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## Conservatives are happier than liberals, but why? Political ideology, personality, and life satisfaction <sup>☆</sup>

Barry R. Schlenker <sup>a</sup>, John R. Chambers <sup>a,\*</sup>, Bonnie M. Le <sup>b</sup>

<sup>a</sup> Department of Psychology, University of Florida, Gainesville, Florida, United States

<sup>b</sup> Department of Psychology, University of Toronto, Ontario, Canada

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### ABSTRACT

Political conservatives are happier than liberals. We proposed that this happiness gap is accounted for by specific attitude and personality differences associated with positive adjustment and mental health. In contrast, a predominant social psychological explanation of the gap is that conservatives, who are described as fearful, defensive, and low in self-esteem, will rationalize away social inequalities in order to justify the status quo (system justification). In four studies, conservatives expressed greater personal agency (e.g., personal control, responsibility), more positive outlook (e.g., optimism, self-worth), more transcendent moral beliefs (e.g., greater religiosity, greater moral clarity, less tolerance of transgressions), and a generalized belief in fairness, and these differences accounted for the happiness gap. These patterns are consistent with the positive adjustment explanation.

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### 1. Introduction

Ever since Adorno, Frenkel-Brunswik, Levinson, and Sanford's (1950) pioneering work on authoritarianism, social psychologists have been interested in the relationship between political ideology and personality. For the most part, this work painted an unflattering portrait of political conservatives (Tetlock, 1994; Tetlock & Mitchell, 1993). For example, reviews suggest conservatives are more dogmatic and intolerant of ambiguity; higher in needs for order, structure, and closure; lower in self-esteem; higher in fear of threat and loss; and prefer less complex modes of thinking (Jost, Glaser, Kruglanski, & Sulloway, 2003). Even children in nursery school, who 20 years later self-identify as conservatives, have been described as fearful, rigid, inhibited, and vulnerable (Block & Block, 2006).

In contrast to descriptions of conservatives as fearful and low in self-esteem, research repeatedly reveals another curious finding: Conservatives are happier than liberals. In surveys of people from across the globe, conservatives report being more satisfied with their lives than liberals (Carroll, 2007; Napier & Jost, 2008; Taylor, Funk, & Craighill, 2006). For example, from 2005 to 2007, Gallup

reported that 61% of Republicans said they were personally very happy as compared to only 47% of Democrats (Carroll, 2007). Popular books (e.g., Brooks, 2006, 2008; Schweitzer, 2008) have similarly documented and amplified this theme, pointing to positive qualities associated with conservatism (e.g., being happier, more helpful and generous, harder working, with closer families) in national samples. The ideology–happiness relationship is reliable, small to moderate in size, and potentially quite meaningful given its implications for understanding political ideologies and behavior.

What explains this life satisfaction gap, and how is it reconcilable with psychological descriptions of conservatives? Arguing from a Systems Justification Theory perspective, Napier and Jost (2008) reasoned that conservatives' desire to perpetuate the existing social order leads them to rationalize away social inequality and justify the suffering of disadvantaged groups. For example, when confronted by evidence of social inequalities (e.g., income or health care disparities between African- and European-Americans), conservatives claim the differences are fair while liberals ruminate over them, thereby producing a difference in happiness. Although demographic factors such as age, income, marital status, and church attendance are sometimes mentioned and sometimes controlled for as other contributors to happiness, system justification has been the predominant social psychological explanation.

In contrast, we suggest that other fundamental personality and ideology differences, which have traditionally been associated with positive adjustment and mental health, exist between conservatives and liberals and better explain the gap. These include differences in personal agency, transcendent moral beliefs

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\* Corresponding author. Address: Department of Psychology, University of Florida, Gainesville, FL 32611, United States.

E-mail address: [jrchamb@ufl.edu](mailto:jrchamb@ufl.edu) (J.R. Chambers).

(e.g., religiosity, moral clarity), and positive outlook. As we will show, individual difference measures of system justification are closely related to an array of other measures that are usually seen as markers of positive adjustment and mental health (e.g., personal control, optimism, trust, moral clarity), not as markers of defensiveness and distortion. Finally, we suggest that objective measures of social inequality do not have the implications attributed to them by Napier and Jost. These ideas will be examined in four studies.

By way of brief review, conservatives believe that the traditions of a developed society represent the collective wisdom of the ages, having been adapted to meet the particular needs and challenges of the culture and environment, and therefore ought to be preserved. In contrast, liberalism is based upon beliefs in progress, the essential goodness of the human race (and the related idea that social inequalities reflect failings of society rather than the individual), and the protection of political and civil liberties. Whereas conservatives generally share the basic values of individual freedom combined with individual responsibility, limited government, economic opportunity, strong national defense (and in-group preservation), and belief in a transcendent moral order, liberals place high value on equality, endorse tolerance and pluralism in matters of morals, religion, and politics, and see government as a vital instrument for solving social injustice (Brooks, 2010; Chambers, Baron, & Inman, 2006; Hunter, 1992; Lakoff, 2002).

As these descriptions suggest, conservatives and liberals differ in the moral values they emphasize. Moral foundations theory (Haidt & Graham, 2009) identifies five psychological foundations of morality. The first two, Harm/Care and Fairness/Reciprocity, are called *individualizing foundations* because they focus on the rights and welfare of individuals. The last three, Ingroup/Loyalty, Authority/Respect, and Purity/Sanctity, are called *binding foundations* because they pull people together into cohesive groups and help to suppress individual selfishness. For Haidt (2008a), morality is not just about how people treat each other (the individualizing foundations), “it is also about binding groups together, supporting essential institutions, and living in a sanctified and noble way.” Krebs (2008), in his evolutionary account of morality, similarly emphasized the role that morality plays in promoting cooperation and suppressing selfishness within groups, thereby maintaining a balance between the interests of the individual and the group. Research indicates that liberals emphasize and use the individualizing foundations more than the binding foundations whereas conservatives emphasize and use the five foundations more equally (Graham, Haidt, & Nosek, 2009).

Differences in moral foundations should be associated with more specific demographic, personality, and attitudinal differences. These include the importance of personal agency, transcendent moral beliefs (i.e., religiosity, transcendent vs. relativist moral conviction, tolerance for deviations from prescriptions), and positive outlook.

First, the binding foundations emphasize the effective coordination of activities in groups, promoting intragroup cooperation and minimizing individual selfishness. As such, there is a greater emphasis on a balance between rights and responsibilities, with group members being accountable to one another for regulating their conduct in ways that promote the group’s values and goals while at the same time pursuing their own individual interests to the best of their abilities. One facet is a greater focus on *personal agency*, as expressed in stronger endorsements of personal control (e.g., internal control, conscientiousness, hard work, perseverance), responsibility, and reliability (e.g., trustworthiness). Without personal agency, people can readily shirk responsibilities and excuse transgressions and failures by blaming them on external circumstances. In fact, self-control, along with loyalty and duty, is regarded as a core element in the binding moral foundations

(Graham et al., 2009). Research (Feather, 1984; Phares, 1976) suggests that conservatives generally score higher on internal control as well as the Protestant Work Ethic (PWE), which emphasizes the inherent meaningfulness and value of work and the strong linkage between one’s efforts and outcomes (and is positively associated with achievement; Mirels & Garrett, 1971). Liberals, on the other hand, are more likely to see outcomes as due to factors beyond one’s personal control, including luck and properties of the social system (Mitchell, Tetlock, Mellers, & Ordenez, 1993). Furthermore, perceptions of internal control, self-efficacy, and the engagement in meaningful work are strongly related to life satisfaction (Myers, 1993; Myers & Diener, 1995). These differences in personal agency could, in and of themselves, explain much of the happiness gap.

System justification theory also mentions aspects of personal agency but considers agency to be the outcome of rationalizing the status quo. For example, people can justify inequality by concluding that better outcomes go to those who work harder (Jost & Hunyady, 2005). However, beliefs in personal agency can exist for many reasons other than rationalization (e.g., Bandura, 1997, describes four origins of self-efficacy beliefs, none of which involve rationalization of injustice), and it is an empirical question whether measures of personal agency will mediate happiness independently of measures of system justification.

Second, the binding foundations play a key role in most religions (Haidt, 2008b). Religion provides the ultimate authority figure, sense of purpose, and clear prescriptions for how to live. Spiritual beliefs contribute to life satisfaction because they instill meaning and direction, offer senses of beauty, uplift, and optimism, provide explanations for events, give a sense of closeness to God, and offer comfort in difficult times, and these characteristics are above and beyond the larger, supportive social networks of those who are religious (Cohen, 2002; Myers, 1993). Indeed, religiosity is closely related to life satisfaction (Brooks, 2008; Myers & Diener, 1995), and surveys show that conservatives are more religious than liberals (Saroglou, Delpierre, & Dernelle, 2004). Although Napier and Jost (2008) controlled for church attendance in two of their three studies when testing whether system justification contributed to the happiness gap, they did not test whether the broader concept of religiosity is a contributor in its own right, nor did they discuss possible conceptual reasons why religion may explain the gap.

Religion and type of moral conviction often go together but they are not coextensive. People differ in the extent to which they see moral prescriptions as objective, stable, and universal vs. subjective, changeable, and local (Schlenker, Miller, & Johnson, 2009). By believing in the objectivity of moral principles and having clear prescriptions for how to live, people can derive a sense of purpose and meaning in life. Indeed, people who report greater transcendent moral commitment also display greater purpose in life and less normlessness or alienation (Schlenker, 2008), and purposefulness is associated with greater life satisfaction (Ryan, 1981). A transcendent as compared to relativist moral code also implies less tolerance for deviations. If moral prescriptions are clear and universally applicable, they *should* be followed, transgressions *should* be condemned, and self-serving excuses and justifications for failing to live up to those prescriptions become less acceptable (Schlenker, Weigold, & Schlenker, 2008). A relativist moral code more readily permits people to excuse or justify failures to do the “right” thing. When moral codes lack clarity and promote flexibility, people may come to feel a sense of normlessness (lack of purpose in life) and alienation. Further, if people believe there are acceptable excuses and justifications for morally questionable acts, they are more likely to engage in those acts, which in turn can create problems and unhappiness (Schlenker et al., 2009). Although relevant data are scarce, there are indications that conservatives are more likely to endorse the steadfast commitment

to transcendent moral principles than are liberals (Schlenker, 2008). Thus, greater moral objectivity and less tolerance of transgressions also could contribute to an ideological happiness gap.

Third, optimism and feelings of self-worth are indicators of positive outlook and are important predictors of happiness (Myers & Diener, 1995). Personal agency, religious faith, and transcendent moral commitment can all contribute to a positive outlook, facilitate coping with problems, and help to ward off depression during times of trouble (Bandura, 1997; Myers, 1993; Myers & Diener, 1995; Ryan & Deci, 2000; Snyder & Lopez, 2007). If conservatives exhibit more of these traits, they may also exhibit a more positive outlook characterized by optimism, feelings of self-worth, and lower depression. These relationships would support a positive adjustment explanation of the happiness gap but contradict the description of conservatives as low in optimism and self-esteem (Jost et al., 2003).

Political commentators suggest that conservatives and liberals differ in their views of how best to help those in need and what best constitutes fairness itself. Liberals define fairness more in terms of equality (equal outcomes regardless of contributions) and turn to government as the vehicle for enforcing social justice and helping those in need. Conservatives define fairness more in terms of equity (outcomes should be proportional to contributions), rely on free markets to distribute outcomes, and prefer individuals and private organizations, not government, to contribute to the care and protection of those in need. We wanted to examine (a) whether ideological differences in these core values and beliefs exist, (b) if these differences are related to happiness, and (c) if this relationship can be explained by differences in personal agency.

In sum, conservative and liberal ideologies seem to differ on numerous dimensions related to positive adjustment and life satisfaction. In our research, we measured individual differences that represent the dimensions above and examined how these are related to political ideology and life satisfaction. We expected that conservatives would (among other things) have a stronger sense of personal agency, more transcendent moral beliefs (i.e., be more religious, more committed to transcendent moral principles, and more condemning of unethical behavior), and a more positive outlook. We also expected that these differences can account for the life satisfaction gap and would do so above and beyond any differences in system justification. Further, given its items, we suspected that individual difference measures of system justification do not have the implications of defensiveness and rationalization that are attributed to them.

Four studies, using a wide range of respondents and measures, examined the positive adjustment explanation. In Study 1, we used a college sample and popular, well validated measures of key constructs. In Studies 2 and 3, we examined the generalizability of our results by using large, representative national samples that contained more restricted sets of measures. In Study 4, we examined whether the Gini index, an objective measure of social inequality used by Napier and Jost to conclude that conservatives rationalize injustice, has the implications they attributed to it.

