The Belief in a Favorable Future

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To cite:
Rogers, T., Moore, D. A., & Norton, M. I. (2017). The Belief in a Favorable Future. Psychological Science , 28 (9), 1290-1301.

Abstract
People believe that future others' preferences and beliefs will change to align with their own. People holding a particular view (e.g., support of President Trump) are more likely to believe that future others will share their view than to believe that future others will have an opposing view (e.g., opposition to President Trump). Six studies demonstrated this belief in a favorable future (BFF) for political views, scientific beliefs, and entertainment and product preferences. BFF is greater in magnitude than the tendency to believe that current others share one's views (false-consensus effect), arises across cultures, is distinct from general optimism, is strongest when people perceive their views as being objective rather than subjective, and can affect (but is distinct from) beliefs about favorable future policy changes. A lab experiment involving monetary bets on the future popularity of politicians and a field experiment involving political donations (N = 660,542) demonstrated that BFF can influence people's behavior today.

Keywords
social cognition, judgment, prediction, forecasting, false consensus, donation, open data, open materials, preregistered

Received 12/18/16; Revision accepted 4/3/17

The authors of *One Party Country: The Republican Plan for Dominance in the 21st Century* (Hamburger & Wallsten, 2006) questioned whether Democrats would "slip into the status of a permanent, carping minority" (p. 4). Meanwhile, the author of another book, *40 More Years: How the Democrats Will Rule the Next Generation* (Carville, 2009), imagined the exact opposite future. How could these beliefs about the future be so discrepant? The first book was written by Republicans, the second by Democrats; the authors of these two books differ profoundly in their current partisan preferences. We argue that this current difference contributes to their divergent beliefs that the future will unfold in ways that benefit their partisan (and mutually exclusive) interests.

The phenomenon of people believing that others will eventually come to share their views and preferences can explain a host of phenomena, from the high frequency with which government officials "kick the can down the road" on important issues ("There will be more legislators in the future who will agree with my solutions") to the low frequency of people's engagement with political advocacy (e.g., "I don't need to attend that pro-same-sex marriage rally; same-sex marriage will be legal in 10 years anyway"), and from people's willingness to stay in organizations with which they disagree ("The Church's views will evolve to align with my values") to people's reluctance to end troubled relationships ("My partner will agree with me more in the future")

We propose that people tend to hold a *belief in a favorable future (BFF)*—a belief that future others' preferences and beliefs will change to align with their own. That is, people who hold a particular view (e.g., support of President Trump) are more likely to believe that future others will share their view than to believe that future others will have an opposing view (e.g., opposition to President Trump). Our conceptualization and hypotheses draw on two bodies of research: forecasting and naive realism. First, generally speaking, people tend to be worse at forecasting events than they believe themselves to be (Tetlock, 2005). In addition, people lean toward optimism about their distant futures (Gilovich, Kerr, & Medvec, 1993; Krizan & Windschitl, 2009; Simmons & Massey, 2012; but see Harris & Hahn, 2011). We propose—and demonstrate in the studies presented in this article—that BFF is a psychologically distinct form of optimism about the social world, different from dispositional optimism as well as optimism about specific good outcomes happening for oneself.

Second, we draw on three tenets of naive realism: (a)

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Table 1. Abbreviated Versions of Belief-in-a-Favorable-Future Questions From Study 1

Issue	Current view	Belief about the future
Abortion	Should legal abortions be easier or harder for a woman to have?	In 20 years, will more Americans prefer for legal abortions to be easier or harder?
Same-sex marriage	Should same-sex marriage be easier or harder?	In 20 years, will more Americans prefer for same-sex marriage to be easier or harder?
Anthropogenic climate change	Are humans causing global temperature changes or not?	In 20 years, will more or fewer Americans believe humans are causing global temperature changes?
Political ideology	Are you politically liberal, moderate, or conservative?	In 20 years, will a larger or smaller proportion of Americans be politically [answer to current-view question]?
Party affiliation	Are you a Democrat, Republican, or Independent?	In 20 years, will a larger or smaller proportion of Americans be politically [answer to current-view question]?
Support for President Trump	Do you support President Trump?	In one year, will Trump support increase or decrease?
National Basketball Association (NBA)	Are you a fan of the NBA or not?	In five years, will more or fewer Americans be fans of the NBA?
Soda	Do you prefer Coca-Cola or Pepsi?	In 20 years, will more people prefer Coca-Cola over Pepsi, or will more prefer Pepsi over Coca-Cola?
Phone operating system	Do you prefer the Android or Apple mobile operating system?	In 5 years, will Android be more widely used compared to Apple, or will Apple be more widely used than Android?

I perceive the world objectively, (b) rational others must see the world as I do, and (c) those who disagree with me are uninformed, irrational, or biased (Ross & Ward, 1996). A consequence of naive realism is that people tend to project their beliefs, attributes, and preferences onto other people (Marks & Miller, 1987; Monin & Norton, 2003; Robbins & Krueger, 2005; Ross, Green, & House, 1977). Such social projection—sometimes called the false-consensus effect (FCE)[1] —has been traced to people's tendency to anchor on themselves to understand unknown others (Epley, Morewedge, & Keysar, 2004; Marks & Miller, 1985). The FCE can lead people with opposing views to hold diametrically opposed beliefs about the likely views of other people. For example, liberal and conservative Christians both project that Jesus Christ would hold their (mutually incompatible) political views if he were on earth today (Ross, Lelkes, & Russell, 2012).

