The Belief in a Favorable Future

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ABSTRACT
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People believe that future others' preferences and beliefs will change to align with their own. People holding a view (e.g., supporting President Trump) are more likely than those holding the opposing view (e.g., oppose President Trump) to believe that future others will share their view. Seven studies show 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 current others share one's views (false consensus effect), arises across cultures, is distinct from general optimism, is strongest when views are perceived as based in objectivity rather than taste, 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) demonstrate that believing in a favorable future can influence people's behavior today.

The authors of *One Party Country: The Republican Plan for Dominance in the 21st Century* imagined that Democrats would "slip into the status of a permanent, carping minority" (Hamburger & Wallsten, 2006). Meanwhile, the authors of another book, *40 More Years: How the Democrats Will Rule the Next Generation*, imagined the exact opposite future (Carville, 2009). 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 partisan current 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.

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 ("I don't need to attend that pro [anti] same sex marriage rally; same sex marriage will be legal [illegal] in 10 years anyway"); 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") – that future others' preferences and beliefs will change to align with their own. That is, people tend to believe that their views will be more common in the future when compared to the beliefs about future others of people with opposing views. Our conceptualization and hypotheses draw on two bodies of research: forecasting and naïve 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 below – that the BFF is a psychologically distinct form of optimism about the social world, differing from dispositional optimism as well as optimism about specific good outcomes happening for oneself.

Second, we draw on three tenets of naïve realism: i) I perceive the world objectively; ii) rational others must see the world as I do; and iii) those who disagree with me are uninformed, irrational, or biased (Ross & Ward, 1997). A consequence of naïve realism is that people tend to project their beliefs, attributes, and preferences onto others (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 et al., 2004; Marks & Miller, 1985). The FCE can lead people with opposing views to hold diametrically opposed beliefs about the likely views of others. 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).

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[1] Researchers debate whether 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).

The FCE arises, in part, due to people viewing their own beliefs as the most sensible, therefore leading them to infer that disagreeing others are uninformed, irrational, or biased (Pronin, Lin, & Ross, 2002). We predict that the BFF will be larger in magnitude than 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 disagreeing others will have opportunities to "discover" the truth between now and the future. Because people tend to believe that they perceive the world in an unbiased fashion, we also predict that the BFF will be stronger for beliefs that people view as based on objective facts relative to beliefs viewed 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

Study 1 examined the existence of the BFF across nine topics.

Method.

Participants. We recruited 254 participants (M_{age}=35.89, *SD*=11.82; 43% female) on Amazon's Mechanical Turk, restricted to respondents located in the United States. The design and analysis plan were pre-registered at https://osf.io/e7hvk/. 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 six topics. The second block of questions asked participants to report on the future opinions of others. Table 1 shows exact questions and response options. SOM shows distributions across response options for each question pair. 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 in order to insert each participant's individual current view into their respective "Beliefs about the Future" question.

Table 1. Study 1 BFF Questions

Issue	Current Views	Beliefs about the Future
Abortion	In terms of a woman's right to have an abortion, would you say that you prefer making it: easier for a woman to have a legal	In 20 years, do you think more Americans than today will prefer for it to be easier for a woman to have a legal abortion, or will more Americans than today prefer for it to be harder for a woman to have

|	abortion or harder for a woman to have a legal abortion?	a legal abortion?
Marriage	In terms of legalizing marriage between two people of the same sex, would you say that you prefer making it: easier for two individuals of the same sex to get married, or more difficult for two individuals of the same sex to get married?	In 20 years, do you think more Americans than today will prefer for it to be easier for two individuals of the same sex to get married, or will more Americans than today prefer for it to be more difficult for two individuals of the same sex to get married?
Climate Change	In terms of changes in global temperature, do you believe that humans are causing changes in global temperature or that humans are not causing changes in global temperature?	In 20 years, do you think more Americans than today will believe humans are causing changes in global temperature or will fewer Americans than today believe that humans are causing changes in global temperature?
Ideology	Are you politically liberal, moderate, or conservative?	In 20 years, do you think a larger or smaller proportion of Americans than today will be politically [your stated ideological preference inserted here]?
Party Affiliation	Are you a Democrat, Republican or Independent?	In 20 years, do you think a larger or smaller proportion of Americans than today will be [your stated party affiliation preference here]? s?
Support for President Trump	Do you support President Trump?	One year from today, how will support for President Trump among Americans change compared to today?
NBA	In terms of being of professional basketball played in the National Basketball Association (NBA), would you say that you are a fan of the NBA, or you are not a fan of the NBA	In five years, will more Americans be fans of professional basketball played in the National Basketball Association (NBA), or will fewer Americans be fans?
Soda	Do you prefer Coca-Cola or	In 20 years, do you believe a greater fraction of people will prefer Coca-Cola over Pepsi, or

	Pepsi?	will a greater fraction of people prefer Pepsi over Coca-Cola?
Phone	Do you prefer the Android mobile operating system or the Apple mobile operating system?	In 5 years, do you believe the Android mobile operating system will be more widely used compared to the Apple mobile operating system, or will the Apple mobile operating system be more widely used compared to the Android mobile operating system?