## 2. Study 1

### 2.1. Method

#### 2.1.1. Participants

University of Florida students ( $n = 416$ ) participated to fulfill a course research requirement. The sample was diverse in terms of reported party affiliations, ethnicities, family income levels, and college majors: Gender: 31% Male, 69% Female; Party affiliation:

31% Republican, 41% Democrat, 29% Other Party/No Affiliation; Ethnicity: 54% European-American, 18% African-American, 15% Hispanic, 8% Asian, 4% Other ethnicity/Prefer not to answer; Parental income (annual): 23% below \$40,000, 40% \$40,000–90,000, 36% above \$90,000; College major: 24% Social sciences, 24% Physical sciences, 6% Engineering, 8% Business, 38% Other/Undeclared.

#### 2.1.2. Procedure and materials

Participants completed the questionnaire in two sessions 1 week apart.<sup>1</sup> It included 27 measures of possible key differences between liberals and conservatives, most of which focused on the major dimensions described in the introduction. The measures, listed in Appendix A, included ones designed to assess personal agency; religiosity; the steadfast commitment to moral principles; the willingness to excuse and justify social, legal, and moral transgressions; purposefulness in life; and core political values (e.g., preference for equity vs. equality, preference for government vs. private solutions to social problems). Also included were personality/attitude measures commonly associated with conservatism (e.g., system justification, authoritarianism), measures of self-esteem, optimism, and depression, preference for values (e.g., individual rights, social standing) and personal qualities (e.g., competence, caring), unconventional beliefs (e.g., psychic phenomena), and attitudes toward select social issues. Almost all of these measures have been used and validated in prior research, and many contain submeasures to allow for fine-tuning the construct.

The Value Scale included 18 values and personal qualities (e.g., Personal Growth, Competence), derived with some modifications from Braithwaite and Law (1985); we added items assessing dimensions not contained in the original (e.g., Moral Commitment, consisting of ratings of the value of morality, integrity, honor, duty). The measures of political attitudes (e.g., divisive issues like abortion, preferences for equity vs. equality, limited vs. activist government) were developed for this study. In addition, standard demographic variables were assessed.

The key measure of political ideology asked participants to rate their political beliefs from liberal (1) to conservative (5), which is comparable to the ideology item used by Napier and Jost (2008). Although political ideologies are multifaceted, a single liberal-conservative (or left–right) dimension has been used frequently in research and shown to have reasonable predictive validity across many domains (Jost, 2006). The key measure of life satisfaction was a composite of 2 measures averaged together: the 5-item Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) and a single item asking participants how satisfied they are with their lives overall (taken from Napier & Jost, 2008). The two satisfaction measures were highly correlated ( $r = .63$ ,  $p < .001$ ) and each was significantly related to conservatism ( $r_s = .16$  and  $.17$ ,  $p < .001$ ), which justified combining them.

### 2.2. Results

Replicating evidence for the happiness gap, conservatism was positively related to life satisfaction,  $r = .18$ ,  $p < .001$ , and even after controlling for participants' age, gender, and family income level,  $r = .16$ ,  $p = .001$ . Conservatives are indeed happier than liberals.

<sup>1</sup> Political self-identification, happiness, and most personality measures were given on the first day and the measures of social distancing, values and personal qualities, Big 5, and political attitudes (divisive social issues, role of government, equity/equality preference) were given on the second day. Some participants (14%; 60/416) did not return for the second session so the latter measures had 356 respondents. An additional 14 participants failed to complete several pages of the questionnaires and their data were excluded from the sample.

Our analytical plan was first to group measures of possible mediators of the happiness gap into a meaningful number of smaller categories using a principal component analysis. Second, we created composite measures of each of the component groupings and tested whether these composites (along with each of the scales that comprised them) could be considered mediators. Third, we used regression analyses to assess whether the measures could uniquely predict happiness after controlling for other possible mediators (e.g., Does personal agency predict happiness after controlling for system justification?). Finally, we examined properties of the System Justification Scale to determine how it fit into the nomological net of other measures.

### 2.2.1. Dimensions related to political ideology and life satisfaction

Table 1 shows the measures that were significantly related to both political ideology and life satisfaction, and therefore may be possible mediators of the conservatism–life satisfaction relationship. To group these variables into meaningful categories, we submitted them to a principal component analysis, which yielded seven distinct components (all Eigenvalues > 1, accounting for 61.1% of the cumulative variance, with scales classified within a component having loadings >.40 after an orthogonal varimax rotation). As overview, the components reflected the major categories described in the introduction: *personal agency*, *positive outlook*, three groupings of *transcendent moral beliefs* (traditional religiosity,

**Table 1**  
Personality, attitude, and value variables that were related to both criteria of political ideology and life satisfaction in Study 1.

Composite and measure/submeasure (PERS)	M (SD)	Correlation with		Sobel test for
		Conservatism (CONS) <i>r</i>	Life satisfaction (SATIS) <i>r</i>	PERS mediation of CONS-SATIS <i>z</i>
Personal Agency		<b>.25***</b>	<b>.51***</b>	<b>4.68***</b>
Spheres of Control Scale: Total	3.41 (0.35)	.15**	.44***	3.03**
Spheres of Control Scale: Personal Efficacy	3.80 (0.45)	.18***	.35***	3.23**
Spheres of Control Scale: Interpersonal Control	3.48 (0.55)	.14**	.49***	2.83**
Responsibility Scale: Total	3.60 (0.51)	.23***	.45***	4.29***
Responsibility Scale: Clarity	3.50 (0.81)	.19***	.42***	3.52***
Responsibility Scale: Obligation	3.58 (0.61)	.19***	.17***	2.37*
Responsibility Scale: Control	3.73 (0.61)	.14**	.41***	2.82**
Conscientiousness (Big Five Inventory)	3.62 (0.83)	.14**	.27***	2.39*
Positive Outlook and Self-Worth		<b>.18***</b>	<b>.63***</b>	<b>3.68***</b>
Life Orientation Test: Revised [Optimism]	3.54 (0.71)	.13**	.48***	2.58**
Self-Esteem Scale	3.86 (0.73)	.10*	.60***	1.94*
Center for Epidemiological Studies Depression Scale (CES-D) (-)	1.82 (0.54)	-.17***	-.53***	3.37***
Patient Health Questionnaire (PHQ-9) (-) [Depression symptoms]	1.73 (0.63)	-.19***	-.45***	3.65***
Traditional Religiosity		<b>.39***</b>	<b>.21***</b>	<b>3.02**</b>
Traditional Religious Beliefs (Paranormal Beliefs Scale)	3.97 (1.03)	.31***	.17***	2.25*
Intrinsic Religiosity (Religiosity Scale)	2.08 (0.59)	.32***	.10*	0.90
Normlessness Scale (-)	3.21 (0.89)	-.32***	-.23***	3.33***
Moral Commitment		<b>.26***</b>	<b>.23***</b>	<b>3.31***</b>
Integrity Scale	3.58 (0.53)	.21***	.20***	2.72**
Personal Commitment (Value Preferences Scale)	3.85 (0.70)	.20***	.22***	2.65**
Moral Commitment (Value Preferences Scale)	4.16 (0.66)	.29***	.10*	1.05
National Strength (Value Preferences Scale)	3.91 (0.71)	.19***	.17**	2.13*
Tolerance of Transgressions		<b>-.27***</b>	<b>-.24***</b>	<b>3.34***</b>
Morally Debatable Behaviors Scale	3.74 (0.54)	-.39***	-.17***	2.25*
Moral Disengagement Scale: Total	2.07 (0.47)	-.12**	-.18***	2.01*
Displacement of Blame (Moral Disengagement Scale)	1.97 (0.61)	-.22***	-.21***	2.86**
Diffusion of Responsibility (Moral Disengagement Scale)	2.02 (0.65)	-.12*	-.19***	1.99*
Advantageous Comparisons (Moral Disengagement Scale)	1.73 (0.68)	-.12*	-.20***	2.05*
Euphemistic Language (Moral Disengagement Scale)	2.02 (0.67)	-.15**	-.10*	1.33
System Satisfaction		<b>.19***</b>	<b>.36***</b>	<b>3.41***</b>
System Justification Scale	2.94 (0.59)	.19***	.33***	3.33***
Global Belief in a Just World Scale	3.06 (0.72)	.13**	.27***	2.32*
Other Measures				
Authoritarianism Scale	2.54 (0.71)	.54***	.15**	1.39
Dogmatism Scale	2.98 (0.37)	.17***	-.15**	-2.55*
Protestant Work Ethic Scale	3.53 (0.49)	.17***	.18***	2.32*
(Conservative) Political Attitudes		<b>.62***</b>	<b>.24***</b>	
Attitudes toward divisive social issues	3.39 (0.52)	.62***	.23***	
Attitudes toward goals/implementation of social policy	3.52 (0.49)	.41***	.18***	
Attitudes toward limited (vs. activist) role of government	3.42 (0.53)	.35***	.15**	
Attitudes toward equity (vs. equality) as distribution goal	3.68 (0.61)	.42***	.17**	

Note: For each variable, larger numbers reflect more of the construct (e.g., greater personal agency). For (Conservative) Political Attitudes, higher numbers indicate a more conservative position towards divisive social issues (e.g., opposing gun control and abortion) and the goals and implementation of social policy (e.g., preferring limited over activist government, favoring equity over equality distribution rules). All measures were on 5-point (1–5) scales except the Religiosity Scale (1–3 scales) and the two measures of depression, CES-D and PHQ-9 (1–4 scales). Measures with a (-) after their names (i.e., normlessness and the two depression measures) loaded negatively on the component and were reverse scored before calculating a composite average.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

moral commitment, tolerance of transgressions), as well as a component that included system justification and a component with specific political attitudes. We subsequently tested the average score on measures within each component (shown in bold highlighting in Table 1). When creating composites from the groupings, all measures were converted to z-scores before mean composite scores were calculated. This procedure allowed the individual scales to be comparably weighted in the composite scores and the composite scores to correlate with one another, as we would expect them to be in natural settings (e.g., religiosity should be related to positive outlook).<sup>2</sup>

**2.2.1.1. Personal agency.** This component reflected personal responsibility and control ( $\alpha = .75$  for the composite). Relative to liberals, conservatives scored higher on two measures of personal control (i.e., personal efficacy, interpersonal control), the three facets of personal responsibility (i.e., believe that prescriptions for goal-achievement are clearer, they are obligated or duty-bound to follow those prescriptions, and they have more personal control over their outcomes, see Schlenker, 1997), and conscientiousness.<sup>3</sup>

**2.2.1.2. Positive outlook and self-worth.** Conservatives exhibit a more positive outlook and stronger feelings of self-worth, as indicated by greater optimism and self-esteem as well as lower depression and depressive symptomology ( $\alpha = .83$  for the composite).

**2.2.1.3. Traditional religiosity.** This component grouped measures of religiousness and purpose in life, comprising what might be described as traditional religious attitudes ( $\alpha = .70$  for the three-measure composite).

<sup>2</sup> To ensure that the composite scores could be interpreted straightforwardly and more readily replicated (given that they are comprised primarily of established scales in their own rights), we planned to assign each scale to its primary component and weight them equally, so long as the groupings made conceptual sense and were statistically reliable. As such, our composite measures of the groupings were not component (or factor) scales but averages of the z-scores in each grouping, and these would be the same regardless of rotation type. Nonetheless, to address whether useful information might be missed by an orthogonal rotation, which yields uncorrelated dimensions, we also conducted an oblique (promax) rotation to permit the components to correlate. Identical scales comprised the seven components after the oblique rotation. There were no substantive changes in any of our groupings or conclusions. The major difference was that the Integrity Scale has secondary loadings on the Traditional Religiosity and Tolerance of Transgressions components after the oblique rotation, which is not surprising given that the scale assesses the commitment to moral principles. It is worth noting that Authoritarianism again loaded on only one component. Finally, both rotations indicated that PWE, self-esteem, and optimism had secondary loadings on Personal Agency, and dogmatism had loadings on Positive Outlook (negatively) and System Satisfaction. Although we prefer the composite scores, we also calculated component scores (i.e., weighted by loading) after the promax rotation and tested these to determine if (a) they were each significantly related to conservative self-ratings and to life satisfaction, and (b) they were each significant when tested as mediators of the political ideology–happiness relationship. Each of the component scores was significantly related (all  $ps < .05$ ) to both conservatism and life satisfaction and each was a significant mediator of this relationship (all  $ps < .05$ ), thereby showing the same results as those in Table 1. Thus, comparable patterns were obtained regardless of how we calculated grouping scores. We will first describe the groupings and then report their possible roles as mediators.