The FCE arises, in part, because people view their own beliefs as the most sensible, which leads them to infer that people who disagree are uninformed, irrational, or biased (Pronin, Lin, & Ross, 2002). We predict that BFF will be larger in magnitude than the FCE for two reasons. First, social projection tends to be larger when others' beliefs cannot be directly observed (Vazire, 2010), and future others' beliefs are, by definition, not directly observable now. Second, because people tend to believe that their current views are the most accurate and true, they are likely to believe that people who disagree will have opportunities to "discover" the truth between now and the future. People tend to believe that they perceive the world in an unbiased fashion; consequently, we also predict that BFF will be stronger for beliefs that people view as being based on objective facts relative to beliefs people view as reflective of subjective taste. Finally, we predict that holding a BFF— believing that others will eventually "come around" to share one's current view—can influence people's behavior in the present.

Study 1: BFF Across Scientific Beliefs and Political, Entertainment, and Product Preferences

Method

Participants. We recruited 254 participants (mean age = 35.89 years, SD = 11.82; 43% female) on Amazon's Mechanical Turk (MTurk), restricted to respondents located in the United States. The sample size of 250 was decided ex ante, informed by a pilot study.

Design. Participants answered two blocks of questions regarding nine topics: abortion, same-sex marriage, climate change, ideology, party affiliation, support of President Trump, soda, the National Basketball Association (NBA), and phone preferences. One block of questions asked participants to report their own views on the nine topics. The second block of questions asked participants to report on the future opinions of others. Table 1 shows abbreviated versions of the questions and response options (for the exact text of the questions asked and the distributions across response options for each question pair, see the Supplemental Material available online). Block order was counterbalanced for all questions except for ideology and party affiliation. The ideology and party affiliation questions were not counterbalanced because the "current views" question had to be asked first so that each participant's individual current view could be inserted into his or her respective "Beliefs about the Future" question.

Results

We quantified BFF by estimating the degree to which people's current beliefs drove their beliefs about the future. For example, consider the abortion question (see Table 1): A BFF effect would mean that people who currently prefer that abortion be easier to access would believe that, in the future, there will be more people who support easier access to abortion than currently support more difficult access to abortions. Indeed, 91% of people who supported easier access to abortion predicted that, in the future, more people will support easier access to abortions (Fig. 1); by contrast, only 47% of people who supported more difficult access to abortion predicted easier access to abortion.

We calculated the percentage of respondents who predicted a future that favors their current preferences by coding participants as 1 if they believed that more future others will hold their current view than do today and 0 if they believed that fewer future others will hold their current view than do today. If there were no predictable changes over time, all possible outcomes would be equally likely, which implies that 50% of participants would demonstrate BFF for these two response-option questions. In fact, BFF was evident for all topics: Kruskal-Wallis χ^2 (2, N = 254) = 13.69, p = .001, for party affiliation; Kruskal-Wallis χ^2 (2, N = 254) = 31.4, $p < .001$, for ideology; and Kruskal-Wallis χ^2 (1, N = 254) > 13, $p < .001$, for all other topics. (For complete crosstabulations, see the Supplemental Material.) Block order had no effect on any of the analyses.

Discussion

Study 1 provided evidence that BFF emerges for political views, scientific beliefs, entertainment preferences, and product preferences.

Study 2: BFF, FCE, Optimism, and Real Money

In Study 2, we had two goals. First, we tested whether BFF was larger than the FCE and whether it was distinct from multiple forms of optimism. Second, we included monetary stakes to determine whether BFF affected consequential decisions made in the present.

Method

Participants. Our preregistered research plan called for 600 participants recruited via MTurk. We based this number on results from a pilot study. We ultimately recruited 602 participants (mean age = 36.4 years, SD = 12.0; 46% female). We required that participants be located in the United States, and they were paid $0.50 for participating.

Design. Two question blocks appeared in random order. The reporting block included four measures:

1. "Do you support Donald Trump?" ("yes" or "no")
2. "What percent of the MTurkers who complete this survey will respond to the previous question by saying that they support Trump?" (slider on a scale from 0 to 100)
3. "A YEAR FROM NOW, how will support for Trump among MTurkers change?" ("greater" or "less")
4. "A YEAR FROM NOW, what percentage of MTurkers will support Trump?" (slider on a scale from 0 to 100)

The betting block informed participants that they would receive a future bonus, the value of which depended on changes in support for Trump among surveyed MTurkers. Our manipulation of bet direction varied which direction of change in support for Trump would be rewarded. For half of the participants, the future bonus increased by $0.01 for each 1% increase in support for Trump. For the other half, the future bonus increased by $0.01 for each 1% decrease in support for Trump. Participants estimated the value of this future bonus in a year's time. To motivate accuracy, we informed participants that estimates within $0.05 of the true value would earn an additional $1 accuracy bonus.

Finally, participants took the Life Orientation Test-Revised (LOT-R; Scheier, Carver, & Bridges, 1994) and reported their age and gender.

Results

FCE. Results were consistent with the FCE. Trump supporters believed that there were currently more Trump supporters (M = 49%) than did Trump detractors (M = 37%), t(602) = -8.70, $p < .001$. This replicates the pattern of typical FCE research: estimates of the beliefs of populations tend to be anchored in the direction of participants' own beliefs. Note that we did not examine whether any consensus effect observed was an actual error or was "truly false" (Dawes, 1989).

Optimism. Did optimism that participants' bets would make money in the future predict participants' estimates of their future bonuses? We tested this in two ways. First, we examined the correlation between trait optimism (LOT-R scores) and the estimated future bonus among the subset of participants for whom the bet direction was compatible with their Trump preferences. The correlation was not significant, r(352) = .022, p = .68. Second, we tested for the presence of optimism that participants' bets would make money by examining whether our manipulation of bet direction affected participants' predictions about future support for Trump.