Results.

We quantify the BFF by estimating the degree to which people's current beliefs drive their beliefs about the future. For example, consider the following questions from Study 1. To assess current preferences, participants are asked, *"In terms of a woman's right to have an abortion, would you say that you prefer making it: easier for a woman to have a legal abortion or harder for a woman to have a legal abortion?"* To assess beliefs about the future, participants are asked *"In 20 years, do you think more Americans than today will prefer for it to be easier for a woman to have a legal abortion, or will more Americans than today prefer for it to be harder for a woman to have a legal abortion?"* BFF means that people who currently prefer for abortions to be easier will believe that more people in the future will support easier abortions than do people who currently prefer abortions to be harder. Indeed, 91% of those who support easier abortions predict more people in the future will support easier abortions, compared to only 47% of people who prefer for abortions to be harder to obtain.

The asterisks in Figure 1 indicate, for each question, the significance of the Kruskal-Wallis test. All topics show the BFF, all χ^2>13, all *p* values <.001. (See SOM for complete crosstabulations). The height of the bars in Figure 1 indicates the percentage of respondents who predict a future that favors their current preferences. We calculate this by coding participants as '1' if they believe that more future others than today will hold their current view, and '0' if they believe that fewer future others than today will hold their current view. If there were no predictable changes over time all possible outcomes would be equally likely, implying 50% of participants showing BFF for these two response-option questions.

Figure 1: People show a belief in a favorable future across a variety of issues.
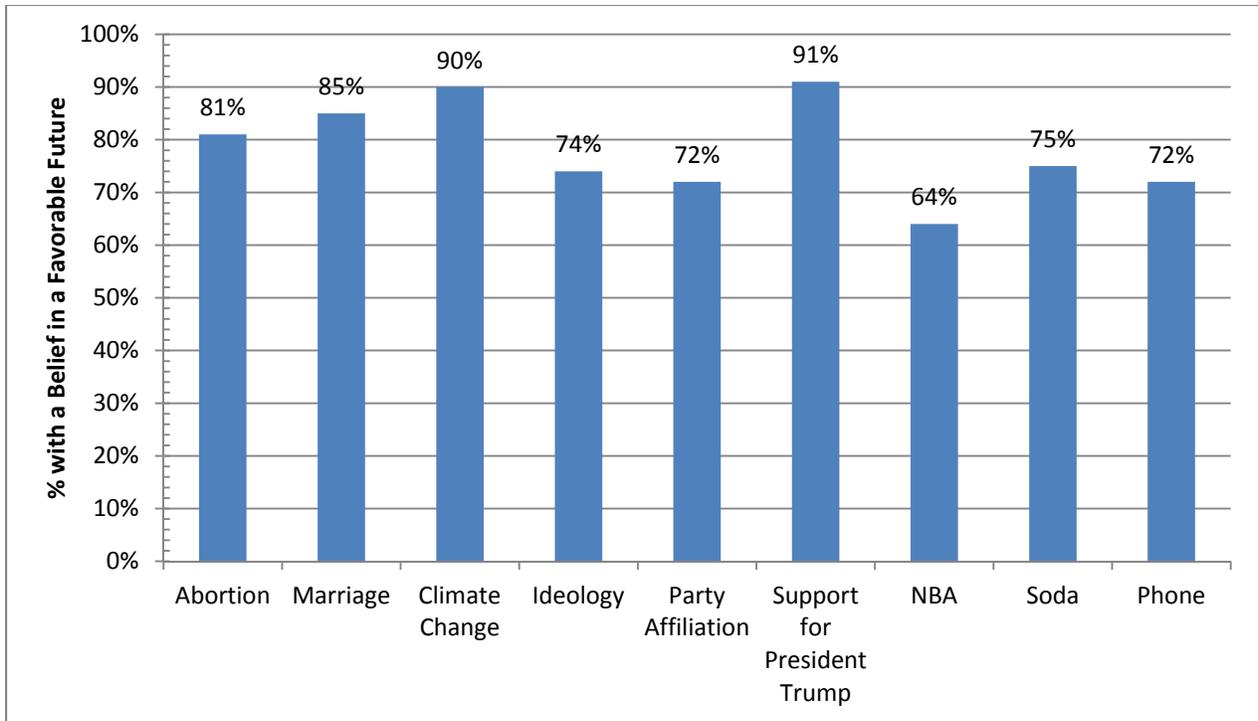
If there were no predictable changes over time each outcome would be equally likely, implying 33% showing BFF.