<sup>3</sup> The first two measures are from the Spheres of Control Scale, which includes three subscales: Personal efficacy, interpersonal control, and sociopolitical control. Total scores on the Spheres of Control Scale were related to both conservatism and life satisfaction, and were a possible mediator of the relationship between conservatism and life satisfaction (see Table 1). However, the sociopolitical control subscale, which assesses feelings of control about distal sociopolitical events, was unrelated to conservatism ( $r = .01$ , *ns*) and satisfaction ( $r = .06$ , *ns*). This pattern suggests that personal control over more proximal events is the better predictor of both criteria. Table 1 therefore focuses on the personal efficacy and interpersonal control subscale results and we only included these subscales in the composite grouping. The Responsibility Scale also includes three subcomponents relating to distinct facets of responsibility; we show the three subcomponents along with the total score to demonstrate that all three were related to both political ideology and life satisfaction (the three subscales, not the total score, were included in the composite grouping).

sure composite). Consistent with prior research, conservatives more strongly endorsed traditional religiosity (measures of traditional religious beliefs and intrinsic religiosity) and purpose in life (the Normlessness Scale, reverse scored, which assesses feelings of purposefulness–meaning vs. alienation–normlessness).<sup>4</sup>

Right-wing authoritarianism also loaded in this grouping (and only in this grouping), perhaps because many of the items endorse beliefs held by social conservatives and religious fundamentalists (e.g., “God’s laws,” “old fashioned values,” “established authorities”). Authoritarianism was correlated with the three-measure religiosity composite ( $r = .65$ ,  $p < .001$ ) and, if added to form a four-measure composite, showed the same patterns in subsequent analyses. However, to avoid the possibility that any patterns involving this composite might be attributed to authoritarianism items, we did not include it in the composite and instead show the results separately (“other measures” in Table 1). It is worth adding that authoritarianism did not uniquely predict happiness. When authoritarianism and the composite Traditional Religiosity measure were entered simultaneously in a regression as predictors of happiness, religiosity was significant ( $\beta = .20$ ,  $p < .002$ ) but authoritarianism was not ( $\beta = .03$ ,  $p = .68$ ).

**2.2.1.4. Moral commitment.** Conservatives scored higher on the Integrity Scale, which assesses commitment to transcendent moral principles, as well as the Value Scale measures of Moral Commitment (e.g., values of morality, duty, honor), Personal Commitment (e.g., value-instrumental personal qualities like having integrity, being moral, standing up for one’s beliefs), and National Strength and Order (e.g., values of the rule of law, national economic development, national security), which can be considered in the binding moral value category (Haidt, 2008b);  $\alpha = .70$  for the four-measure composite.

**2.2.1.5. Tolerance of transgressions.** The next component represents the Tolerance of Transgressions through the use of various excuses and justifications ( $\alpha = .79$  for the composite). Higher scores on the Morally Debatable Behavior Scale indicate a willingness to justify a variety of moral and legal transgressions (e.g., cheating on taxes, lying, infidelity, drug use), and higher scores on the Moral Disengagement Scale indicate the distancing of oneself from transgressions through various excuses and justifications. Conservatives scored lower on both measures, indicating less willingness to tolerate transgressions, and lower scores were associated with greater life satisfaction. Interestingly, the relationships with moral disengagement were strongest for the subcomponents most closely dealing with reducing personal responsibility.<sup>5</sup>

**2.2.1.6. System satisfaction.** This component included the System Justification Scale (SJS) and Global Belief in a Just World Scale

<sup>4</sup> The measure of Traditional Religious Beliefs was taken from the Paranormal Beliefs Scale (PBS). The PBS includes (a) the submeasure of Traditional Religious Beliefs (e.g., belief in God, the Devil, and an afterlife) which, as would be expected, was positively related to conservatism and life satisfaction (see Table 1), as well as (b) six submeasures of various kinds of unconventional or mystical beliefs (e.g., belief in the Loch Ness Monster, mind reading, witchcraft), which were negatively related to conservatism and unrelated to life satisfaction (see Table 4). Because they are conceptually distinct and the beliefs tapped by these measures (traditional religion vs. New Age mysticism/paranormal) have opposite patterns with conservatism and life satisfaction, we analyzed the Traditional Religious Beliefs submeasure separately from the others. The measures of Traditional Religious Beliefs and Intrinsic Religiosity were highly correlated ( $r = .61$ ,  $p < .001$ ).

<sup>5</sup> Total moral disengagement scores were negatively related to both conservatism and happiness, but four of the eight subscales (see Table 1) primarily accounted for the relationships. Three of these were disengagement strategies that are most representative of lowering personal control and responsibility (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996), and only these three were significant mediators (see Table 1). The four subscale scores, not the total score, were included in the composite.

(BJWS). Conservatives scored higher on both and both were related to life satisfaction. There are conceptual similarities between system justification and belief in a just world (Kay & Jost, 2003) and the measures were correlated ( $r = .40, p < .001$ ), although the reliability for the two-measure composite was not as high as desired ( $\alpha = .57$ ). Given that our focus was on system justification, we will mention results for the SJS as well as the composite.

**2.2.1.7. Other measures.** Two other scales, Protestant Work Ethic (PWE) and Dogmatism, did not fit cleanly into the groupings. PWE loaded highest on System Satisfaction, probably because some items reflect beliefs in the fairness and appropriateness of equitable distributions (Jost & Hunyady, 2005), but also had a secondary loading on Personal Agency, reflecting beliefs in self-reliance and in hard work affecting outcomes. Dogmatism similarly loaded highest on System Satisfaction, although it does not seem to fit well conceptually in that grouping (e.g., it was unrelated to the SJS,  $r = -.02, p = .76$ ), and also had a secondary (negative) loading on Positive Outlook. To help decide how to treat these scales, we examined whether PWE and Dogmatism made unique contributions to the prediction of happiness beyond the other composites; neither did. PWE was a significant predictor of happiness when entered along with conservatism ( $\beta = .15, p = .002$ ; conservatism was also significant,  $\beta = .15, p = .002$ ); however, PWE was no longer significant ( $ps > .21$ ) when Personal Agency or System Satisfaction was added. Dogmatism similarly predicted happiness when entered in a regression along with conservatism ( $\beta = -.18, p < .001$ ; conservatism was also significant,  $\beta = .21, p < .001$ ); however, dogmatism was no longer significant ( $p = .45$ ) when Positive Outlook was added. Given the multifaceted nature of these scales and the fact that they do not explain unique variance in happiness beyond our composite variables, we decided to omit them from the composites and report them separately in Table 1 (“other measures”).

**2.2.1.8. Conservative attitudes.** This consists of measures of attitudes about current social issues and the goals and implementation of social policies ( $\alpha = .77$  on all items). One subscale asked for opinions on a variety of Divisive Social Issues (e.g., abortion, gun control, climate change). Two Social Policy scales asked for attitudes about the role of government (i.e., limited vs. activist; e.g., “It is usually better to help people through government programs than through private charities”) and the goals of equality vs. equity (e.g., “It is fairer to give everyone the same amount than to give larger rewards to those who produce more”). As expected, these subscales (scored so that higher scores equal greater conservatism) were positively related to self-described conservatism and to life satisfaction (see Table 1).

Because Napier and Jost (2008) used political self-descriptions to define an individual’s conservative vs. liberal position, we will focus on that measure as our key predictor variable in the mediation analyses. Conceptually, we regard political self-descriptions and these political attitudes as distinct facets of a political self-schema, and the two are highly correlated ( $r = .62, p < .001$ ). The attitude measures provide slightly different types of information about an individual’s political ideology, and we will provide further analyses of these items shortly.

### 2.2.2. Mediation analyses

Are differences on these composites possible explanations for why conservatives are happier than liberals? To find out, we conducted mediation analyses (Baron & Kenny, 1986) to test whether the relationship between conservatism and life satisfaction can be explained by their associations with various third variables (e.g., Personal Agency). The results, shown in the rightmost column of Table 1, indicate that relationship may be mediated by differences in our predicted variables. Composite measures reflecting *Personal*

*Agency, Positive Outlook, Religiosity, Moral Commitment, Tolerance of Transgressions, and System Satisfaction* were all significant mediators when tested individually. Most of the individual scales that constituted each composite were also significant mediators.

### 2.2.3. Regression analyses

Next, we wanted to see how well these six measures explained the relationship in combination with one another, so we conducted a series of regressions with simultaneous entry of variables (zero-order correlations are presented in Table 2). Three patterns were noteworthy.

First, when conservatism and one of the six composite measures were entered as predictors of life satisfaction, only two composites resulted in conservatism no longer being a significant predictor: Personal Agency ( $\beta = .50, p < .001$ ; conservatism:  $\beta = .06, p = .21$ ) and Positive Outlook ( $\beta = .62, p < .001$ ; conservatism:  $\beta = .06, p = .10$ ). In all other cases, both conservatism and the other predictor were significant. For example, System Satisfaction ( $\beta = .34, p < .001$ ) and conservatism ( $\beta = .11, p = .02$ ) were both significant predictors of life satisfaction (as was the System Justification Scale,  $\beta = .31, p < .001$ , and conservatism,  $\beta = .12, p = .01$ ).

Second, to determine if the composites predicted happiness above and beyond the contribution of System Satisfaction, we conducted regressions using each to predict life satisfaction while controlling for System Satisfaction. Each of the composites were significant predictors ( $\beta s > .18, ps < .001$ ). In short, they cannot be regarded merely as by-products of system justification. (The same conclusions apply if the System Justification Scale is substituted for the System Satisfaction composite,  $\beta s > .17, ps < .001$ .)

Third, when conservatism and all six measures were entered simultaneously to predict life satisfaction, three were significant predictors: Personal Agency ( $\beta = .17, p = .001$ ), Positive Outlook ( $\beta = .48, p < .001$ ), and System Satisfaction ( $\beta = .17, p < .001$ ). Religiosity ( $\beta = .04, p = .35$ ), Moral Commitment ( $\beta = -.00, p = .93$ ), Tolerance of Transgressions ( $\beta = -.03, p = .46$ ), and conservative self-identifications ( $\beta = -.01, p = .90$ ) were insignificant. Note that conservatism no longer explained any of the variance in life satisfaction after controlling for the other predictors. (If the System Justification Scale scores are substituted for the System Satisfaction composite in this analysis, the same conclusions hold.)

We wanted to understand why the composites dealing with transcendent moral beliefs were no longer significant when entered simultaneously with the other predictors. Despite their expected conceptual and statistical overlap (see Table 2,  $r s > \pm .34, ps < .001$ ), Religiosity, Moral Commitment, and Tolerance of Transgressions were each significant ( $\beta s \geq \pm .11, ps < .03$ ) when entered together in a regression to predict happiness, so they did not merely cancel one another out. Adding Positive Outlook with the three composites to predict happiness was sufficient to make each of the morals composites become insignificant predictors; neither Personal Agency nor System Satisfaction alone did the same. Thus, the three morals composites overlap and are closely associated with Positive Outlook, which overwhelms their predictive contribution in a regression when all are entered simultaneously.

### 2.2.4. System justification

We also wanted to understand why the System Satisfaction composite (and the SJS) was playing a role in the happiness gap – is it justification of inequality or something else? According to Kay and Jost (2003), system justification is the “rationalization of the status quo” designed to ward off threats, such as the possibility that economic outcomes are unjust (p. 825). Through stereotyping, prejudice, and a variety of psychological distortions, conservatives preserve their perceptions of the legitimacy of the system. Further, Kay and Jost state that “we do not see this propensity as driven

**Table 2**  
Correlations of the composite mediators in Study 1.

	Personal Agency	Positive Outlook	Traditional Religiosity	Moral Commitment	Tolerance of Transgressions	System Satisfaction	System Justification Scale	Belief in Just World Scale
Personal Agency	–							
Positive Outlook	.55***	–						
Traditional Religiosity	.20***	.25***	–					
Moral Commitment	.39***	.26***	.34***	–				
Tolerance of Transgressions	–.34***	–.28***	–.37***	–.42***	–			
System Satisfaction	.38***	.27***	.05	.14**	–.02	–		
System Justification Scale	.31***	.29***	.08	.14**	–.03	.84***	–	
Belief in Just World Scale	.33***	.17***	.00	.10*	.00	.84***	.40***	–

Note: Although we focused on the System Satisfaction composite in our analyses, correlations with the System Justification Scale and Global Belief in a Just World Scale are shown to indicate their similar relationships with other measures.

\*  $p \leq .05$ .

\*\*  $p \leq .01$ .

\*\*\*  $p \leq .001$ .

**Table 3**  
Correlations of the System Justification Scale and Global Belief in a Just World Scale with other personality and attitude measures in Study 1.