We considered optimism that participants' bets would make money was present if participants believed that support for Trump would change in the next year, such that their future bonus would increase, regardless of

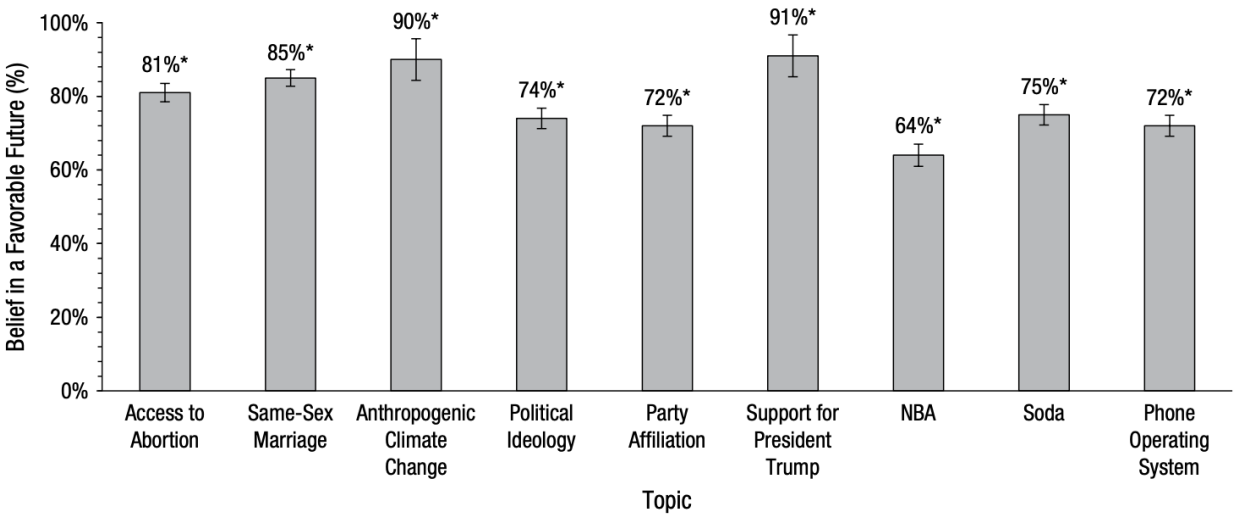

Fig. 1. Results from Study 1: percentage of respondents who had a belief in a favorable future, presented separately for each topic. Asterisks indicate that significantly more respondents had a belief in a favorable future than would be expected by chance ($^*p \leq .001$). NBA = National Basketball Association. Error bars represent $\pm 1SE$.

whether their support for Trump was compatible with the future-bonus incentive. This meant that participants who would receive a larger future bonus if support for Trump increased would estimate its value reflecting the belief that support for Trump would increase. Conversely, participants who would receive a larger future bonus if support for Trump decreased would estimate its value reflecting the belief that support for Trump would decrease.

We conducted an independent samples t test comparing the two bonus direction conditions. The dependent variable was participants' forecasted change in support for Trump, as measured by their estimate of the value of their future bonus in 1 year elicited in the incentive-compatible prediction block. Participants showed optimism that their bets would make money in the future: Those rewarded if support for Trump increased predicted a greater increase in support (M = 7.76%) compared with those rewarded if support for Trump decreased (M = -10.31%), t(602) = -18.43, $p < .001$.

BFF. There were two ways to test for the presence of BFF in this study. The first was akin to the way in which BFF was analyzed in Study 1: Among current Trump supporters and current Trump detractors, which group thought there would be a greater increase in support for Trump in 1 year? Analyzing Question 3 in the reporting block (which had only two response options) showed that 83% of Trump supporters and 23% of Trump detractors predicted that support for Trump would go up in 1 year, Kruskal-Wallis χ^2 (1, N = 602) = 200.95, $p < .001$.

The second way to test for the presence of BFF involved reported beliefs about the percentage of future Americans who would support Trump in 1 year. For Question 4 (which is a continuous measure), we considered BFF to be present if, compared with current Trump detractors, current Trump supporters predicted greater support for Trump in 1 year. This prediction was confirmed: Trump supporters believed that the percentage of Americans supporting Trump in 1 year would go up to 57%, whereas Trump detractors believed it would decline to 29%, t(600) = -18.50, $p < .001$.

BFF versus optimism. BFF is a form of optimism in which people believe that other people's views will change in the future in ways that align with their own current views; it is distinct from optimism that good outcomes will generally happen. Accordingly, our findings showed that participants bet that their future bonuses would be worth more if the bonuses were compatible with their support or lack thereof for Trump than if the bonuses were incompatible with their Trump preference. We tested this with a 2 (bet direction: increased support for Trump rewarded, decreased support for Trump rewarded) × 2 (support for Trump: supporter, detractor) between-subjects analysis of covariance, and we controlled for LOT-R scores. The two-way interaction was significant, F(1, 597) = 22.74, $p < .001$. The means are shown in Figure 2. There were no significant main effects of either bet direction, F(1, 597) = 2.95, p = .09, or support for Trump, F(1, 597) = 0.80, p = .38. The key result, the two-way interaction, remained significant when a simple 2 × 2 analysis of variance (ANOVA) was conducted without controlling for LOT-R scores, F(1, 598) = 22.8, $p < .001$.