Block Order. We test whether block order affects participants' current or future beliefs. Using an ANOVA with block order as a between-participants factor, we find that order did not significantly affect responses to any of the questions about participants' current beliefs, all Kruskal-Wallis $\chi^2(1)<1.2$, $p>.3$. Block order did not significantly affect responses to any of the nine "future" questions either, all Kruskal-Wallis $\chi^2(1)<1.3$, $p>.25$.

We further test whether block order affects the likelihood of participants having a BFF, using a logistic regression predicting whether participants show the BFF as a function of order. The results suggest that order does not have a significant effect, Log odds=0.18, SE=0.12, p=.12.

Discussion.

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

Study 2: BFF, FCE, Optimism and Real Money

Study 2 has two goals. First, Study 2 tests whether BFF is larger than FCE, and distinct from multiple forms of optimism. Second, Study 2 includes monetary stakes to show that believing in a favorable future affects consequential decisions made today.

Method.

Participants. Our pre-registered research plan called for 600 participants recruited via Amazon's Mechanical Turk (https://osf.io/xuebw/?view_only=6250096f3b2c4f258936bad738c51689). We based this number on results from a pilot study. We ultimately recruited 604 participants (46% female; M_{age}=36.4, SD=12.0) with an announcement that offered to pay them $.50 and required that they be located in the United States.

Design. There were two question blocks. The reporting and betting 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 0 to 100 scale)
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 0 to 100 scale)

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 the rewarding direction of changes in Trump support. For half of participants, this future bonus increased by $.01 for each 1% increase in support for Trump. For the other half, this future bonus increased by $.01 for each 1% decrease in support for Trump. Participants estimated the value of this future bonus in a year's time. In order to motivate accuracy, participants also learned that estimates within 5 cents of the true value would earn an additional $1 accuracy bonus.

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

Results.

FCE. 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 their own beliefs. Note that this study does not examine whether the consensus effect we observe is an actual error, or "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 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(350)=.046, p=.39. Second, we tested for the presence of

optimism that participants' bets would make money by examining if our manipulation of bet direction affected participants' predictions about future Trump support. Here, optimism that participants' bets would make money would be present if participants believed that support for Trump would change in the next year such that their Future Bonus would be worth more, regardless of whether their support for Trump was compatible with the Future Bonus incentive. This means that those assigned to receive a larger Future Bonus if Trump support increases would estimate its value reflecting the belief that Trump support would increase. Conversely, those assigned to receive a larger Future Bonus if Trump support decreases would estimate its value reflecting the belief that Trump support would decrease. We conducted an independent samples t-test, comparing the two different bonus direction conditions. The dependent variable was participants' forecasted change in Trump support implied in their estimate of the value in one year of their Future Bonus elicited in the incentive-compatible prediction block. Participants showed optimism that their bets would make money in the future: those rewarded when support for Trump increased predicted that support would go up more (M=7.71%) than did those rewarded when support for Trump decreased (M=-10.31%), $t(602)$=-18.43, $p<.001$.

BFF. There are two ways to test for the presence of BFF in this study. The first way is akin to how BFF was analyzed in Study 1: does a greater fraction of current Trump supporters think more people will support Trump in year compared to current Trump detractors? Analyzing question Q3 in the reporting block (which has only two response options) shows that 82% of Trump supporters predicted that support for Trump would go up in one year whereas 23% of Trump detractors predicted that support Trump would go up in one year, Kruskal-Wallis $\chi^2(1)$=202.24, $p<.001$. The second way to analyze for the presence of BFF involves reported beliefs about the percent of future Americans who will support Trump in one year. Analyzing Q4 in the reporting block (which is a continuous measure) BFF would be present if the percentage of Americans predicted to be supporters of Trump in one year is greater for current Trump supporters than current Trump detractors. This was supported as Trump supporters believed that the percentage of Americans supporting Trump in one year would go up to 57%, whereas detractors believed it would decline to 29%, $t(602)$=-18.50, $p<.001$.