Personality/attitude measure	System Justification Scale	Belief in Just World Scale
Personal Agency Composite Measure	.31***	.33***
Spheres of Control Scale (total score)	.30***	.25***
Responsibility Scale (total score)	.33***	.32***
Positive Outlook and Self-Worth Composite Measure	.29***	.17***
Self-Esteem Scale	.26***	.21***
Optimism (Life Orientation Test-Revised)	.23***	.15**
Center for Epidemiological Studies Depression Scale (CES-D)	–.25***	–.13**
Patient Health Questionnaire (PHQ-9) [Depressive symptoms]	–.19***	–.06
Traditional Religiosity Composite Measure	.08	.00
Moral Commitment Composite Measure	.14**	.10*
Tolerance of Transgressions Composite Measure	–.03	.00
Morally Debatable Behavior Scale	–.08	.02
Moral Disengagement Scale	.06	.10*
Trust	.29***	.18***
Cynicism	–.10*	.16***
Protestant Work Ethic Scale	.16***	.41***
Dogmatism	–.02	.18***
Authoritarianism Scale	.14**	.17***
Conservative Attitudes Composite Measure	.19***	.03
Attitudes toward divisive social issues	.23***	.00
Attitudes toward nonactivist vs. activist government	.08	.02
Attitudes toward equity vs. equality as social policy goal	.14**	.06
Extrinsic Religiosity	.14**	.16**
Socially Desirable Responding	.08	.12*
Need for Closure Scale	.17***	.22***
Big Five Inventory: Extraversion	.10*	.09
Big Five Inventory: Agreeableness	.12*	.03
Big Five Inventory: Conscientiousness	.13**	.08
Big Five Inventory: Neuroticism	–.19***	–.07
Big Five Inventory: Openness	–.10*	–.14**

Note: For each variable, larger numbers reflect more of the construct (e.g., greater personal agency, more tolerance of transgressions). For the attitudes measures, higher numbers indicate a more conservative position towards divisive social issues (e.g., opposing gun control or abortion) and the goals and implementation of social policy (e.g., preferring limited over activist government, favoring equity over equality distribution rules).

\*  $p \leq .05$ .

\*\*  $p \leq .01$ .

\*\*\*  $p \leq .001$ .

solely (or even primarily) by the need for personal control or the desire for justice to be done" (p. 825).

To gain a better understanding of the properties of the SJS, we looked at its relationships to other measures. As shown in Table 3, SJS scores were positively related to trust, the components of Personal Agency, optimism, self-esteem, agreeableness, Moral Commitment, and work ethic, and were negatively related to depression, neuroticism, and cynicism. This combination would

usually be regarded as indicating positive adjustment and mental health, and would seem inconsistent with the darker view of conservatives as defensive and fearful.

Next, we wanted to see which aspects of the SJS were partially mediating the ideological happiness gap. Is it something about perceived fairness, injustice, societal problems, or something else? The SJS and the BJWS (Lipkus, 1991) each have eight items and are conceptually similar in that they deal with perceived fairness and

**Table 4**

Personality, attitude, and value variables that were related only to one of the criteria of political ideology and life satisfaction in Study 1.

Measure/submeasure	M (SD)	Correlation with	
		Conservatism <i>r</i>	Life satisfaction <i>r</i>
<i>Measures related to ideology but not life satisfaction</i>			
Need For Closure Scale	3.21 (0.38)	.19***	.07
Paranormal Beliefs Scale (PBS) Total (minus Traditional Religious Beliefs)	2.12 (0.68)	-.25***	.01
PBS: Psi Phenomena	2.10 (0.86)	-.23***	.01
PBS: Witchcraft	2.15 (1.03)	-.11*	.04
PBS: Spiritualism	2.26 (0.91)	-.30***	.02
PBS: Extraordinary Life Forms	2.35 (0.80)	-.19***	-.05
PBS: Precognition	2.14 (0.85)	-.22***	-.00
PBS: Superstition	1.67 (0.82)	-.10*	-.05
Big Five Inventory: Openness	3.59 (0.88)	-.13**	-.01
Value Scale			
International Harmony and Equality	4.11 (0.58)	-.12*	.01
Propriety in Manners and Appearance	3.61 (0.66)	.12*	.09
Impulsivity	3.04 (0.89)	-.19***	-.00
Social Distancing Scale (SDS) Total	2.95 (0.52)	.17***	.03
SDS: Foreigners and Religions (e.g., Muslims)	2.66 (0.83)	.17**	.04
SDS: African-Americans and Hispanics	2.02 (0.86)	.13**	.01
SDS: Other ideologies (e.g., Communists)	2.94 (0.77)	.21***	-.01
<i>Measures related to life satisfaction but not ideology</i>			
Cynicism (Philosophies of Human Nature Scale)	3.43 (0.52)	.05	-.11*
Socially Desirable Responding Scale	1.74 (0.27)	-.01	.21***
Big Five Inventory: Extraversion	3.34 (0.92)	-.08	.23***
Big Five Inventory: Agreeableness	3.64 (0.79)	.03	.29***
Big Five Inventory: Neuroticism	2.94 (0.95)	-.02	-.34***
Value Scale			
Physical Well-Being	4.16 (0.71)	.03	.12*
Getting Ahead (Ambition)	3.77 (0.70)	.01	.13*

Note: For each variable, larger numbers reflect more of the construct (e.g., greater need for closure). All measures were on 5-point (1–5) scales except the Socially Desirable Responding Scale (2-point, True or False).

\*  $p \leq .05$ .\*\*  $p \leq .01$ .\*\*\*  $p \leq .001$ .**Table 5**

Correlations of personality and attitude variables with political ideology and life satisfaction (and mediation tests) in Studies 2 and 3.

Study	<i>df</i>	M (SD)	Correlation with		Sobel test for PERS mediation of CONS-SATIS <i>z</i>
			Conservatism (CONS) <i>r</i>	Life satisfaction (SATIS) <i>r</i>	
<b>Study 2</b>					
Personal Control	3411	7.74 (1.85)	.10***	.40***	5.73***
Religiosity	3375	1.80 (0.40)	.12***	.09***	3.56***
Moral Clarity	2246	2.04 (0.97)	.19***	.05***	1.60
Tolerance of Transgressions	1098	2.74 (1.24)	-.26***	-.10***	2.75**
System Justification I: System Defended	2168	2.11 (0.48)	.10***	.05*	1.60
System Justification II: Income Inequality Defended	3384	5.77 (2.51)	.22***	.08***	3.08***
<b>Study 3</b>					
Personal Control	1118	5.61 (1.31)	.09***	.14***	2.43*
Positive Outlook	981	3.16 (0.46)	.08*	.36***	2.35*
Religiosity	5384	2.65 (0.95)	.22***	.11***	6.69***
Moral Clarity	5409	1.80 (0.88)	.19***	.04***	1.98*
Tolerance of Transgressions	2214	1.72 (0.62)	-.14***	-.04*	1.67
System Justification	1106	3.10 (1.23)	.15***	.10**	2.63**

Note: These analyses controlled for age, gender, income, and education level. For each variable, larger numbers reflect more of the construct (e.g., greater personal control, more tolerance of transgressions).

\*  $p \leq .05$ .\*\*  $p \leq .01$ .\*\*\*  $p \leq .001$ .

justice (Kay & Jost, 2003). The BJWS also was a significant mediator of the happiness gap (Table 1), showed many of the same relationships to other variables as did the SJS (Table 3), and, if substituted for SJS in regressions predicting happiness from conservatism and the composites, also was significant ( $\beta = .13$ ,  $p < .001$ ) and showed comparable patterns to SJS. As such, we wanted to identify

common properties and to determine which of these properties were central as a mediator.

We conducted a principal components analysis of the combined pool of items from both scales and found four components (all Eigenvalues > 1, accounting for 58.6% of the cumulative variance). The first was a belief in *Equitable Outcomes* (e.g., "I feel that people

earn the rewards and punishments they get” [BJWS]; “Society is set up so that people get what they deserve” [SJS]). The second seemed to represent a belief in *Generalized Fairness*; the two items with the highest loadings ( $>.75$ ) were “In general, you find society to be fair” [SJS]; “I basically feel that the world is a fair place” [BJWS]). The last two components contained only items from the SJS and seemed to reflect (3) *Affirmations of Society* (“The United States is the best country in the world to live” [SJS]; “Most policies serve the greater good” [SJS], loadings of each  $>.70$ ), and (4) two reverse-scored items reflecting *Condemnations of Society* (“American society needs to be radically restructured” [SJS]; “Our society is getting worse every year” [SJS], loadings of each  $>.70$ ). The first two components shared some items in common (3 items had loadings  $>.40$  on both components), so we did not want to assign items arbitrarily, include their unweighted values in more than one component, or omit them (unlike full scales, there is little help from prior research about conceptual meaning and validity of specific items). We therefore used an orthogonal varimax rotation to produce uncorrelated dimensions and calculated component scores to allow the items to make weighted contributions to the four distinct dimensions.

Component scores were entered, one at a time, in regressions to predict life satisfaction from conservative self-identifications and our composites. Each component score was entered twice, once replacing the System Satisfaction composite, and then as an addition to the System Satisfaction composite. Only the *Generalized Fairness* component was significant in its own right ( $\beta = .16, p < .001$ ) and caused the System Satisfaction composite to become insignificant as a predictor of happiness. None of the other components were significant by themselves or caused System Satisfaction to become insignificant. We followed the same procedure twice more, once using the total SJS score and once using the total BJWS score as substitutes for the System Satisfaction composite, and found identical results with each scale: only *Generalized Fairness* was a significant predictor in its own right ( $\beta_s = .16, p < .001$ ) and caused each scale to become insignificant as a predictor of happiness.

These patterns suggest that the unique contribution by both scales is a generalized belief about fairness rather than more specific beliefs about the equitable or equal distribution of outcomes or the condition of society. The other three components, which were significant predictors of happiness when entered individually in bivariate regressions, shared variance with one or more of our composites and dropped out of the picture because of them (e.g., the belief in Equitable Outcomes became insignificant when Personal Agency was added; Affirmations of Society became insignificant when Positive Outlook was added).

In light of these patterns, it appears that concerns about inequality or dissatisfaction with society, which were the focus of Napier and Jost’s (2008) analysis, were not unique mediators of the happiness gap. In contrast, a generalized belief of fairness is consistent with the other markers of personal adjustment and mental health that are associated with conservatism and happiness, and probably emerged as a unique mediator because similar items were not directly represented in our other measures (e.g., items dealing with general fairness are not in scales of self-esteem, optimism, personal control, or responsibility). Perceived fairness, broadly considered, is an essential ingredient to satisfaction in a wide range of life’s domains, including relationships and work (Greenberg, 1996), and goes beyond macro-level economic inequality.

### 2.2.5. Attitude components of political ideologies

We conducted additional analyses to test hypotheses about ideological differences in political attitudes and values and how these relate to happiness. As expected, conservatives and liberals differed on attitudes toward equity vs. equality and the role of government (see Table 1; these two measures were highly correlated,  $r = .63, p < .001$ ). They did not differ on the individualizing

moral values of fairness and harm used by Haidt (2008b) or on the Value Scale dimensions of *Individual Rights* or *Positive (Caring) Orientation Toward Others* (no  $r$ s greater than  $\pm.08$ , all  $n$ s). Although they differed on the value *International Harmony and Equality* (see Table 3), only one of the items from this grouping was related to conservatism [ $r = -.26, p < .001$ : “Greater economic equality (lessening the gap between the rich and poor)”), and no other item was greater than  $r = \pm.05$ , including “Equal opportunity for all (giving everyone an equal chance in life).”

These patterns suggest that liberals and conservatives similarly endorse individualizing values like fairness and caring in generic form. They differ, though, when it comes to (a) defining fairness, with liberals favoring equality and conservatives favoring equity, (b) the role that government should play in imposing social justice, with liberals favoring a more active role and conservatives favoring a more limited role, and (c) their generalized beliefs about whether life really is fair (see prior section). We suspect that whether liberals and conservatives differ on measures of fairness or caring depends on whether the questions prime or suggest equity or equality and helping through self-initiative or government intervention.

Next, we wanted to determine if the relationship between *Conservative Attitudes* (the composite of the measures of divisive social issues, the role of government, and policy goals;  $\alpha = .72$  for the three) and life satisfaction can be explained by differences in each of our other major predictors, essentially making these attitudes a substitute for self-described ideology. We found patterns that were comparable to those obtained with conservative self-identifications, with Personal Agency fully accounting for the relationship and each of the other measures partially accounting for the relationship. Thus, these attitudinal differences are associated with personal agency and, to a lesser extent, our other variables, which again account for the happiness gap.

### 2.2.6. Non-mediators

For purposes of cross-referencing our findings with earlier work, we report personality, value, and attitudinal variables related to either political ideology or life satisfaction but not both (see Table 4). Regarding correlates of ideology, we replicated established findings (Jost et al., 2003) that conservatives scored higher than liberals on the need for closure, prejudice, and valuing propriety, but lower on openness to new experiences and unconventional beliefs (e.g., believing in UFOs, paranormal phenomenon; Stark, 2008). Note that conservatives and liberals did not differ on the measure of socially desirable responding, indicating that ideology differences found on other variables are unlikely to be due to tendencies for conservatives to display more (or less) social desirability bias.

### 2.2.7. Summary

Study 1 showed that personality and attitude measures traditionally associated with positive adjustment – personal agency, positive outlook, and transcendent moral beliefs – can account for why conservatives are happier than liberals. Each of these explain the gap even after statistically controlling for System Satisfaction (or system justification). Although system justification also explains some of the variability in happiness, its unique contribution stemmed from generalized beliefs about fairness, not specific beliefs about inequality or system (dis)satisfaction.