To understand this result, consider the means reflected in Figure 2. Among participants who would be rewarded

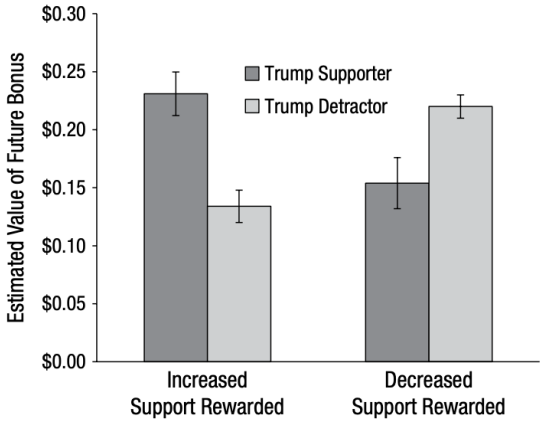

Fig. 2. Results from Study 2: the relationship between estimated value of a future bonus and whether that bonus would come from increased or decreased support for Trump, presented separately for Trump supporters and Trump detractors. Error bars represent 1 SE.

if support for Trump increased, Trump supporters bet more money that his support would increase than did Trump detractors; note that even Trump detractors bet that support for Trump would increase. This reflected optimism that the outcome would generally benefit them. Critically, among the group who would make money if support for Trump increased, Trump detractors were significantly less optimistic than Trump supporters.

The reverse pattern arose when we examined participants who were rewarded if support for Trump decreased: Trump supporters bet less money that future support for Trump would decrease than did Trump detractors; note that even Trump supporters bet that support for Trump would decrease. This reflected optimism that the outcome would generally benefit them. In line with the BFF-consistent pattern observed in the other condition, among the group who would make money if support for Trump decreased, Trump supporters were significantly less optimistic than Trump detractors.

BFF versus FCE. BFF was larger than the FCE. We tested this with a 2 (support for Trump: supporter, detractor) × 2 (prediction about MTurkers: today, in 1 year) mixed ANOVA. The two-way interaction was significant, $F(1, 600) = 126.5$, $p < .001$. Although Trump supporters thought 49% of MTurkers currently support Trump, they thought 57% would support Trump in 1 year, $t(212) = -6.88$, $p < .001$. Meanwhile, Trump detractors thought 37% of MTurkers currently support Trump, and they thought 29% would support Trump in 1 year, $t(388) = -9.43$, $p < .001$ (for evidence that BFF is greater than the FCE for legalizing same-sex marriage and legalizing recreational use of marijuana, see Study S1 in the Supplemental Material).

Discussion

Study 2 showed that BFF was distinct from the FCE, trait optimism, and optimism that outcomes will generally benefit the self. It also showed that BFF was not just cheap talk. It emerged even when people had the opportunity for a financial bonus if they accurately predicted the beliefs of other people in the future.

Study 3: BFF Is Robust Across Cultures

In Study 3, we assessed the robustness of BFF (for political ideology) across collectivist and individualist cultures (Triandis, 1995). Many social biases are moderated by the differences between collectivist and individualist cultures, including the FCE (Fiske & Taylor, 2013): people from collectivist cultures show greater FCE than people from individualist cultures (Park, 2012). We explored whether the pattern of greater social projection in collectivist cultures also held for BFF.

Method

Participants. Eight hundred twenty-four participants (mean age = 38.66 years, SD = 14.91; 48% female) were recruited online through Global Market Research and Qualtrics and paid $4.50 to complete the survey. Participants were recruited from two collectivist countries, China (n = 204) and Japan (n = 200), and two individualist countries, The Netherlands (n = 210) and the United Kingdom (n = 210). We aimed to collect 200 interviews per country (the number was decided ex ante).

Design. This survey was part of a larger omnibus survey that asked participants several sets of questions, including an attention check, which read, "In order to demonstrate that you have read the instructions, please ignore the question below, and simply click on 'other' and write 'cards' in the space next to it. Thank you very much. What is your marital status?" Only participants who passed the attention check at the beginning of the omnibus survey (86% of participants) were included in the analysis. A significantly lower percentage of participants from The Netherlands passed the attention check (79%) compared with the other countries, $t(822) = 3.56$, $p < .001$. (Results were substantively unchanged when we included the participants who did not pass the attention check.) The last section of the survey included all questions relating to BFF. In this section, participants answered two questions. The first was an ideology question adapted from the World Values Survey (World Values Survey Association, 2014): "The terms 'left (reformist)' or 'right (conservative)' are often used to explain a person's political standing. How about your political stance? Would you describe yourself as

left (reformist), right (conservative), or in the middle?" The second is a version of the World Values Survey question that we modified to reflect beliefs about the future (World Values Survey Association, 2014): "In 20 years (in 2035), which of the following do you think most [country name] citizens will identify as: left (reformist), right (conservative), or in the middle?"

Results

BFF was evident in participants from each country. The aggregated data revealed consistent differences between liberals, moderates, and conservatives regarding predictions of the future, Kruskal-Wallis χ^2 (2, N = 711) = 92.17, $p < .001$. Overall, 62% of participants believed that in the future, their country's citizens would come to share their ideology. This was true in three of the countries—United Kingdom: χ^2 (2) = 36.9, $p < .001$; China: χ^2 (2) = 36.4, $p < .001$; Japan: χ^2 (2) = 24.5, $p < .001$—but not The Netherlands, χ^2 (2) = 0.74, p = .69.

For all countries, including The Netherlands, the following pattern held: Left-reformists were more likely than other people to believe that their country would become more left-reformist in the future. People in the middle (centrists) were more likely than left-reformists and right-conservatives to believe that their country would become more centrist in the future. Right conservatives were more likely than others to believe that their country would become more right-conservative in the future (see the Supplemental Material).