BFF v. Optimism. The BFF is distinct from optimism that good outcomes will generally happen; it is a form of optimism in which people believe that others in the future will change in ways that align with the current self. Consistent with this, participants bet that their Future Bonuses would be worth more when their Future Bonuses were compatible with their Trump preference than when they were incompatible with their Trump preference. We tested this with a 2 (Bet direction: increased Trump support rewarded, decreased Trump support rewarded) x 2 (Trump Support: supporter, detractor) between-subjects ANCOVA, controlling for LOT-R scores. The two-way interaction was significant, $F(1, 599)$=22.93, $p<.001$. The means are shown in Figure 2. Neither the main effect for bet direction, $F(1, 599)$=3.05, $p=.08$, nor for Trump supporter, $F(1, 599)$=.80, $p=.37$, were significant. The key result, the two-way interaction, remains significant when a simple 2 X 2 ANOVA is conducted without controlling for LOTR scores: $F(1, 600)$=22.94, $p<.001$.

To understand this result, consider the means reflected in Figure 2. When assigned to make more money if Trump support increases, Trump supporters bet that future Trump support would

increase (and their bets would make money) more than Trump detractors bet that Trump support would increase. Note that Trump detractors assigned to make money if Trump support increased still bet that Trump support would increase. This reflects optimism that the outcome would generally benefit them. Critically, that optimism of Trump detractors' who were assigned to make money if Trump support increases was significantly less than that of Trump supporters who were also assigned to make money if Trump support increases.

The reverse pattern arises when examining those assigned to make more money if Trump support decreases. Trump supporters bet that future Trump support would decrease (and their bets would make money) less than Trump detractors bet that Trump support would decrease. Note that Trump supporters assigned to make money if Trump support decreased still bet that Trump support would decrease. This reflects optimism that the outcome would generally benefit them. Reflecting the same BFF-consistent pattern observed above, that optimism of Trump supporters who were assigned to make money if Trump support decreased was significantly less than that of Trump detractors who were also assigned to make money if Trump support decreased.

Figure 2: Evidence that the BFF affects behavior with material consequences, over and above the effects of both the FCE and optimism that outcomes will generally benefit the self.
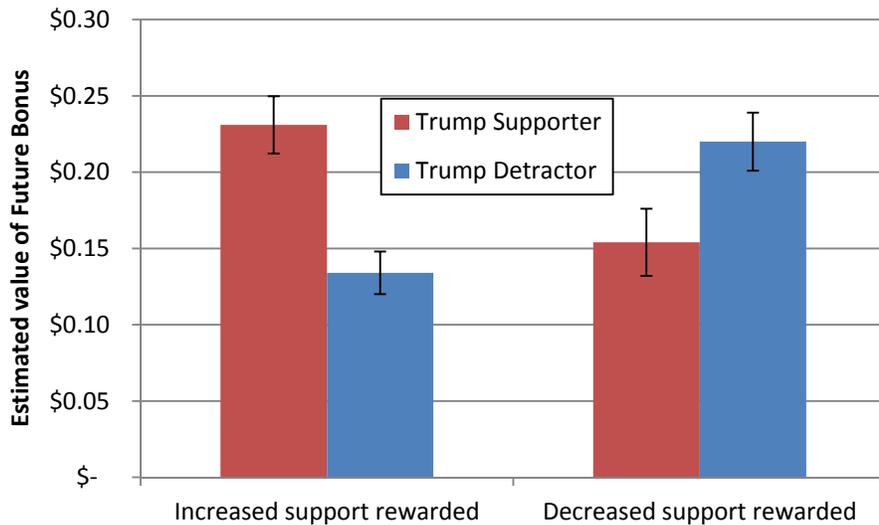
Error bars show SE.

BFF v. FCE. The BFF was larger than the FCE. We tested this with a 2 (Trump Support: supporter, detractor) x 2 (Prediction about MTurkers: today, in one year) mixed ANOVA. The two-way interaction was significant, $F(1, 602)=126.7$, $p<.001$. While Trump supporters thought 49% of MTurkers currently support Trump, they thought 57% would support Trump in one 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 one year, $t(390)=9.45$, $p<.001$. See SOM for an additional study (Study S1) showing that the BFF is greater than the FCE for legalizing same sex marriage and legalizing recreational use of marijuana.

Discussion.