## 3. Study 2

### 3.1. Method

#### 3.1.1. Participants

To examine the generalizability of the findings beyond college students, we analyzed data from a representative sample of US

adults from the World Values Survey (2010; WVS). The WVS data set is publicly available, was collected in the US in three cross-sectional waves (1995, 1999, 2006), and included between 1046 and 3411 respondents depending on the question (not all questions were included in all waves, see sample sizes in Table 5).

### 3.1.2. Measures

We identified one or more variables in the WVS that represented political self-identification, life satisfaction, and our major measures. These were: (1) *ideology*, which asked respondents to rate their political attitudes on a left–right continuum (1 = *on the left*, 10 = *on the right*); (2) *life satisfaction*, which asked how satisfied they were with their lives (1 = *dissatisfied*, 10 = *satisfied*); (3) *personal control*, which asked how much freedom of choice and control they feel they have over the way their life turns out (1 = *none at all*, 10 = *a great deal*); (4) *religiosity*, which asked how religious respondents were (1 = *not a religious person/a convinced atheist*, 2 = *a religious person*); and (5) *moral clarity*, which asked whether there are clear guidelines about good and evil that apply to everyone, regardless of the circumstances (1 = *depends on circumstances at the time*, 2 = *disagree with both*, 3 = *clear guidelines about what is good and evil*). (6) *System justification* was assessed with two items: whether society should be defended (1 = *society must be radically changed*, 2 = *society must be gradually improved by reforms*, 3 = *society must be valiantly defended*) and whether income inequality should be defended (1 = *incomes should be made more equal*, 10 = *we need larger income differences as incentives*). We could not find a generalized fairness item in the WVS. In addition, (7) a *tolerance of transgressions* measure consisted of the average score on items that asked how justifiable (1 = *never justifiable*, 10 = *always justifiable*) each of 11 morally and legally questionable acts were (e.g., cheating on taxes, accepting a bribe, buying stolen goods). We were unable to locate items that measured positive outlook in the US waves.

### 3.2. Results

First, conservatism was again related to life satisfaction overall ( $r = .13, p < .001, df = 3690$ ), and after controlling for age, gender, income, and education level ( $r = .12, p < .001, df = 3411$ ). Second, as shown in Table 5, conservatism was related to measures of personal control, religiosity, moral clarity, tolerance of transgressions, and system justification; and each of these variables was significantly related to life satisfaction. Third, personal control mediated the conservatism–satisfaction relationship, as did religiosity and tolerance of transgressions. Moral clarity (which focused on only one aspect of the broader concept of moral commitment and was on only a 3-point scale) was not significant. The system justification item about defending inequality was significant but the item about defending society was not. Thus, the relationships observed with our college student sample were largely replicated among a broader, more diverse sample of US respondents.

We conducted regressions predicting life satisfaction from conservatism and all of the measures shown in Table 5 (entered simultaneously, after controlling for age, gender, income, and education in a hierarchical regression,  $N = 984$ ). Although most of these measures were only represented by single items (and hence were less than ideal), the patterns largely replicated Study 1. (1) Personal control ( $\beta = .40, p < .0001$ ) and religiosity ( $\beta = .09, p = .003$ ) were significant predictors; tolerance of transgressions just fell short of significance ( $\beta = -.06, p = .06$ ). (2) The system justification measures were insignificant when entered with the other measures regardless of whether they were entered individually or together ( $\beta s < .05, p s > .10$ ) and did not explain additional

variance beyond the other measures ( $\Delta R^2 = .00, p > .25$ ). Another regression showed that, as in Study 1, beliefs about income inequality were no longer significant when entered with personal control. (3) Conservatism no longer predicted life satisfaction after controlling for the other variables ( $\beta = .01, p = .71$ ). Once again, personal control and transcendent moral beliefs played key roles in explaining the happiness gap; aspects of system justification dealing with inequality and societal satisfaction did not uniquely account for it.

## 4. Study 3

We had four goals for Study 3. First, we wanted to extend the generalizability of our findings across measures and samples by using another large public opinion database, the *General Social Surveys* (2010; GSS).

Second, the GSS provided the opportunity to examine a fuller range of specific measures related to happiness, including satisfaction with one's marriage, family life, place of residence, job, and even personal health. We would expect that the ideological happiness gap exists across most domains of happiness. As shown in Studies 1 and 2, a conservative ideology is related to individual differences (e.g., personal agency, religiosity) that should facilitate happiness in most areas of life, including satisfaction with one's personal relationships, career, and health. In contrast, system justification theory would not necessarily predict happiness differences across most domains. According to system justification theory, conservatives are more satisfied with life because they are better able to rationalize socioeconomic inequalities, justify the misfortunes of disadvantaged groups, and thereby accept the current social system (Napier & Jost, 2008). It is not clear from that theory why conservatives would be happier with their marriages, family lives, or personal health. Of course, one could argue that social inequalities seep into every facet of people's lives and thereby affect all happiness domains. However, such pervasive generalizability would seem to require broadening the theory to make perceptions of socioeconomic inequality the centerpiece of all personal happiness.

Third, we wanted to examine more closely the relationships between conservatism, self-esteem, and optimism. In Study 1, we observed a small but significant positive relationship between conservatism and both self-esteem and optimism; these are opposite in direction to the predicted relationships described by Jost et al. (2003). As acknowledged by Jost et al. and discussed more fully shortly, there is little prior research on these relationships. Further, what does exist failed to include clear measures of ideology (e.g., using surrogates like authoritarianism or social dominance). Given the potential importance of these relationships for understanding the ideological happiness gap, we reexamined them using the GSS data, which included items from the popular Rosenberg (1965) self-esteem scale and from a measure of dispositional optimism–pessimism (Life Orientation Test-Revised; Scheier, Carver, & Bridges, 1994), both of which were also included in Study 1.

Finally, Studies 1 and 2 found that conservatives have personality and attitude characteristics that are usually associated with positive adjustment and mental health. This conclusion is reminiscent of the results of four Gallup polls conducted between 2004 and 2007 (Newport, 2007), which found that Republicans report better mental health than Democrats (e.g., excellent mental health is reported by 58% of Republicans but by only 38% of Democrats and 43% of Independents), after controlling for demographic differences. Because the GSS contained items dealing with self-reported mental health, we wanted to see if this pattern is also found for self-described conservatives and liberals.

#### 4.1. Method

##### 4.1.1. Participants

The GSS data set is publicly available and was collected during 27 of the years from 1972 to 2008. The representative cross-sectional sample included adults 18 years or older (oversamples of subgroups in 1982 and 1987 were deleted, see Appendix A of the GSS Codebook). Few items were included in all or even most years, and thus the sample sizes vary from item to item (see Tables 5 and 6) and necessitated analyses of individual measures rather than simultaneous analyses of all measures.

##### 4.1.2. Measures

The variables in our analyses were: (1) *ideology*, which asked respondents to rate their political attitudes on a liberal-conservative continuum (1 = *extremely liberal*, 7 = *extremely conservative*); (2) *life satisfaction*, which asked how happy they were (1 = *not too happy*, 2 = *pretty happy*, 3 = *very happy*); (3) *personal control*, which asked how much freedom of choice and control they feel they have over the way their life turns out (1 = *no choice and control*, 7 = *a great deal of choice and control*); (4) *system justification*, which asked respondents whether they agree that it is okay if some people in a free society accumulate a lot of wealth and property while others live in poverty (1 = *strongly disagree*, 5 = *strongly agree*); (5) *religiosity*, which asked how religious respondents were (1 = *not religious*, 4 = *very religious*); and (6) *moral clarity*, which asked respondents whether they agree that “right” and “wrong” is not a simple matter of black and white, but has shades of gray (1 = *agree strongly*, 4 = *disagree strongly*).

Also included were 5 items ( $\alpha = .71$ ) from Rosenberg’s (1965) self-esteem scale and 4 items ( $\alpha = .62$ ) that dealt with dispositional optimism–pessimism (e.g., “I expect more good things to happen to me than bad”; 1 = *strongly disagree*, 5 = *strongly agree*). The self-esteem and optimism measures were combined to form a measure of *positive outlook* ( $\alpha = .73$ ). *Tolerance of transgressions* was assessed with two items asking whether it was wrong for a taxpayer to fail to report income to reduce his/her taxes and to give the government incorrect information in order to qualify for benefits to which he/she is not entitled (1 = *seriously wrong*, 4 = *not wrong*).

In addition, eight items dealt with satisfaction with various facets of life. Respondents rated how happy they were with their marriages (1 = *not too happy*, 3 = *very happy*) and how satisfied they were with their family life, health or physical condition, friendships, city or place where they live, hobbies and leisure activities (all 1 = *none*, 7 = *very great deal*), job (1 = *completely dissatisfied*, 7 = *completely satisfied*), and financial situation (1 = *not satisfied at all*, 3 = *pretty well satisfied*).

Finally, seven items dealt with the respondents’ mental health. Items asked if they ever felt they had a mental health problem, felt they were going to have a nervous breakdown, underwent counseling for mental or emotional problems in the last 12 months, had taken Prozac, and had an emotional or mental disability (all 1 = *no*, 2 = *yes*), as well as the number of days during the past 30 days that their mental health was not good because of stress, depression, and problems with emotions, and that their poor physical or mental health kept them from doing their usual activities, such as self-care, work, or recreation.

#### 4.2. Results

##### 4.2.1. Happiness gap

Once again, conservatism was positively related to life satisfaction ( $r = .07$ ,  $p < .001$ ,  $df = 41,717$ ), even after controlling for age, gender, income, and educational level ( $r = .05$ ,  $p < .001$ ,  $df = 37,756$ ). As shown in Table 5, conservatism and life satisfaction

were each related to personal control, positive outlook, religiosity, moral clarity, tolerance of transgressions, and system justification. Each of these variables significantly mediated the conservatism–satisfaction relationship except for the tolerance of transgressions ( $p < .10$ ). (All of these and the following results in Tables 5 and 6 controlled for age, gender, income, and education.) In short, we replicated the major patterns observed in Studies 1 and 2 with yet another sample of respondents, an extended time period, and somewhat different items assessing the key constructs.

##### 4.2.2. Domains of satisfaction

As shown in Table 6, conservatism showed small but significant positive relationships with happiness in 7 of the 8 specific domains (only satisfaction with hobbies and leisure activities was insignificant). In turn, happiness in each of these domains was related to global life satisfaction. Conservatives are not only happier with life in general, they are happier with their marriages, family relationships, jobs, financial situations, health, and even where they reside, all controlling for income, education, age, and gender.

##### 4.2.3. Conservatism, self-esteem, and optimism

Replicating the results of Study 1, self-esteem scores were positively related to conservatism ( $r = .07$ ,  $p = .03$ ,  $df = 981$ ) and life satisfaction ( $r = .32$ ,  $p < .001$ ) and were a significant mediator of the conservatism–satisfaction relationship (Sobel test:  $z = 2.22$ ,  $p = .03$ ). In addition, scores on dispositional optimism were positively related to conservatism ( $r = .06$ ,  $p = .05$ ,  $df = 981$ ) and life satisfaction ( $r = .32$ ,  $p < .001$ ) and also mediated the conservatism–satisfaction relationship (Sobel test:  $z = 1.89$ ,  $p = .059$ ). Once again, conservatives appear to have more positive views of themselves and a more hopeful outlook on life than liberals.

##### 4.2.4. Mental health

As shown in Table 6, conservatives reported better mental health than liberals on 6 of the 7 questions (the only exception asked about mental “disability,” a more severe problem that only 156 of 2777 respondents admitted having). Conservatives not only have personality and attitude qualities that are usually associated with positive adjustment and mental health, they also report being in better mental health, with fewer problems and bad mental health days.

#### 5. Study 4

In an intriguing analysis, Napier and Jost (2008, Study 3) reported that objective social inequalities are related to (un)happiness, especially for liberals. According to Census Bureau statistics, the gap between rich and poor has increased in the US since 1968. Napier and Jost reasoned that liberals should become less happy than conservatives in the face of this inequality because liberals “lack ideological rationalizations that would help them frame inequality in a positive (or at least neutral) light” (p. 571).

They tested these ideas in a multilevel regression by using (a) measures of respondents’ political views, happiness, and demographic data from the GSS, and (b) Census Bureau data on year-level societal conditions, including income inequality as assessed by the Gini index (the most commonly used measure of household income differences). They found that increases in the Gini index were associated with decreases in happiness at the individual-level, and this overall tendency was more pronounced for liberals than conservatives.

One problem for the straightforward interpretation of these results is that the Gini index has increased steadily nearly every year since 1968, raising the potential confound of the index with time and all other variables that have changed in society during these

**Table 6**

Correlations of satisfaction in various life domains and mental health measures with political ideology and global life satisfaction in Study 3.