BFF, as measured by the percentage of respondents who thought other people would change to favor their own views, was greater among participants from collectivist countries than among participants from individualist countries, log odds = 0.77, SE = 0.16, $p < .001$ (Fig. 3). BFF remained significantly higher among participants from collectivist countries than among participants from individualist countries when we controlled for country-level variance, either by adding individual countries as covariates, log odds = 0.96, SE = 0.22, $p < .001$, or by clustering the standard errors by country, log odds = 0.77, SE = 0.26, $p = .003$. If there were no predictable changes over time, each outcome would be equally likely, which would mean that roughly 33% of participants in each country would show BFF.

Discussion

Study 3 showed that the BFF is robust across cultures. Like the FCE, the BFF is more pronounced in collectivist countries than in individualist countries. This pattern makes sense if the BFF is understood to mean that one will fit in even better in the future than one does today. Because people in collectivist cultures tend to value fitting in more than those in individualist cultures (Markus & Kitayama, 1991), fitting in in the future is probably also more highly valued in collectivist cultures than in individualist cultures. Note that this pattern further distinguishes BFF from a more general optimism, which tends to be more pronounced in individualist countries than in collectivist countries (Fischer & Chalmers, 2008).

Study 4: Perceived Objectivity Moderates BFF

In Study 4, we tested whether BFF is larger when people believe their current views are based on objective facts as opposed to subjective tastes.

Method

Participants. Our preregistered research plan called for 300 participants to be recruited via MTurk. We ultimately recruited 308 participants. Participants received $0.40 in compensation. Our plan led us to exclude 31 participants because we suspected that they participated more than once. After exclusion, there were 277 participants (mean age = 31.84 years, SD = 9.67; 39% female). The sample size of 300 participants was decided ex ante, informed by a pilot study.

Design. Participants wrote about their choice of mobile operating systems, and we manipulated whether the writing was subjective or objective. Participants first indicated which mobile operating system they preferred, Apple or Android. In the objective condition, participants wrote reasons why they preferred their chosen operating system. For example, participants who indicated that they preferred Apple read: "Please write 23 sentences about why a sensible person might prefer the Apple mobile operating system." In the subjective condition, participants were invited to consider why another person might prefer the opposite choice: "Please write 23 sentences about why a sensible person might instead prefer the Android mobile operating system." In a manipulation check, we asked whether operating-system preferences are subjective or objective on a scale from 0 (*Purely subjective. I just like my operating system more, but sensible people could disagree) to 100 (Purely objective. The operating system I prefer is objectively superior and no sensible person would disagree*).

In the key dependent measure, we asked participants to forecast which operating system would be more popular in 5 years. Because we were concerned that the manipulation could have influenced people's beliefs about the degree to which their own preferences were shared by other people, we also included a measure of the FCE: Participants estimated whether, at the time of the study, more people preferred the Apple mobile operating system or the Android mobile operating system.

Results

The manipulation check succeeded: Participants in the objective condition rated the choice as more objective (M

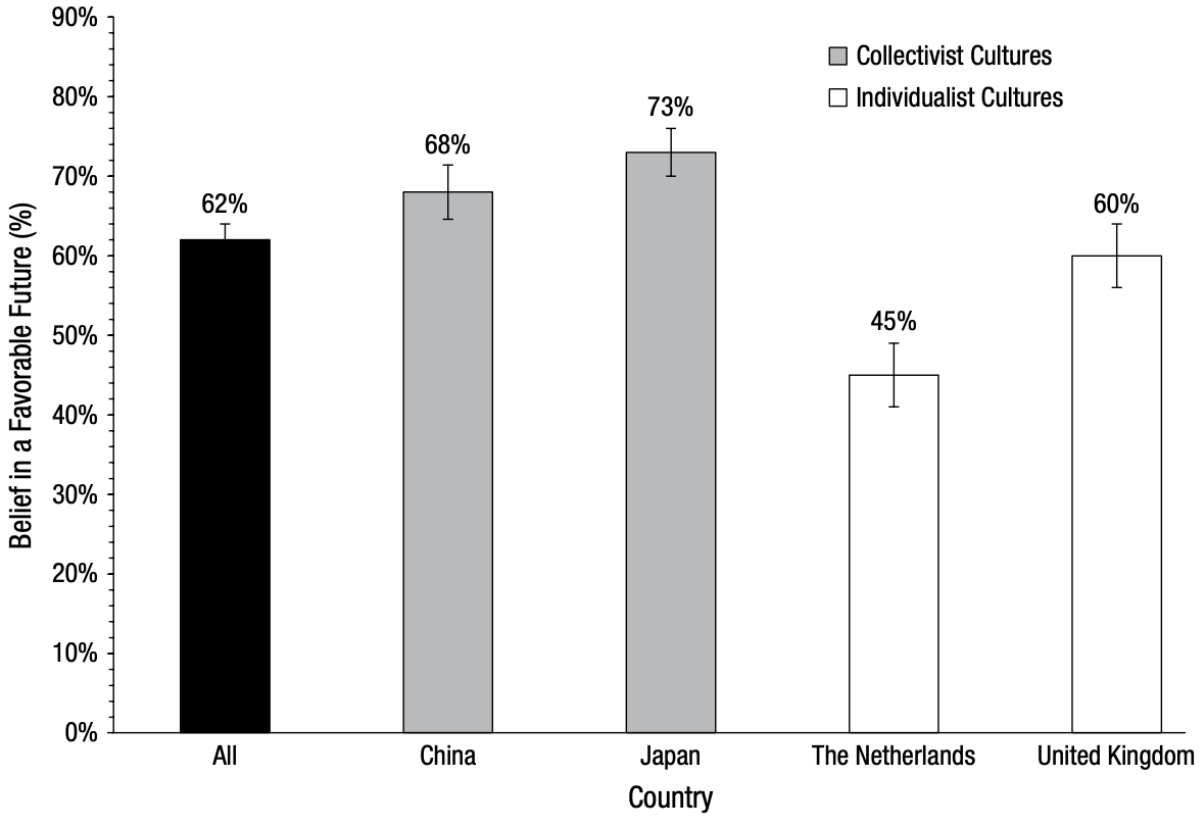

Fig. 3. Results from Study 3: percentage of respondents in each country (and across all countries) who had a belief in a favorable future, presented separately for traditionally individualist and collectivist cultures. Error bars represent 1 SE.