Study 2 shows that the BFF is distinct from the FCE, and distinct from both trait optimism and optimism that outcomes will generally benefit the self. It also shows that the BFF is not just cheap talk: it emerges even when people have the opportunity for a financial bonus if they accurately predict the beliefs of others in the future.

Study 3: BFF is Robust across Cultures

Study 3 further assesses the robustness of the BFF (for political ideology) across collectivistic and individualistic cultures (Triandis, 1995). Many social biases are moderated by collectivistic/individualistic cultures, including the FCE (Fiske & Taylor, 2013): people from collectivistic cultures show greater FCE than people from individualistic cultures (Park, 2012). We explore whether the pattern of collectivistic cultures showing greater social projection also holds for the BFF.

Method.

Participants. 824 participants (M_{age}=38.66, 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 collectivistic countries (China (n=204) and Japan (n=200)) and two individualistic countries (Netherlands (n=210) and United Kingdom (n=210)). The survey was restricted to participants over the age of 18 and aimed (ex-ante) to collect two hundred interviews per country.

Design. This survey was part of a larger omnibus survey that asked participants several sets of questions, including an attention check. The attention check told participants, *"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 Netherlands passed the attention check compared to the other countries (79%, χ^2(3, N=824) =12.72, p=0.005). (Results are substantively unchanged whether we include or exclude 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 is the ideology question used in the World Values Survey: "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: "In 20 years (in 2035), which of the following do you think most [YOUR COUNTRY] citizens will identify as: left (reformist), right (conservative), or in the middle?"

Results.

Participants showed a BFF across each of the four countries. The aggregated data reveals consistent differences between liberals, moderates, and conservatives regarding predictions of the future, Kruskal-Wallis $\chi^2(2)$=104.9, p<.001. Overall, 62% of participants believed that in the future their country's citizens would come to share their ideology. This was true across countries: United Kingdom, $\chi^2(2)$=24.3, p<0.001; China, $\chi^2(2)$=35.6, p<0.001; Japan, $\chi^2(2)$=32.28, p<0.001, with the exception of the Netherlands, $\chi^2(2)$=4.17, p=.12.

For all countries, including the Netherlands, the following pattern holds: Left-reformists are more likely than others to believe that their country will become more Left-reformist in the future; those "in the middle" are more likely than Left-reformists and Right-conservatives to believe that their country will become more "in the middle" in the future; and Right-conservatives are more likely than others to believe that their country will become more Right-conservative in the future (see SOM).

The BFF, as measured by the percentage of respondents who thought others would change to favor their own views, was greater among participants from collectivistic countries than individualistic countries, Log odds=0.77, SE=0.16, p<0.001. The BFF remains significantly higher among participants from collectivistic countries than individualistic countries when controlling for country-level variance, either by adding individual countries as covariates, Log odds=0.96, SE=0.22, p<0.001, or clustering the standard errors by country, Log odds =0.76, SE =0.26, p=0.003.

Figure 3: Cross-culturally, people believe that their co-citizens' ideologies will converge toward their own ideology in the future.
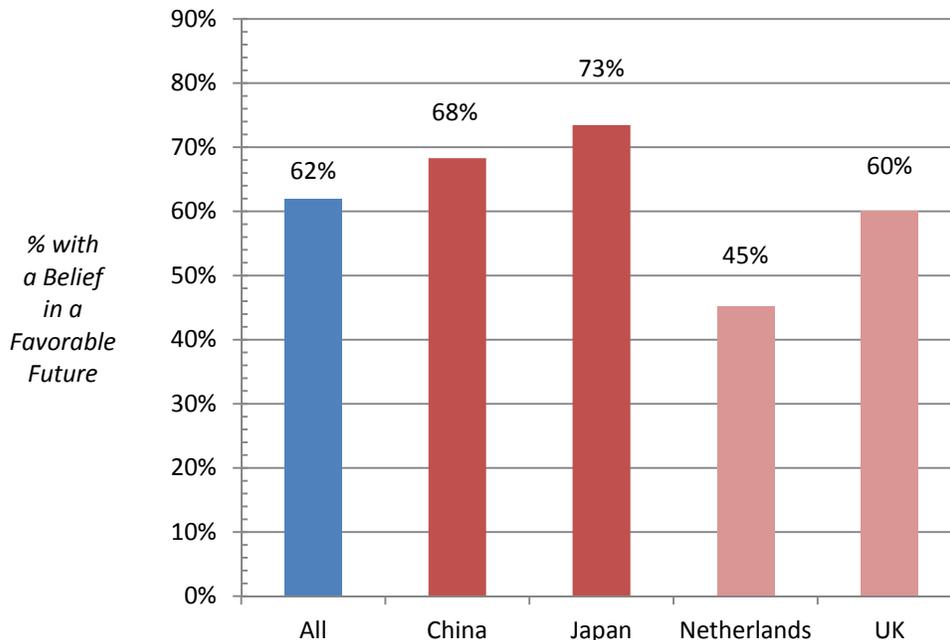
Dark bars represent traditionally collectivistic countries. Light bars represent traditionally individualistic countries. If there were no predictable changes over time each outcome would be equally likely, implying 33% showing BFF.