Category and variable	df	M (SD)	Correlation with	
			Conservatism (CONS) r	Life satisfaction (SATIS) r
<i>Satisfaction domain</i>				
Marriage	20,759	2.61 (0.54)	.04***	.46***
Family life	18,394	5.93 (1.34)	.06***	.31***
Job	30,257	3.30 (0.81)	.04***	.26***
Health/physical condition	18,432	5.46 (1.46)	.03***	.26***
Financial situation	37,690	2.04 (0.75)	.04***	.25***
City/place where one resides	18,439	5.09 (1.50)	.02**	.25***
Friendships	18,446	5.78 (1.21)	.01*	.26***
Hobbies and leisure activities	18,393	5.34 (1.53)	.01	.24***
	df	% Yes or M (SD)	r	r
<i>Mental health problems</i>				
Had a mental health problem	856	7%	-.10**	-.12***
Felt like going to have nervous breakdown	1175	27%	-.08**	-.17***
Days of poor mental health (last 30 days)	3060	3.54 (6.91)	-.08***	-.25***
Days of activity limitation (last 30 days)	2285	1.21 (4.12)	-.07***	-.12***
Had counseling for mental or emotional problems	2020	7%	-.09***	-.14***
Taken Prozac	2109	9%	-.05*	-.11***
Emotional or mental disability	2327/1162	6%	-.01	-.12***

Note: These analyses controlled for age, gender, income, and education level. Variables were scored so that larger numbers indicate more of the concept: greater satisfaction or mental health problems (e.g., acknowledging a mental health problem, more days of poor mental health). The emotional or mental disability item was answered by 2777 respondents, of whom 2333 also answered the political ideology question and all control items but only 1168 answered the happiness item and all control items.

\*  $p < .05$ .\*\*  $p < .01$ .\*\*\*  $p < .001$ .

decades. Study 4 examined potential confounds and extended the data base to include the two major waves of the GSS completed in 2006 and 2008 (Napier and Jost conducted their analysis after the 2004 wave).

### 5.1. Method

The individual-level variables used by Napier and Jost were available for 22 of the 35 years of the GSS from 1974 through 2008. The data were adjusted to reflect national distributions (by deleting oversamples of subgroups in the 1982 and 1987 waves). Sample sizes ranged from 761 to 2326 (28,027 total in our multi-level analysis).

We used the same individual-level and year-level variables and coding procedures described by Napier and Jost (2008, Study 3). The key measures of political orientation (strong liberal to strong conservative) and life satisfaction (not at all to very happy) were the same as in our Study 3. The analysis controlled for the demographic variables of gender (0 = *male*, 1 = *female*), marital status (0 = *unmarried*, 1 = *married*), employment status (0 = *employed or not looking for work*, 1 = *unemployed*), age (nine intervals), age squared (centered before squaring, to control for a possible quadratic relationship between age and happiness), income (three intervals), health status (four intervals), and education (five intervals). These variables were rescaled to range from 0 to 1 (as done by Napier & Jost, 2008; see them for justification of the controls).

Year-level predictor variables included unemployment, inflation, the Gini index (all obtained from the US Census Bureau, 2010), and the party of the President. The Gini index ranged from .395 in 1974 to .466 in 2008.<sup>6</sup> The first three variables were cen-

tered at their grand means and whether the President was Republican (or Democrat) was dummy coded (as done by Napier & Jost, 2008).

### 5.2. Results and discussion

As an initial step, we examined the relationship between Year and its corresponding Gini index and confirmed that they are nearly perfect proxies for one another. The correlation between Year and Gini index is .98 for the 35 years from 1974 to 2008, and also .98 for the specific 22 years of GSS data included in these analyses (as well as the 20 years used by Napier and Jost). In other words, one could substitute year for the Gini index and get virtually the same results (as shown momentarily), so any social/historical changes that occurred during that period of time are possible confounds.

As shown in Table 7 we replicated the pattern described by Napier and Jost by following their procedure of using Year as a level 2 grouping variable in the two-level model. The effects of the Gini index and Political Conservatism ( $p = .057$ ) were qualified by the interaction of Political Conservatism by Gini index, with liberals reporting less happiness as the Gini index increased ( $\beta = -.04$ ,  $B = -1.027$ ,  $SE = .228$ ,  $p < .0001$ ) and conservatives remaining largely unchanged ( $\beta = -.01$ ,  $B = -.322$ ,  $SE = .209$ ,  $p = .12$ ).

We then substituted Year (centered) for the Gini index as a level 2 predictor in the model. The GSS wave, after being recoded in terms of its sequence in the series of waves instead of its year, became the category variable for clustering the level 1 variables and identifying the associated level 2 variables. With these substitutions, a nearly identical set of results was obtained. As shown in Table 7, the unstandardized coefficients (and standard errors) are smaller for Year than for the Gini index owing to their different size scales, but their effect sizes and significances are comparable. Year now predicted happiness, such that there was a gradual decline in happiness over time. More importantly, effects of Political Conservatism and the interaction of Political Conservatism by Year were significant. Liberals evidenced a decline in happiness over time

<sup>6</sup> Changes in the upper limit for reporting household income and the introduction of computer-assisted interviewing produced an upward shift (of indeterminate magnitude) in the Gini index between 1992 and 1994 (Weinberg, 1996). We followed Napier and Jost's (2008) procedure by not making any adjustments for the shift. In any case, these changes are irrelevant to our primary conclusion that the results found by Napier and Jost can be explained by the confounding with year; the Gini index was not included in the analysis that substituted year.

**Table 7**

Unstandardized coefficients from multilevel linear regression analyses of self-reported happiness in the general social surveys, Study 4.

Predictor	Gini index as level 2 predictor Unstandardized coefficient	Year as level 2 predictor Unstandardized coefficient
<i>Level 2 variables</i>		
Intercept	1.461 (.021)***	1.454 (.021)***
Unemployment	-.012 (.005)*	-.011 (.005)*
Inflation	-.002 (.003)	-.001 (.002)
Republican President	-.033 (.020)	-.022 (.020)
Gini index	-1.567 (.502)**	NA
Year	NA	-.004 (.001)*
<i>Individual-level variables</i>		
Marital status	.242 (.008)***	.242 (.008)***
Education	.062 (.014)***	.062 (.014)***
Gender	.043 (.007)***	.043 (.007)***
Income	.117 (.010)***	.117 (.010)***
Employment status	-.210 (.021)***	-.210 (.021)***
Age	.187 (.018)***	.187 (.018)***
Age squared	.312 (.028)***	.312 (.028)***
Health status	.548 (.014)***	.548 (.014)***
Political Conservatism	.047 (.025)+	.053 (.024)*
Political Conservatism × Republican President	.071 (.033)*	.062 (.032)*
Political Conservatism × Gini	1.382 (.634)*	NA
Political Conservatism × Year	NA	.004 (.002)*

Note: Standard errors are given in parentheses.

\*  $p \leq .05$ .

\*\*  $p \leq .01$ .

\*\*\*  $p \leq .001$ .

+  $p \leq .057$ .

( $\beta = -.05$ ,  $B = -.003$ ,  $SE = .001$ ,  $p < .0001$ ), whereas conservatives evidenced little decline ( $\beta = -.01$ ,  $B = -.001$ ,  $SE = .001$ ,  $p = .20$ ).

These patterns are what one might expect based on historical/social changes in the US over that time period. The US Census Bureau (Weinberg, 1996) offered two complementary explanations for increased income inequality over time. First, the US shifted from goods-producing industries, which historically provided low-skilled workers with opportunities for middle-class status, to a technology and services-based economy that either requires highly skilled, college-educated workers or offers low wages (e.g., retail). The structural shift in economic activity, combined with global competition and immigration, left low-skilled workers with less attractive job opportunities and economic prospects.

Second, and more relevant to our thesis, “long-run changes in living arrangements have taken place that tend to exacerbate differences in household incomes” (p. 4). The shift has been “away from married-couple households and toward single-parent and nonfamily households, which typically have lower income” (p. 4).

The decline in the traditional family coincides with (and some argue is partially produced by) increasingly secular attitudes and values. Traditional religions place a premium on the family unit, emphasize long-term family commitments, offer clear moral principles, and generally endorse personal agency. In contrast, secular orientations and New Age beliefs endorse relativism, generally claim to avoid moral judgment, and emphasize the power of the situation to shape people’s lives. As we have shown, (a) religiosity, moral commitment, and personal agency (Studies 1–3), as well as marriage (Study 4), are associated with happiness, and (b) conservatives score higher on these qualities than liberals. If liberals also have displayed greater declines on these measures over time than conservatives, which would be consistent with increasing secularization for those amenable to it, we also would expect liberals to show decreasing happiness.

Two relevant variables were included in all of the waves of the GSS: Church attendance (0 = *never*, 8 = *more than once a week*) and marital status. We ran multilevel models using these as target variables and using Year (centered), Political Conservatism (centered), and the interaction of Year by Political Conservatism as predictors (GSS wave was the grouping variable). The results, shown in Table 8, indicated that church attendance and being married (a) are greater overall for conservatives than liberals, (b) have generally declined since 1974, and (c) the declines have been greater for liberals than for conservatives.

The measure of religiosity used in Study 3, which asked respondents how religious they were (4-point scale), was administered in only 3 recent GSS waves (1998, 2006, 2008). A multilevel model indicated that although there was no overall decline in religiosity during this truncated time interval ( $\beta = -.00$ ,  $B = -.001$ ,  $SE = .004$ ,  $p = .87$ ), there was the previously mentioned Political Conservatism difference ( $\beta = .12$ ,  $B = .078$ ,  $SE = .030$ ,  $p = .01$ ) and a Year by Conservatism interaction ( $\beta = .12$ ,  $B = .006$ ,  $SE = .002$ ,  $p = .01$ ). Liberals showed a decline in religiosity ( $\beta = -.06$ ,  $B = -.015$ ,  $SE = .006$ ,  $p = .02$ ) whereas conservatives showed an increase ( $\beta = .05$ ,  $B = .012$ ,  $SE = .005$ ,  $p = .02$ ).

Another empirical angle on the interpretation of the Gini index is to see if adding church attendance to the multilevel model changes the results. Church attendance is a correlate of religiosity (as well as moral commitment and tolerance of transgressions) and is often measured in publicly available data sets, so it can be useful to control for it when trying to account for the relationship between political ideology and happiness. Napier and Jost (2008) controlled for church attendance in their Studies 1 and 2 and found that it was a significant predictor of happiness, but did not control for church attendance in their analysis of the GSS data.

If we add church attendance as an individual-level variable to the multilevel analysis that included the Gini index (and replicated the Napier and Jost model and results), the interaction of Political Conservatism by Gini index falls below significance ( $B = 1.060$ ,  $SE = .633$ ,  $p = .094$ ; effect of church attendance:  $B = 0.168$ ,  $SE = .011$ ,  $p < .001$ ). Given that church attendance is at best an imperfect representation of intrinsic religiosity (e.g., people often attend church for extrinsic reasons such as their business interests), and given the many other changes in demographics, attitudes, and values that occurred during this time period and could also account for the ideological happiness gap, the pattern further refutes the idea that inequality, as reflected by the Gini index, is a driving force for psychological processes related to the happiness gap.

We would expect that greater secularization would also be accompanied by declines in personal agency. Indeed, Twenge, Zhang, and Im (2004) documented substantial declines in personal control in the US between 1960 and 2002. Unfortunately, we could

**Table 8**

Unstandardized coefficients reflecting differences in church attendance and marital status for liberals and conservatives from 1974 to 2008, Study 4.

Predictor	Church attendance	Marital status
Year	-.015 (.002)***	-.006 (.001)***
Political Conservatism	.357 (.009)***	.043 (.002)***
Year × Political Conservatism	.005 (.001)***	.001 (.000)***
Liberals	-.022 (.002)***	-.029 (.002)***
Conservatives	-.005 (.002)***	-.021 (.002)*

Note: Standard errors are given in parentheses. The overall multilevel models included 43,020 and 43,404 respondents for church attendance and marital status, respectively. The last two rows show unstandardized coefficients indicating greater declines over time for liberals than conservatives, thereby providing information about the year by political conservatism interaction from the multilevel model.

\*  $p \leq .05$ .

\*\*\*  $p \leq .001$ .

not test whether liberals showed the expected greater decline in personal agency than conservatives during this period because the measure of personal control (reported in Study 3) was administered in only one of the GSS waves (2000).

The GSS data are cross-sectional, so any differences over time between liberals and conservatives could be due to changes in people's attitudes or behavior (e.g., liberals becoming more secular), changes in the type of people who define themselves as liberal or conservative (e.g., those who are less religious become even more likely to identify themselves as liberals), or both. It would be useful in future research to try to disentangle these possibilities.

## 6. General discussion

Conservatives score higher than liberals on personality and attitude measures that are traditionally associated with positive adjustment and mental health, including personal agency, positive outlook, transcendent moral beliefs, and generalized beliefs in fairness. These constructs, in turn, can account for why conservatives are happier than liberals and have declined less in happiness in recent decades.