= 50.12) than did those in the subjective condition (M = 39.62), t(272) = -3.09, p = .002. Further, we found no difference in word count of the writing samples across conditions, t(275) = -0.189, p = .85. The majority of participants (67%) believed that their own operating-system preference was shared by other people, which is consistent with the FCE. However, an even greater percentage (77%) displayed BFF, t(276) = 3.46, p = .001.

Most important, the experimental manipulation had a significant effect on BFF: Participants in the objective condition displayed greater BFF (85%) than those in the subjective condition (70%), χ^2 (1, N = 277) = 8.87, p = .003. This result held when we controlled for the FCE; a logistic regression including both the experimental treatment and our measure of the FCE as predictors showed that the manipulation remains significant, log odds = 1.01, SE = 0.33, p = .002.

Discussion

In Study 4, we showed that when people believed that their views on an issue were objective (as opposed to subjective), they were more likely to believe that others in the future would share their views.

Study 5: BFF and Beliefs About Future Policy Changes

Incorrectly believing that people's policy preferences will change in the future to align with their own preferences could cause people to also believe that the future policies will change in ways that align with their preferences. In Study 5, we tested whether a belief in a favorable future regarding policy change existed and, if it did, whether it was moderated by people's beliefs about policies' responsiveness to public opinion.

Method

Participants. Our preregistered research plan called for 200 participants to be recruited via MTurk. The sample size was chosen ex ante, informed by a pilot study. We ultimately recruited 208 participants (mean age = 36.19 years, SD = 11.6; 59% male). Participants received $0.48 in compensation.

Design. Participants answered four blocks of questions, each containing four questions about one policy. The policies were chosen on the basis of a pilot study in which 23 policies were rated for the degree to which participants believed that they were responsive to public opinion (for

more information, see Study S2 in the Supplemental Material). We selected for inclusion in the present study the two policies participants believed were the most responsive to public opinion (the ease or difficulty of legally obtaining marijuana for recreational use and the ease or difficulty of access to same-sex marriage) and the two policies participants believed were the least responsive to public opinion (the permissibility of the National Security Agency, or NSA, monitoring the communications of American citizens and changing the amount of money spent on the military).

In each policy block, participants were asked about their (a) current preferences regarding the policy, (b) their belief about preferences of other people in the future, (c) their belief about how the policy would change in the future, and (d) their belief about how responsive the policy is to public opinion (for the exact questions, see Study S2 in the Supplemental Material). Both block order and question order within blocks were randomized.

Results

BFF. We tested for the presence of BFF using the same method used in the previous studies: We estimated the degree to which people's current preferences biased their beliefs about the views of future others. The participants showed BFF for all four topics, all Kruskal-Wallis χ^2 (1, N = 208) > 19, $p < .001$ (for complete cross-tabulations, see the Supplemental Material).

Responsiveness to public opinion. Consistent with the results of Study S2, our results showed that, on average, 87% of participants reported that marijuana and same-sex marriage policies were responsive to public opinion, whereas, on average, 40% of participants reported that NSA surveillance and military spending were responsive to public opinion, χ^2 (1, N = 208) = 17.4, $p < .001$.

BFPC and policy responsiveness. Participants who believed that a given policy would change in the future in ways that aligned with their current policy preferences were coded as showing BFPC. The preregistered analysis plan described two strategies for testing whether participants believed that policies that are responsive to public opinion would be more likely to show a BFPC than policies that are not responsive to public opinion. The first involved including all participant responses for a given policy, regardless of whether they showed a BFF for the policy. In terms of marijuana policy, 81% of participants showed both a BFF and a BFPC. The same general pattern was apparent for same-sex marriage policy: 83% of participants showed both a BFF and a BFPC. Only 40% of participants showed both a BFF and a BFPC for NSA policy, and only 49% of participants showed both a BFF and BFPC for military-spending policy. The average percentage who showed both a BFF and BFPC for the two policies believed to be highly responsive to public opinion (marijuana legalization and same-sex marriage) was 82%, whereas the average for the two policies believed to be less responsive to public opinion (NSA surveillance and military spending) was 45%, χ^2 (1, N = 208) = 10.78, $p = .001$.

The second analysis strategy entailed examining the percentage of participants who showed BFF who also showed a BFPC. This strategy was motivated by the presumption that BFF is a necessary precondition for BFF to lead to BFPC. This strategy showed the same pattern as the other strategy. In terms of recreational marijuana laws, 96% (169 of 176) of participants who showed BFF also showed a BFPC. Same-sex marriage policy showed the same general pattern: 96% (172 of 179) of participants who showed BFF also showed a BFPC. Only 54% (84 of 157) of participants who showed a BFF for NSA surveillance policy also showed a BFPC. And only 60% (101 of 167) of participants who showed BFF for military spending also showed a BFPC. For the two policies believed to be highly responsive to public opinion (marijuana legalization and same-sex marriage), the average percentage of those who showed BFF and who also showed a BFPC was 96% (average numerator and denominator: 170.5 of 177.5). For the two policies believed to be less responsive to public opinion (NSA surveillance and military spending), the average percentage of those who showed a BFF and who also showed a BFPC was 57% (92.5 of 162), χ^2 (1, N = 208) = 9.94, p = .002.