Discussion.

Study 3 showed that the BFF is robust across cultures. Like FCE, BFF is more pronounced in collectivistic countries than in individualistic countries. Note that this pattern further distinguishes the BFF from a more general optimism, which tends to be more pronounced in individualistic countries than in collectivistic countries (Fischer & Chalmer, 2008).

Study 4: Perceived Objectivity Moderates the BFF

Study 4 tests whether the BFF is larger when people believe their current views are based on objective facts as opposed to subjective tastes.

Method.

Participants. Our pre-registered research plan called for 300 participants recruited via Amazon's Mechanical Turk (https://osf.io/w38qr/?view_only=0e3b9882980c409fbb489d37b1bc9cf4). We ultimately recruited 308 participants. Participants received $.40 in compensation. Our plan led us to exclude 31 participants on suspicion of duplicate participation, leaving data from 277 participants (M_{age}=31.84, SD=9.67, 39% female). We chose a sample size of 300 participants ex ante informed by a pilot study.

Design. The experiment manipulated whether participants wrote about their choice of mobile operating systems as either Subjective or Objective. Participants first indicated which mobile operating system they preferred: Apple or Android. In the Objective condition, participants wrote reasons for their favored choice. For example, participants who indicated that they preferred Apple read:

Please write 2-3 sentences about why a sensible person might prefer the [Apple] mobile operating system.

The Subjective condition invited participants to consider why another person might prefer the opposite choice:

Please write 2-3 sentences about why a sensible person might instead prefer the [Android] mobile operating system.

The manipulation check 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"*).

The key dependent measure then 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 others currently shared their preferences, we also included a measure of the false consensus effect: Participants estimated whether, at present, more people prefer the Apple or the Android mobile operating system.

Results.

The manipulation check succeeded: Participants in the Objective condition rated the choice as more objective (*M*=50.12) than did those in the Subjective condition (*M*=39.62), *t*(272)=-3.09, *p*=.002. Further, we find no difference of word count across conditions, *t*(275)=-0.189, *p*=0.85.

The majority of participants (67%) believed that others preferred the same operating system they did, consistent with FCE. However, an even greater percentage (77%) displayed belief in a favorable future, *t*(276)=3.46, *p*=0.001.

Most importantly, the experimental manipulation had a significant effect on the BFF: participants in the Objective condition displayed a greater BFF (85%) than those in the Subjective condition (80%), χ^2(1, N=277)=8.87, *p*=0.003. These results effect hold when controlling for the false consensus effect; a logistic regression including both the experimental treatment and our measure of the false consensus effect as predictors shows that the manipulation remains significant, Log odds=1.01, *SE*=0.33 *p*=0.002.

Discussion.

Study 4 showed that when people believe that their views on an issue are objective (as opposed to subjective) they are more likely to believe that others in the future will share their views.

Study 5: BFF and Beliefs about Future Policy Changes

Incorrectly believing that future others' policy preferences will change to align with one's own could cause people to also believe that future policies will change in ways that align with their preferences. Study 5 explores whether this belief in a favorable policy change (BFPC) exists, and if it is moderated by whether people believe a policy is responsive to public opinion.

Method.
Participants. Our pre-registered research plan called for 200 participants recruited via Amazon's Mechanical Turk (https://osf.io/eyype/). The sample size was chosen ex ante, informed by a pilot study. We ultimately recruited 208 participants (*M*$_{age}$=36.19, *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 based on a pilot study in which twenty three policies were rated for how responsive participants believed they were to public opinion (Study S2 in SOM). 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 two individuals of the same sex getting married) and the two policies participants believed were the least responsive to public opinion (the permissibility of the National Security Agency 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 1) current preferences regarding the policy; 2) their belief about preferences of others in the future; 3) their belief about how the policy will change in the future; and 4) their belief about how responsiveness the policy is to public opinion. For exact questions see SOM. Block order was randomized and question order within-block was also randomized. The pre-registered analysis plan for this study is available at.