The portrait of conservatives that emerges is different from the view that conservatives are generally fearful, low in self-esteem, and rationalize away social inequality. Conservatives are more satisfied with their lives, in general and in specific domains (e.g., marriage, job, residence), report better mental health and fewer mental and emotional problems (all after controlling for age, sex, income, and education), and view social justice in ways that are consistent with binding moral foundations (Haidt & Graham, 2009), such as by emphasizing personal agency and equity. Liberals have become less happy over the last several decades, but this decline is associated with increasingly secular attitudes and actions (e.g., less religiosity, less likelihood of being married, and perhaps lessened belief in personal agency).

Could the relationships we found be dismissed as artifacts of low validity of the measures (e.g., low discriminant validity, yea-saying, social desirability bias)? This seems implausible. First, Study 1 used measures that, by and large, have histories of acceptable reliability and validity and are usually assessed with self-reports (e.g., happiness, political attitudes, self-efficacy beliefs, religiosity). Data supporting convergent, discriminant, and criterion-related validity are available for most of those measures. Second, the patterns found in Study 1 were largely replicated in Studies 2 and 3 with other measures that were part of diverse cross-sectional national samples with multiple waves over time. The trade-off for using these less validated, often single-item measures was greater external validity. Third, we included a social desirability measure in Study 1 and found no differences between liberals and conservatives, so such bias cannot explain those patterns. Fourth, acquiescence bias (yea-saying, e.g., agreeable people are more likely to be conservative as well as optimistic and conscientious) cannot explain the patterns given that (a) the measures of liberalism-conservatism (or left-right) were not agree-disagree items, (b) multi-item measures in Study 1 usually included both reverse-scored and direct-scored items (e.g., political attitudes, optimism, self-esteem, self-efficacy, integrity), and (c) the items used in the WVS and GSS were not usually on agree-disagree scales. Fifth, the key measures of political ideology, life satisfaction, and major mediators (e.g., personal agency, religiosity) were not adjacent to one another in any of the studies (e.g., in Study 1, they were on different pages in separate sections), so it seems unlikely that a simple priming or cueing effect could account for the patterns. Sixth, we focused in Study 1 on measures that we expected to be related to both ideology and happiness, so it was not surprising that most of our measures were related to both, either posi-

tively or negatively. However, we also included measures (see Table 4) that were not correlated with both and provide further evidence of discriminant validity. Seventh, we replicated established findings of differences between conservatives and liberals, for example, on measures of need for closure, openness to experience, dogmatism, authoritarianism, work ethic, belief in a just world, religiosity, and conscientiousness, to name a few. In cases where prior empirical benchmarks are clear, our findings are consistent with past research.

### 6.1. Self-esteem and optimism

Self-esteem, which is positively related to optimism, positive mood, and personal control, was also positively related to conservatism and life satisfaction, and was a possible mediator of the latter relationship (Studies 1 and 3). These findings are inconsistent with the conclusions of Jost et al. (2003), who listed (low) self-esteem as one of nine main predictors of conservatism. They stated that "people should be more likely to embrace political conservatism to the extent that their self-esteem is chronically low or otherwise threatened," and their review "leads to the conclusion that there is indeed a [negative] relationship between self-esteem and political conservatism, but it is relatively weak in magnitude" (p. 360). However, none of the studies that were included in their meta-analysis of chronic self-esteem also contained a measure of self-described liberalism or conservatism; instead, they all included surrogates like authoritarianism or social dominance, which are correlated with ideology but are far from coextensive with it. In Studies 1 and 3, which included the popular Rosenberg (1965) measure of self-esteem, we found the opposite, *positive* relationship between conservatism and self-esteem, a relationship that is consistent with the rest of our findings concerning conservatism, personal agency, and mood. In their review, Jost et al. (2003) also list optimism as one of the personality variables that is negatively related to conservatism, but they report only a single study examining that relationship (Nias, 1973), and again, that study failed to include a measure of self-described liberalism-conservatism. We had measures of dispositional optimism in Studies 1 and 3 and found that it was positively related to self-described conservatism.

### 6.2. Bias, rationalization, and error

Just as scientists perceive events through the lenses of their theories, people perceive world events through the lenses of their political ideologies. The tendency for people to interpret events consistently with their moral values and political attitudes indicates *bias*, in that people systematically prefer an ideologically compatible selection and interpretation of information. However, everyone is biased in this sense, even those who try to remain objective. Interpreting events consistently with one's theories does not necessarily indicate *error* or *rationalization*, which by definition, involves plausible but untrue reasons for behavior.

Consider the System Justification Scale (SJS) as an example. Higher scores reflect beliefs that the current system is working, does not need radical restructuring, is basically fair, and people generally get what they deserve. These ideas are elements of conservatism but do not necessarily reflect justification in the sense of motivated, rationalized distortions of reality. To regard them as rationalizations requires that the objective, true state of the world is that the current system is not working, needs radical restructuring, is basically unfair, and that people generally do not get what they deserve. The latter beliefs are comparably value laden and ideologically infused, and there is no objective standard by which their truth or falsity can be verified. Yet, Napier and Jost (2008, p. 566) regard greater system justification as motivated distortion,

stating “liberals may be less happy than conservatives because they are less ideologically prepared to rationalize (or explain away) the degree of inequality in society.”

One could as readily argue that liberals justify their own unhappiness and dissatisfaction by accentuating the negative aspects of society and viewing the system as half empty rather than half full. It would not be hard to construct a scale that endorsed liberal values and attitudes and call it a Change Justification Scale (CJS), because it would consist of items that denigrated the status quo and promoted change (in fact, one could simply reverse-score the SJS items and re-label it the CJS). People can legitimately disagree about whether it is morally right or wrong to favor an equitable rather than equal distribution of outcomes in society, without one side being out of touch with reality. There seems to be no compelling reason to regard higher or lower SJS scores as greater rationalization instead of simply as differences in core values and beliefs.

### 6.3. Chronic and acute measures can provide different portraits

The results converged on the conclusion that the SJS, as an individual difference measure, reflects self-determination and an upbeat, positive outlook on oneself and others. SJS scores were positively related to trust, personal agency (i.e., personal efficacy, interpersonal control, personal responsibility, conscientiousness), optimism, self-esteem, agreeableness, moral commitment, work ethic, attitudes favoring equity over equality, as well as belief in a just world, and were negatively related to depression, neuroticism, and cynicism. This combination would usually be regarded as indicating positive adjustment and mental health, not defensiveness, fear, and distortion. Further, when it comes to predicting happiness, the unique aspect of the SJS (and the BJWS) seems to be a generalized belief about fairness, not specific beliefs about outcome distributions, affirmations or rejections of society, which are themselves closely related to personal agency and positive outlook, respectively. General perceptions of fairness are strongly associated with happiness in a wide range of domains, including satisfaction with personal relationships and job satisfaction (Greenberg, 1996).

In this context, it is important to distinguish between system justification as represented by individual difference measures, such as the SJS or BJWS, and situational manipulations of system threats that are designed to produce justification. Conceptually, system justification is a motivated process triggered by threats to one's sanguine view of the system. Data show that certain types of threats can produce motivated bias in ways that justify the status quo (e.g., Kay, Jost, & Young, 2005). However, the fact that acute threat manipulations can increase system justification in the average person does not lead to the conclusion that conservative beliefs primarily reflect system justification. Just as chronic (assessed) and acute (manipulated) measures of self-esteem or anxiety often produce differences at the construct level and at the functional level (Whitley, 2002), there is every reason to expect that naturally-occurring groups of low or high SJS scorers differ from manipulated groups of low or high threatened individuals. Scores on the SJS are not equivalent to how the average person feels after being threatened. It is an even further leap to the conclusion that conservative beliefs represent distortions of reality designed to rationalize the system.

According to system justification theory, people can justify an unequal social system by believing in a just world, the value of a work ethic, personal responsibility, or equitable rather than equal distributions (Jost & Hunyady, 2005). We agree that endorsing such attitudes can be a way of dealing with acute threats to relevant beliefs, just as, in the dissonance tradition, any shift in attitudes has the potential to justify corresponding threats. However, natu-

rally-occurring differences on such measures are created and perpetuated for numerous reasons. Self-efficacy beliefs, for example, result from enactive mastery, vicarious experience, persuasion by others, and physiological feedback (Bandura, 1997). We do not know how much variability (if any) in such naturally occurring beliefs is due to system justification.

In system justification theory, the conceptual fusion of measures that reflect personal agency (e.g., personal control, responsibility) and those that are defined as motivated attempts to deal with threat has the potential to produce confounded interpretations. For example, in Study 2 of their article dealing with the happiness gap, which also used the WVS data set, Napier and Jost (2008) relied on a one-item measure of system justification that they labeled *meritocracy*. Upon finding that this measure was related to conservatism and mediated the happiness gap, they concluded that their results provided “strong additional support for the hypothesis that rationalizing inequality—for example, by seeing it as emerging from a fair, legitimate, and meritocratic system—serves a palliative function” (pp. 568–569). However, their single-item measure of meritocracy would usually be regarded as a measure of internal–external control or personal efficacy, because it asked respondents to rate the relationship between hard work and outcomes (scale ranged from *hard work doesn't generally bring success—it's more a matter of luck to in the long run, hard work usually brings a better life*). Nearly identical items are found in most scales assessing self-efficacy or internal–external control.

We included this item in Study 1 so that we could examine its relationships to other established measures. If the item assessed an important component of system justification, one would expect it to be more strongly related to system justification than personal agency. Yet, the opposite was found. The item was more strongly related to the composite personal agency measure ( $r = .34$ ) than to system justification ( $r = .14$ ; this difference is significant,  $p < .001$ ); the former would be an acceptable item–total score correlation whereas the latter would not (the item also was unrelated to the Generalized Belief in a Just World,  $r = .05$ ,  $p = .31$ ). Just as it appears based on the wording of the item, “meritocracy” is better described as a measure of personal agency, so the results of Napier and Jost's (2008) Study 2 provide stronger evidence for the conclusion that personal agency mediates the ideological happiness gap than it does that rationalizing inequality mediates the gap.

### 6.4. Is there evidence that conservatives are happy because they rationalize inequality?

In arguing that system justification explains the ideological happiness gap, Napier and Jost (2008) presented findings from three studies. Their Study 1 found the gap to be related to a measure of “rationalization of inequality” (p. 566), but this measure consisted of six items reflecting legitimate ideological disagreements about equity vs. equality and what should be done about unequal outcomes (e.g., “This country would be better off if we worried less about how equal people are”). We showed that a preference for equity (rather than equality) is positively associated with personal agency, and personal agency can account for its role as a mediator of the happiness gap. Their Study 2 found the happiness gap to be related to a one-item measure they called “meritocracy” but which would usually be called personal agency. Their Study 3 found that liberals but not conservatives were increasingly unhappy as the Gini index, a measure of inequality in household income, increased. However, we showed that the index and time are confounded. Social and historical changes in the US (e.g., in religious vs. secular attitudes and marital status) are more viable explanations for liberals' small decreases in happiness in recent decades. These studies do not

lead to the conclusion that conservatives are happier because of a propensity to rationalize social injustice.

### 6.5. Ideologies have personal consequences

In the real world, people can control a wide variety of their outcomes and those who *perceive* a sense of control tend to be better off. All other things being equal, a student who believes that her grades depend on her efforts (e.g., by studying and attending class) will perform better than a student who believes that her grades depend on chance. Decades of research in social, organizational, educational, and clinical psychology show that people who feel more control tend to be happier, healthier, and more productive (Bandura, 1997; Twenge et al., 2004). Research on self-determination (Ryan & Deci, 2000) similarly shows that autonomous self-regulation, as reflected in feelings of personal control and intrinsic motivation, is related to greater productivity, satisfaction, and well-being. These differences lead to different orientations toward difficult or challenging tasks, such that those who perceive control are more likely to begin sooner (less procrastination), expend more effort, concentrate better, and persist longer in the face of obstacles, thereby increasing their chances of success (Bandura, 1997). There is an impressive amount of evidence indicating that a sense of control is psychologically beneficial.

Similarly, religious individuals are less likely than non-religious individuals to engage in risky behaviors (e.g., drinking, drug use, unsafe sex practices; McCree, Wingood, DiClemente, Davies, & Harrington, 2003; Myers & Diener, 1995; Wills, Gibbons, Gerrard, Murry, & Brody, 2003) and use more effective coping strategies when dealing with stressful situations (Krause, 1992; Myers & Diener, 1995; Siegel, Anderman, & Schrimshaw, 2001). Further, people who exhibit greater commitment to transcendent moral principles appear to be better able to implement their moral intentions, resist temptations, and cope effectively with problems (Schlenker et al., 2009). People who express greater transcendent moral commitment are more likely to be regarded by their friends as having high integrity (Miller & Schlenker, 2011), to report giving greater help to others and to engage in more volunteering, and to report fewer antisocial activities such as lying, cheating, and stealing (Schlenker, 2008). Greater moral commitment also is associated with a variety of personality and attitudinal qualities that signify greater psychological well-being, buffering from stress, and effective social functioning, including greater internal control, purpose in life, authenticity, and empathy, plus less narcissism and Machiavellianism (Schlenker, 2008).