Discussion

Study 5 provided evidence that for policies believed to be responsive to public opinion, BFF may lead people to believe that the policy will change in favorable ways in the future.

Studies 6a and 6b: Can BFF Contribute to Political Inaction?

Participants were led to believe that their preferred candidate would either win (favorable future) or lose (unfavorable future). If BFF causes inaction, then participants should be less likely to donate when they believe that their preferred candidate will win, and they should be more likely to donate when they believe their preferred candidate will lose. That is, we predicted that BFF would undermine participants' willingness to take action to make that favorable future more likely. Study 6a was a manipulation check testing whether the treatment in Study 6b, a large field experiment involving political donations, actually altered whether people think the future will be favorable.

Study 6a: pilot test

Method

Participants. We recruited 352 participants (mean age = 33.33 years, SD = 10.59; 44% female) via MTurk using an announcement offering self-identified Democrats \$0.24 for completing a short survey. It required that

participants be located in the United States. The sample size was chosen to ensure adequate power on the basis of a guess about the likely effect size.

Design. Participants were randomly assigned to one of three conditions, and all were presented with the following scenario:

> Please imagine that a Democratic candidate is campaigning to be governor of Florida. The election is in a few months. The candidate is running against the current Republican governor, though the Democratic candidate is a former governor who had been elected several election cycles ago.

Participants were then presented with information according to the condition to which they were assigned. Those in the no-BFF condition were told that "A recent poll came out saying that the election was close and that the Democratic candidate was LOSING." Those in the BFF condition were told that "A recent poll came out saying that the election was close and that the Democratic candidate was WINNING." Those in the control condition were not presented with any polling information. After these scenarios were presented, participants were asked, "Given this information, would you say that the Democratic candidate is more likely to win the election or more likely to lose the election?" Participants could choose from two responses: "more likely to win the election" or "more likely to lose the election." Participants then answered demographic questions before completing the survey.

Results. Participants in the BFF condition were more likely to think that their candidate was more likely to win the election (95%) than were those in the no-BFF condition (13%), log odds = 4.84, SE = 0.5, $p < .001$, or those in the control condition (59%), log odds = 2.55, SE = 0.46, $p < .001$. Participants in the control condition were more likely to think that their candidate would win the election (59%) than those in the no-BFF condition (13%), log odds = 2.29, SE = 0.33, $p < .001$.

Study 6b: BFF field experiment

Method. We sent messages to a total of 660,542 e-mail addresses for people on the fund-raising e-mail list of the Democratic Governors Association (DGA). Of these people, 63,520 had donated to the DGA in the past and 597,022 had not donated in the past. The data did not include age or gender.

Working with a leading online fund-raising consultancy, we developed two e-mails that the DGA distributed to its entire fund-raising e-mail list. The list contained past donors and prospective donors whom the DGA believed were supporters of Democratic candidates and potential donors to Democratic gubernatorial candidates. The e-mails attempted to raise money on behalf of Charlie Crist, the Democratic candidate for governor in Florida in 2014. Charlie Crist was running against the incumbent Republican governor of Florida, Rick Scott. The e-mails were sent on June 30, 2014. The content of both e-mails was based on actual recent polling data. Half of recipients were randomly assigned to the BFF condition (n = 330,302). They received an e-mail that read as follows:

> BREAKING: A new SurveyUSA poll has Democrats LEADING Rick Scott in Florida, 44-40!!! Now is THE moment to DETHRONE the king of voter suppression and his allies in key battlegrounds.
>
> [NAME],
>
> We have to protect this lead! If we let Scott overtake us, we'll lose this November and risk the White House in 2016—that's a slippery slope we CAN'T afford.
>
> The ONLY way to protect our lead and win is to get a team on the ground to rally our Democratic supporters and protect every single vote. Scott cheated his way into office before—we CAN'T let him do it again.

The other half were randomly assigned to the no-BFF condition (n = 330,240). They received an e-mail that read as follows:

> BREAKING: A new SurveyUSA Poll has Democrats LOSING to Rick Scott in Florida, 41-42!!! Now is THE moment to DETHRONE the king of voter suppression and his allies in key battlegrounds.
>
> [NAME],
>
> If we fall further behind in Florida and other key battlegrounds, we'll lose this November and risk the White House in 2016—that's a slippery slope we CAN'T afford.
>
> The ONLY way to turn this around is to get a team on the ground to rally our Democratic supporters and protect every single vote. Scott cheated his way into office before—we CAN'T let him and other Republicans do it again.

All other content in the two e-mails was the same (for reproductions of both e-mails and details on the data-hygiene and data-integration strategy, see the

Supplemental Material).

Results. Some e-mail clients inform e-mail senders whether e-mails have been viewed. Such e-mails are referred to as having been opened. This is considered a loose proxy for whether recipients read and engage with an e-mail.

We found that, after controlling for whether the donors were new or had donated before (i.e., donor status), participants in the BFF condition (12.05%) were less likely to open the e-mail than participants in the no-BFF condition (12.33%), log odds = 0.026, SE = 0.0075, p = .001. The results for this analysis and the analyses presented later were not substantively affected by whether we controlled for donor status, and the pattern was consistent regardless of donor status (see the Supplemental Material). Note that our low response rates were within the range of industry averages for prospect fundraising lists (M+R Strategic Services, 2016).