Results.
BFF. We test for the presence of BFF using the same method used in the previous studies: by estimating the degree to which people's current preferences bias their beliefs about the views of future others. All four topics show the BFF, all Kruskal-Wallis $\chi^2 > 19$, $p < .001$. (See SOM for complete crosstabulations).

Responsiveness to public opinion. Consistent with Study S2, on average 84% of participants reported that marijuana and same sex marriage policies were responsive to public opinion, whereas on average 57% reported that NSA and military spending were responsive to public opinion, $\chi^2 = 5.17$, $p = .02$.

BFPC and policy responsiveness. Participants who believe that a given policy will change in the future in ways that align with their current policy preferences are coded as showing BFPC. The pre-registered analysis plan describes two strategies for testing whether participants believe that policies that are responsive to public opinion will be more likely to show a BFPC than policies that are not responsive to public opinion. The first involves including all participant responses for a given policy, regardless of whether or not they show a BFF for the policy. In terms of marijuana policy, 81% of participants showed both a BFF and a BFPC. Same sex marriage policy showed the same general pattern, with 83% of participants showing both a BFF and a BFPC. Only 40% of participants showed both a BFF and BFPC for NSA policy, and only 49% of participants showed both a BFF and BFPC for military spending policy. The average percent who showed both a BFF and BFPC for the two policies believed to be highly responsive to public opinion (marijuana and same sex marriage) was 82%, whereas the average for the two policies believed to be less responsive to public opinion (NSA and military spending) was 45%, $\chi^2 = 10.78$, $p = .001$.

The second analysis strategy entailed examining what percent of participants who showed a BFF also showed a BFPC. This strategy is motivated by the presumption that BFF is a necessary precondition for BFF to lead to BFPC. This strategy shows the same pattern as the other

strategy. In terms of recreational marijuana laws, 96% (169/176) of participants who showed a BFF also showed a BFPC. Same sex marriage policy showed the same general pattern, with 96% (172/179) of participants who showed a BFF also showing a BFPC. Only 54% (84/157) of participants who showed a BFF for NSA policy also showed a BFPC. And only 60% (101/167) of participants who showed a BFF for military spending also showed a BFPC. For the two policies believed to be highly responsive to public opinion (marijuana and same sex marriage), the average percent of those who showed a BFF who also showed a BFPC was 96% (170.5/177.5). For the two policies believed to be less responsive to public opinion (NSA and military spending) the average percent of those who showed a BFF who also showed a BFPC was 57% (92.5/162), $\chi^2=9.99$, $p=.002$.

Discussion.
Study 5 provides 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.

Study 6: Can BFF Contribute to Political Inaction?

Study 6b is a large field experiment involving political donations. Participants are led to believe either that their preferred candidate will win (favorable future) or lose (unfavorable future). If believing in a favorable future 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 predict that believing in a favorable future undermines participants' willingness to take action to make that favorable future more likely. Study 6a is a manipulation check showing that the treatment in Study 6b actually alters whether people think the future will be favorable.

Study 6a: Pilot

Method.

Participants. We recruited 352 participants ($M_{age}=33.33$, SD=10.59; 44% female) via Amazon's Mechanical Turk using an announcement that offered to pay self-identified Democrats $.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 based on 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, based on the specific details and messages of the treatments in Study 6b: "*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.*"

Those assigned to the No-BFF condition were then presented with the following information: *"A recent poll came out saying that the election was close and that the Democratic candidate was LOSING."* Those assigned to the BFF condition were then presented with the following information: *"A recent poll came out saying that the election was close and that the Democratic candidate was WINNING."* Those assigned to the Control condition were not presented with any polling information. Following these scenarios 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.

Those assigned to the BFF condition were more likely to think that their candidate was more likely to win the election (95%) than those in the No-BFF condition (13%), Log odds ratio=4.84, *p*<0.001. Those assigned to the BFF condition were more likely to think that their candidate was more likely to win the election (95%) than those in the Control condition (59%), Log odds =2.55, *SE*=0.46, *p*<0.001, and those in the Control condition were more likely to think that their candidate was more likely to win the election (59%) than those in the No-BFF condition (13%), Log odds =-2.29, *SE*=0.33, *p*<0.001.

Study 6b: BFF Field Experiment

Method.

