ahead with a mandate for face coverings. The policy succeeded. The spread of the virus was greatly reduced while researchers worked on inventing a vaccine.

Case 13: The U.S. is currently experiencing the outbreak of Coronavirus Disease 2019 (COVID-19). The pandemic has infected 2.15 million people and killed more than 118 thousand individuals, as of the middle of June 2020. If unaddressed, the pandemic is likely to affect more than 290 million Americans, of which 16 million are likely to die from the disease. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is the closing of all non-essential businesses, such as bars, restaurants, sport events, concerts, and retailers. Doing so is expected to greatly reduce the spread of the virus until a vaccine is discovered. However, it is estimated that there is an 8% chance that adopting these measures will fail to reduce the spread of the virus, but, nonetheless, it will damage the economy for years to come. A Democrat politician, Cameron Jones, is a strong proponent of this policy. Based on his analyses and recommendations, the Task Force went ahead with closing the economy. The policy succeeded. The spread of the virus was greatly reduced while researchers worked on inventing a vaccine.

Case 14: The U.S. is currently experiencing the outbreak of Coronavirus Disease 2019 (COVID-19). The current outbreak brought severe negative consequences for the economy. Domestic and

International air travel have been most adversely affected during the pandemic, leaving airline companies on the verge of bankruptcy. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is financially bailing-out the airlines. Doing so is expected to save the airline companies and stimulate the economy, because the airlines employ a lot of people. However, it is estimated that there is an 8% chance that bailing out the airlines and allowing them to operate will drastically increase the spread of the virus while also leading to significant budget deficits and increases in the national debt. A Republican politician, Cameron Jones, is a strong proponent of this policy. Based on these analyses and recommendations, the U.S. government went ahead with a full bail-out for airline companies. The policy failed. Airline companies continued with financial troubles and went bankrupt anyway while also increasing the spread of the virus.

Case 15: The U.S. is currently experiencing the outbreak of Coronavirus Disease (COVID-19). The current outbreak brought severe negative consequences for the economy, where 38.6 million Americans have filed for unemployment benefits since March. As a result, the entire economy has slowed down significantly. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is administering \$1200 stimulus checks to individuals who are not claimed as dependents. Doing so is expected to greatly reduce the financial burden for citizens and stimulate the economy. However, it is estimated that there is an 8% chance that adopting these measures will fail to stimulate the economy, and it will lead to significant budget deficits and increases in the national debt. A Republican politician, Cameron Jones, is a strong proponent of this policy. Based on these analyses and recommendations, the U.S. government went ahead with distributing stimulus checks. The policy succeeded. Those impacted by negative financial burdens were greatly helped by the stimulus checks, thus stimulating the economy.

Case 16: The U.S. is currently experiencing the outbreak of Coronavirus Disease 2019 (COVID-19). The pandemic has infected 2.15 million people and killed more than 118 thousand individuals, as of the middle of June 2020. If unaddressed, the pandemic is likely to affect more than 290 million Americans, of which 16 million are likely to die from the disease. The U.S. government has created a national bipartisan COVID-19 Task Force, whose aim is to develop public and health policy aimed at mitigating the negative effects of the virus. One of the policies under consideration is creating a mandate to wear face coverings while inside public spaces. Doing so is expected to greatly reduce the spread of the virus until a vaccine is discovered. However, it is estimated that there is an 8% chance that adopting these measures will fail to reduce the spread of the virus, and it will lead to the public panic-buying facemasks, thus decreasing the supply for doctors, nurses, and first responders. A Democrat politician, Cameron Jones, is a strong proponent of this policy. Based on his analyses and recommendations, the Task

Force went ahead with a mandate for face coverings. The policy failed. The spread of the virus was not greatly reduced while researchers worked on inventing a vaccine.

Appendix B

CRT Questions

1. “A bat and ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost?”
2. “If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?”
3. “In a lake, there is a patch of lily pads. Everyday, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half the lake?”

SECS Scale Topics

1. Abortion
2. Welfare benefits (reverse scored)
3. Tax
4. Immigration
5. Limited Government
6. Military and National Security
7. Religion
8. Gun Ownership
9. Traditional Marriage
10. Traditional Values
11. Fiscal Responsibility
12. Business
13. The Family Unit
14. Patriotism