In analyses controlling for donor status, we found that participants in the BFF condition (0.25%) were less likely to click on the donations link in the e-mail than were participants in the no-BFF condition (0.30%), log odds = 0.17, SE = 0.047, $p < .001$. The pattern was consistent regardless of donor status (see the Supplemental Material). In addition, we found that participants in the BFF condition (n = 145, 0.04%) were less likely to make a donation than were participants in the no-BFF condition (n = 196, 0.06%), log odds = 0.30, SE = 0.11, p = .006. This pattern was also consistent regardless of donor status (see the Supplemental Material).

Participants in the BFF condition donated a total of $2,954.50, averaging $20.38 per donation. Participants in the no-BFF condition donated a total of $4,413, averaging $22.52 per donation. We found that, after controlling for donor status, BFF participants gave less money than no-BFF participants, b = 0.0044, SE = 0.0025, p = .077. The test was marginally significant when we used a conservative two-tailed test, but was statistically significant with a one-tailed test, p = .039, which was appropriate given our directional hypothesis. The difference was driven by past donors and not new donors (see the Supplemental Material).

Discussion. Studies 6a and 6b showed that BFF can discourage people from taking action that could increase the chance that the favorable future actually will arise.

General Discussion

We demonstrated across six studies that people had a BFF, and that this belief affected their behavior. In Study 1, people believed that their own views on politics (abortion, same-sex marriage, ideology, partisanship, support for Trump), entertainment (interest in the NBA), products (soda, phone operating system), and science (climate change) would be more widely held in the future than would the beliefs of people with opposing views. Study 2 revealed that BFF was larger in magnitude than the FCE, was distinct from two forms of optimism, and affected financial decisions. Study 3 showed that BFF emerged across cultures. Study 4 revealed that BFF was greatest when people considered their views to be based on objective fact as opposed to subjective taste. Study 5 showed that believing that other people would share one's policy preferences in the future could lead to believing that one's policy preferences would be enacted in the future. Finally, Studies 6a and 6b showed that BFF could reduce people's likelihood of donating money to a campaign that they would like to win.

What other mechanisms might underlie BFF? Because the FCE is larger when people consider the views of others they know rather than others they do not know (Robbins & Krueger, 2005), BFF may also be larger for known or similar others and smaller for unknown or dissimilar others. If anything, this research suggests that our studies may reflect relatively small magnitudes of BFF, because the future others about whom participants projected were vague and unknown. Another possible driver of BFF might be threats to the self, if such threats lead people to defend and bolster their opinions or cultural worldviews; affirming the self may in turn reduce BFF (see Schmeichel & Martens, 2005).

One implication of BFF is that, in addition to believing progress will occur between the present and the future, people may believe that the progress that has been achieved up until today will endure into the future (Fukuyama, 1992; Quoidbach, Gilbert, & Wilson, 2013). This "end of history" belief may reduce people's vigilance to prevent backsliding and decline. In Study 2, Trump detractors believed there would be even more Trump detractors in a year, whereas Trump supporters believe there would be even more Trump supporters in a year. Indeed, Study 6b shows that BFF can undermine people's motivation to take costly action today to bring about the desired state tomorrow. This is inconsistent with other biases that increase people's likelihoods of committing to prosocial behaviors when they think about the future (Rogers & Bazerman, 2008). In results consistent with the idea that the BFF may lead to inaction, Bain, Hornsey, Bongiorno, Kashima, and Crimston (2013) found that changing people's beliefs about what will occur in the future changes their likelihoods of taking action today. People in poorly matched relationships (with partners, religions, or jobs) may be too reluctant to move on because they believe that their counterpart will eventually change to see their side; people who support (or oppose) a political issue (e.g., legalizing recreational marijuana use) might underestimate the strength of opposition to their views in the future. Ironically, BFF can undermine the likelihood that people will actually make their more favorable futures come to fruition.

Action Editor

Bill von Hippel served as action editor for this article

Author Contributions

All the authors were involved in the design of Studies 1, 2, 4, 5, and 6a. T. Rogers and M. I. Norton designed Study 3. T. Rogers and D. A. Moore designed Study 6b. T. Rogers oversaw analysis of Studies 1, 3, 5, 6a, and 6b, with input from M. I. Norton and D. A. Moore. D. A. Moore analyzed Studies 2 and 4. All the authors approved the final version of the manuscript for submission.

Acknowledgements

We thank Adan Acevedo, Carly Robinson, Avi Feller, Sam Skowronek, Gonzalo Pons, and Alec Yeh for data assistance and Anne Lewis Strategies and the Democratic Governors Association for Study 6b collaboration.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Funding

This research was supported by Harvard Kennedy School's Center for Public Leadership and by Harvard Business School.

Supplementary Material

Additional supporting information can be found at http://journals.sagepub.com/doi/suppl/10.1177/0956797617706706

Open Practices

All data and materials have been made publicly available via the Open Science Framework and can be accessed at https:// osf.io/w38qr. The design and analysis plans for Studies 1, 2, 4, and 5 were preregistered at the Open Science Framework and can be accessed at https://osf.io/e7hvk/ (Study 1), https:// osf.io/xuebw/ (Study 2), https://osf.io/w38qr/ (Study 4), and https://osf.io/eyype/ (Study 5). The complete Open Practices Disclosure for this article can be found at http://journals.sagepub.com/doi/suppl/10.1177/0956797617706706. This article has received badges for Open Data, Open Materials, and Preregistration. More information about the Open Practices badges can be found at https://www.psychologicalscience.org/ publications/badges.

Note

1. Researchers debate whether the FCE is "truly false" because it is normatively appropriate for people to incorporate their own views when estimating the views of a population in which they are included (Dawes, 1989; Krueger & Zeiger, 1993).

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