Participants. We sent messages to a total of 660,542 emails addresses from the fundraising email list of the Democratic Governors Association (DGA). Of these, 63,520 had donated to the DGA in the past and 597,022 had not donated in the past. The data do not include age or gender.

Design. Working with a leading online fundraising consultancy (Anne Lewis Strategies, Inc.), we developed two emails that the DGA distributed to its entire fundraising email list. The list contained past donors and prospective donors who the DGA believed were supporters of Democratic candidates and potential donors of Democratic gubernatorial candidates. The emails attempted to raise money on behalf of Charlie Crist, the Democratic candidate for Florida Governor in 2014. Charlie Crist was running against incumbent Republican Governor of Florida, Rick Scott. The emails were sent on June 30, 2014. The content for both emails was based on actual recent polling data. Half of recipients were randomly assigned to receive the BFF condition email (N=330,302), which read:

> *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), which read:

> *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 emails was the same. See SOM for reproductions of both emails.

Results

See SOM for details on the data hygiene and data integration strategy.

"Opened" Emails. Some email viewing platforms inform email senders whether emails have been viewed. Such emails are referred to as having been "opened." This is considered a loose proxy for whether recipients read and engage with an email. Participants in the BFF condition (12.05%) were less likely to open the email than participants in the No-BFF condition (12.33%), controlling for donor status, Log odds=0.026, SE=.0075, p=0.001. The results for this analysis and future analyses are not substantively affected by whether or not we control for donor status, and the pattern is consistent across both donor types (previous and new donors), see SOM. Note that our low response rates are within the range of industry averages for prospect fundraising lists (M+R, 2016).

Click-through. Participants in the BFF condition (0.25%) were less likely to click on the link to donate (embedded within the email) than participants in the No-BFF condition (0.30%),

controlling for donor status, Log odds=0.17, SE=.047, *p*<0.001. The pattern is consistent across both types of donors, see SOM.

Donations. Participants in the BFF condition (N=145, 0.04%) were less likely to make a donation than participants in the No-BFF condition (N=196, 0.06%), controlling for donor status, Log odds=0.30, SE=.11 *p*=0.006. The pattern is consistent across both types of donors, see SOM.

Amount Donated. Participants in the BFF condition donated $2,954.50, averaging $20.38 per donation. Participants in the No-BFF condition donated $4,413, averaging $22.52 per donation. This BFF participants gave less money than No-BFF participants, controlling for donor status, B=0.0044, SE=.0025 *p*=0.077. The test we report is marginally significant using a conservative two-tailed test; the test would be statistically significant with a one-tailed test, which is appropriate given our directional hypothesis. The difference is larger for past donors than new donors, see SOM.

Discussion

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

General Discussion

We demonstrated across seven studies that people hold a belief in a favorable future, and that this belief affects behavior. In Study 1, people believed that their views on politics (abortion, same sex marriage, ideology, partisanship, Trump support), entertainment (interest in NBA), products (soda, phone operating system) and science (climate change) would be more widely held in the future in comparison to the beliefs of those who hold opposing views. Study 2 revealed that the BFF is larger in magnitude than the FCE, is distinct from two forms of optimism, and affects financial decisions. Study 3 showed that the BFF emerges across cultures. Study 4 revealed that the BFF is greatest when people consider their views to be based on objective fact as opposed to subjective taste. Study 5 showed that believing future others will share one's policy preferences can lead to believing one's policy preferences will be enacted in the future. Finally, Studies 6a and 6b showed that people's BFF can reduce their likelihoods of donating money to a campaign that they would like to win.

What other mechanisms might underlie the BFF? Since the FCE is largest when people consider the views of others whom they know as opposed to others whom they do not know (Robbins & Krueger, 2005), the BFF may also be largest for known or similar others, and smallest for unknown or dissimilar others. If anything, this research suggests that our studies may reflect relatively small magnitudes of the BFF, since the future others about whom participants projected were vague and unknown. Another possible driver of the 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 the BFF (see Schmeichel & Martens, 2005).

One implication of the 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, 2006; Quoidbach, Gilbert, & Wilson, 2013). This "end of history" belief may reduce people's vigilance to prevent backsliding and decline. In Study 2, Trump detractors believe there will be even more Trump detractors in a year, while Trump supporters believe there will be even more Trump supporters in a year. Indeed, Study 6b shows that believing the future will unfold in a favorable way can undermine people's motivation to take costly action today to bring about the desired state tomorrow. Consistent with this, Bain et al. (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, the BFF can undermine people's likelihoods of actually making their more favorable futures come to fruition.

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