To the extent that conservatives evidence more personal agency, positive outlook, religiosity, moral commitment, and less willingness to excuse and justify transgressions, there are reasons to expect them to engage in behaviors that are likely to produce greater satisfaction with life, both globally (Studies 1–3) and in specific domains (Study 3). There are reasons why conservatives are more likely to help others (Brooks, 2006), and helping, in turn, is associated with greater life satisfaction (Brooks, 2008; Myers, 1993). Many of these ideological differences in associated variables are small to moderate in size, with considerable overlap between conservatives and liberals (e.g., in Study 1, absolute values of correlations between the composite mediators and political ideology ranged from .18 to .39 for the single-item measure of ideology and .26 to .33 for the composite measure of political attitudes). Nonetheless, taking these personality and attitudinal variables into account when examining the ideological happiness gap provides more complete insight into ideological differences than that provided by some traditional academic portraits of conservatives and liberals.

In our research and that of Napier and Jost (2008), the ideological happiness gap is itself a relatively small effect (e.g., the correlation between life satisfaction and political ideology ranged from .07 in

Study 3 to .18 for the single-item measure and .24 for the conservative attitudes composite measure in Study 1). Small effects are perhaps not surprising given the complex nature of liberal and conservative ideologies as well as the numerous factors that are documented antecedents of happiness. These difficulties are compounded when the happiness gap is examined in diverse cross-sectional samples collected over time, when the strengths of relationships with the mediators may change (e.g., there were smaller differences between liberals and conservatives in church attendance 50 years ago than today). As such, the replicability of the happiness gap across studies that involve heterogeneous samples, including cross-cultural samples (Napier & Jost, 2008), and long time-frames becomes more impressive. The ideological happiness gap reliably appears, is well known amongst political commentators and psychologists, and like many small effects (e.g., Whitley, 2002), is potentially quite meaningful, in this case given its implications for understanding political ideology and behavior.

### 6.6. Evaluative connotations

The evaluative connotations of the qualities of liberals and conservatives can be altered by applying alternative constructs that seem to fit the data equally well. For example, two central aspects of conservatism have emerged from social psychological research. The first is the resistance to change, as assessed by measures of authoritarianism and openness to experience (Jost et al., 2003). The second is a preference for hierarchical social structures, indicated by the tendency to respect authorities, endorse hierarchical arrangements, and resist programs aimed at achieving equality (Jost et al., 2003; Pratto, Sidanius, Stallworth, & Malle, 1994). To some, these two themes imply rigidity and closed-mindedness (e.g., failure to see new possibilities for betterment), blind obedience to authority figures, and opposition to social fairness defined by equality of outcomes. Yet these themes also can be described as endorsing binding moral foundations: by respecting traditions that have worked well in the past to promote group welfare, by asserting moral principles about right and wrong and a willingness to sanction moral deviations, by respecting traditional institutions and authorities who are seen as having earned their leadership positions, and by believing that the combination of skill, hard work, and determination will allow some people to contribute more to the group and it is only fair to reward them with equitable outcomes. Conversely, seemingly praiseworthy attributes such as open-mindedness, being nonjudgmental and tolerant, and promoting equality, often used to describe liberals, could as easily be called indecisiveness, moral relativity (including licentiousness and libertinism), and the failure to learn from and respect insights from the past, including the value of personal agency and equity. According to philosophers of science, meaning is never found directly in the data; meaning is provided by interpreting the data from specific theoretical perspectives. Different perspectives can imply different evaluative connotations.

### 6.7. Summary and conclusions

Conservatives appear to have qualities that are traditionally associated with positive adjustment and mental health. When we examined established measures of personal agency, positive outlook, and transcendent moral beliefs (i.e., religiosity, moral commitment, tolerance of transgressions), we found ideological differences that accounted for the happiness gap. A self-report measure of system justification (Kay & Jost, 2003) was a partial mediator but this measure was itself shown to be positively related to markers of positive adjustment and mental health; further, its unique contribution dealt with a generalized belief about fairness, not concerns about inequality or systemic injustice. This

generalized belief in fairness is consistent with the picture presented by other markers of adjustment and probably emerged as a unique predictor because similar items were not directly represented in our other measures. Liberals and conservatives differ in how they define fairness, with the former promoting equality and the latter equity, and therefore how fair they think the world generally is. Also, contrary to an approach focused on defensiveness and rationalization in response to threats (Jost et al., 2003), conservatives demonstrated higher, not lower, self-esteem and optimism.

Liberalism and conservatism are complex, multifaceted ideologies (e.g., fiscal conservatism, social liberalism) that are associated with numerous personality, value, and attitudinal differences, many of which also are associated with happiness. Instead of singling out one quality, like system justification, as the focal explanation for the ideological happiness gap, it seems preferable to appreciate the advantages and disadvantages of each ideology, personally, interpersonally, and for the social system.

## Appendix A

Personality, attitude, and value measures (and submeasures) used in Study 1, along with references.

Measure	Construct assessed	Submeasures	References
Spheres of Control Scale	Internal vs. External Control	Total Scale Score Personal Efficacy Interpersonal Control Sociopolitical Control	Paulhus, D. L. (1983). Sphere-specific measures of perceived control. <i>Journal of Personality and Social Psychology, 44</i> , 1253–1265
Personal Responsibility Scale	Personal Responsibility for One's Outcomes as Defined by Prescription Clarity, Event Control, and Obligation to Follow Prescriptions	Total Scale Score Responsibility-Clarity Responsibility-Control Responsibility-Obligation	Schlenker, B. R. (1997). Personal responsibility: Applications of the triangle model. In L. L. Cummings & B. Staw (Eds.), <i>Research in organizational behavior</i> (Vol. 19, pp. 241–301). Greenwich, CT: JAI
Self-Esteem Scale	Global Self-Evaluation	NA	Rosenberg, M. (1965). <i>Society and the adolescent self-image</i> . Princeton, NJ: Princeton Univ. Press.
Life Orientation Test-Revised	Optimism vs. Pessimism	NA	Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A re-evaluation of the Life Orientation Test. <i>Journal of Personality and Social Psychology, 67</i> , 1063–1078
Center for Epidemiological Studies Depression Scale (CES-D)	Depression	NA	Radloff, L.S. (1977). The CES-D scale: A self report depression scale for research in the general population. <i>Applied Psychological Measurement, 1</i> , 385–401
Patient Health Questionnaire-9 (PHQ9)	Depressive Symptomology	NA	Kroenke, K., Spitzer, R., & Williams, R. (2001). The PHQ-9: Validity of a brief depression severity measure. <i>Journal of General Internal Medicine, 16</i> , 606–616
Big Five Inventory-Brief Version	Five Foundational Personality Dimensions	Extraversion Conscientiousness Agreeableness Openness Neuroticism	Rammstedt, B., & John, O. P. (2007). Measuring personality in 1 min or less: A 10-item short version of the Big Five Inventory in English and German. <i>Journal of Research in Personality, 41</i> , 203–212
Philosophies of Human Nature Scale-Revised	Trust and Cynicism	Trust Cynicism	Wrightsmann, L. S. (1974). <i>Assumptions about human nature: A social-psychological approach</i> . Monterey, CA: Brooks/Cole
Need For Closure Scale	Need For Closure	NA	Webster, D. W., & Kruglanski, A. W. (1994). Individual differences in need for cognitive closure. <i>Journal of Personality and Social Psychology, 67</i> , 1049–1062

(continued on next page)

## Appendix A (continued)

Measure	Construct assessed	Submeasures	References
Right-Wing Authoritarianism Scale	Right Wing-Authoritarianism	NA	Altmeyer, B. (1981). <i>Right-wing authoritarianism</i> . Winnipeg: University of Manitoba Press
Dogmatism Scale	Dogmatism	NA	Rokeach, M. (1956). Political and religious dogmatism: An alternative to the authoritarian personality. <i>Psychological Monographs</i> , 70 (Whole No. 425)
Satisfaction With Life Scale	Satisfaction With Life	NA	Diener, E., Emmons, R.A., Larsen, R.J., & Griffin, S. (1985). The satisfaction with life scale. <i>Journal of Personality Assessment</i> , 49, 71–75
Protestant Work Ethic Scale	Protestant Work Ethic	NA	Quinn, D. M., & Crocker, J. (1999). When ideology hurts: Effects of belief in the protestant ethic and feeling overweight on the psychological well-being of women. <i>Journal of Personality and Social Psychology</i> , 77, 402–414
Normlessness Scale	Lack of Meaning and Purpose in Life	NA	Dean, D. (1961). Alienation: Its meaning and measurement. <i>American Sociological Review</i> , 26, 753–758
Integrity Scale	Steadfast Commitment to Moral Principles	NA	Schlenker, B. R. (2008). Integrity and character: Implications of principled and expedient ethical ideologies. <i>Journal of Social and Clinical Psychology</i> , 27, 1078–1125
Religiosity Scale	Religious Values, Beliefs, Practices	Total Scale Score Intrinsic Religiosity Extrinsic Religiosity	Allport, G. W., & Ross, M. (1967). Personal religious orientation and prejudice. <i>Journal Of Personality and Social Psychology</i> , 5, 432–443
Paranormal Beliefs Scale	Unconventional, Mystical Beliefs	Psi Phenomena, Witchcraft, Superstition, Spiritualism, Extraordinary Life Forms, Precognition, Traditional Religious Beliefs	Tobacyk, J. J. (1988). <i>A revised paranormal beliefs scale</i> . Unpublished manuscript. Louisiana State University
Morally Debatable Behaviors Scale	Willingness to Justify Legal, Social, and Moral Transgressions	NA	Harding, B., & Phillips, D. (1986). <i>Contrasting values in Western Europe: Unity, diversity and change</i> . London: Macmillan
Moral Disengagement Scale	Tendency to Morally Disengage From Antisocial, Harmful Acts via Excuses, Justifications, AND Other Accounts	Total Scale Score Displacement of Blame Diffusion of Responsibility Advantageous Comparisons Euphemistic Language Moral Justification Distorting Consequences Dehumanization of Victim Attribution of Blame to Victim	Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Mechanisms of moral disengagement in the exercise of moral agency. <i>Journal of Personality and Social Psychology</i> , 71, 364–374
System Justification Scale	Propensity to View Social System as Fair and Functioning Well	NA	Kay, A. C., & Jost, J. T. (2003). Complementary justice: Effects of 'poor but happy' and 'poor but honest' stereotype exemplars on system justification and implicit activation of the justice motive. <i>Journal of Personality and Social Psychology</i> , 85, 823–837

## Appendix A (continued)

Measure	Construct assessed	Submeasures	References
Global Belief in a Just World Scale	Belief that the World is Fair and Just	NA	Lipkus, I. (1991). The construction and preliminary validation of a global belief in a just world scale and the exploratory analysis of the multidimensional belief in a just world scale. <i>Personality and Individual Differences</i> , 12, 1171–1178
Socially Desirable Responding Scale (Short Form)	Short Version of the Marlowe-Crowne Scale Assessing the Need for Approval	NA	Reynolds, W. H. (1982). Development of reliable and valid short forms of the Marlowe-Crowne Social Desirability Scale. <i>Journal of Clinical Psychology</i> , 38, 119–125
Social Distancing Scale	Preferred Social Distance from Various Groups or Categories	Total Scale Score Categories included Foreigners, Religious Groups, Substance Abusers, Felons, Illnesses, Professions, Blacks & Hispanics, Ideologies	Developed for this study based on Bogardus, E. S. (1926). Social distance in the city. <i>Proceedings and Publications of the American Sociological Society</i> , 20, 40–46. (updated version)
Value Scale	Preferred Values and Personal Qualities	10 Value Groupings 8 Personal Quality Groupings	Braithwaite, V. A., & Law, H. G. (1985). Structure of human values: Testing the adequacy of the Rokeach Value Survey. <i>Journal of Personality and Social Psychology</i> , 49, 250–263. (with some modifications and additions)
Moral Values Fairness	Individualizing Values of Harm and Fairness	Total Individualizing Values Harm Fairness	Haidt, J. (2008). Morality. <i>Perspectives on Psychological Science</i> , 3, 65–72
Attitudes About The Goals and Implementation of Social Policies	Preferences for Equality vs. Equity and Limited vs. Activist Government	Total Scale Score Equity vs. Equality Limited vs. Activist Government	Developed For This Study
Attitudes Toward Topical Social Issues	Attitudes Toward Current Divisive Political Issues (e.g., Abortion, Iraq War, Climate Change)	NA	Developed For This Study

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