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Disgust Sensitivity, Political Conservatism, and Voting

Yoel Inbar[1], David Pizarro[2], Ravi Iyer[3], and Jonathan Haidt[4]

Abstract

In two large samples (combined $N = 31{,}045$), we found a positive relationship between disgust sensitivity and political conservatism. This relationship held when controlling for a number of demographic variables as well as the "Big Five" personality traits. Disgust sensitivity was also associated with more conservative voting in the 2008 U.S. presidential election. In Study 2, we replicated the disgust sensitivity–conservatism relationship in an international sample of respondents from 121 different countries. Across both samples, contamination disgust, which reflects a heightened concern with interpersonally transmitted disease and pathogens, was most strongly associated with conservatism.

Keywords

disgust, disgust sensitivity, politics, ideology, conservatism

The emotion of disgust, which likely evolved to discourage us from ingesting noxious or dangerous substances (Rozin, Haidt, & McCauley, 2008), also plays an important role in many moral and social judgments (Bloom, 2004; Nussbaum, 2001). People feel disgust in response to moral violations (Chapman et al., 2009; Haidt, Rozin, McCauley, & Imada, 1997), and those who are induced to feel extraneous or irrelevant disgust by exposure to disgusting images, foul odors, or bad tastes judge putative moral violations as more immoral (Eskine, Kacinik, & Prinz, 2011; Schnall, Benton, & Harvey, 2008; Schnall, Haidt, Clore, & Jordan, 2008). Disgust seems especially likely to affect judgments of acts that are related to sexual, bodily, or spiritual purity. For instance, individuals made to feel disgusted are more likely to report that taboo sexual behaviors are morally wrong (Horberg, Oveis, Keltner, & Cohen, 2009) and are more likely to report negative feelings toward social groups associated with these behaviors (such as gay men; Dasgupta, Desteno, Williams, & Hunsinger, 2009; Inbar, Pizarro, & Bloom, in press). In this respect, inducing disgust seems to temporarily shift people's moral judgments toward the conservative end of the political spectrum—like those who are momentarily disgusted, political conservatives are especially likely to disapprove of acts and individuals that violate norms of sexual and bodily purity (Graham, Haidt, & Nosek, 2009; Haidt & Hersch, 2001).

Not only does the momentary experience of disgust shift judgments in a politically conservative direction, individuals who are more readily disgusted reflect this in their stable moral and political attitudes. Individuals who report being easily disgusted are more tolerant of social inequality and score higher on measures of authoritarianism (Hodson & Costello, 2007), have more conservative attitudes toward sex (Olatunji, 2008), and hold more negative implicit attitudes toward homosexuality (Inbar, Pizarro, Knobe, & Bloom, 2009). Consistent with the experimental work described above, such individuals are also more likely to identify as politically conservative. In two studies, Inbar, Pizarro, and Bloom (2009) found a reliable relationship between political conservatism and disgust sensitivity (DS). This relationship was observed across two samples—undergraduate students and adults from four contested states in the 2004 U.S. presidential election—and held even when controlling for gender, age, and religious affiliation.

Considered in the context of experimental work on the effects of disgust on judgment, these findings suggest that individual differences in the frequency with which disgust is experienced may play an important role in influencing which moral and political beliefs individuals come to endorse. Such a conclusion, however, necessarily rests on firmly establishing the empirical link between DS and political conservatism. Although this relationship was first reported by Inbar et al. (2009), and has since been observed in other samples (Terrizzi, Shook, & Ventis, 2010), at least one investigation has failed to replicate it (Tybur, Merriman, Caldwell, McDonald, &

[1] Department of Social Psychology, Tilburg University, Tilburg, LE, the Netherlands
[2] Cornell University, Ithaca, NY, USA
[3] University of Southern California, Los Angeles, CA, USA
[4] University of Virginia, Charlottesville, VA, USA

Corresponding Author:
Yoel Inbar, Department of Social Psychology, Tilburg University, P.O. Box 90153, NL-5000 LE Tilburg, the Netherlands
Email: yinbar@uvt.nl

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Navarrete, 2010). While the absence of a relationship between disgust and political orientation in this study may have been due to a number of differences (such as in the population measured), it remains a possibility that the initial studies overestimated the relationship between DS and conservatism.

Our first aim in the current research was to address these conflicting findings by seeking to replicate—in a large, heterogenous sample—the basic finding that individuals high in DS are more likely to be politically conservative. At the same time, we wanted to investigate whether, if replicated, this relationship between DS and conservatism would hold when controlling for a number of potentially confounding demographic and individual difference variables (such as basic personality traits).

Our second aim was to investigate a possible explanation for the link between DS and conservatism by examining whether the tendency to experience a certain *kind* of disgust is most predictive of political orientation. According to several theorists, disgust evolved not just to protect individuals from oral contamination by potential foods but also from the possibility of contamination by contact with unfamiliar individuals or groups. Because contact with these individuals (especially those belonging to groups with unfamiliar customs in the domains of food, cleanliness, or sexuality) would have posed the risk of exposure to novel pathogens, the disgust response may have developed as a form of protection against this exposure (Rozin et al., 2008; Schaller & Duncan, 2007). Given that recent research on pathogen threat and disease avoidance links these constructs to ethnocentrism (Navarrete & Fessler, 2006), hostility toward foreigners (Faulkner et al., 2004), and more negative attitudes toward socially stigmatized groups (Park, Faulkner, & Schaller, 2003; Park, Schaller, & Crandall, 2007), it might be expected that disgust at interpersonal contamination threats would be most strongly related to political conservatism.

Despite its plausibility, to date this hypothesis has received limited empirical support. Most of the extant research (e.g., Inbar et al., 2009; Terrizzi, Shook, & Ventis, 2010) assessed DS using the original version of the Disgust Scale developed by Haidt, McCauley, and Rozin (1994). One potential issue with this version of the scale is that while the overall reliability of the scale is consistently high (Cronbach's $\alpha = .84$ in the original paper), the eight short subscales showed poor internal reliability (average Cronbach's $\alpha = .49$), making any relationship between the subscales and other psychological measures difficult to observe even if it exists. When using an improved (but unpublished) version of the Disgust Scale (the DS-2) that contained a longer and more reliable "interpersonal disgust" subscale, Hodson and Costello (2007) found that interpersonal disgust was the best predictor among the subscales of anti-immigrant attitudes, social dominance, and right wing authoritarianism—a finding consistent with the possibility that concerns over interpersonal contamination may be of particular importance for political orientation.

Offering a further improvement, Olatunji et al. (2007) developed a shorter version of the Disgust Scale that recategorized a number of the scale items to reliably assess three domains of DS: contamination disgust (interpersonal contagion threats such as drinking from someone else's soda or eating at a restaurant where the cook has a cold); core disgust (basic disgust elicitors such as maggots, vomit, and dirty toilets); and animal-reminder disgust (corpses, gore, and other sometimes "creepy" reminders that human bodies are like animal bodies). Validation studies showed that the three subscales of the Disgust Scale–Revised (DS-R) do indeed tap empirically and theoretically distinct domains of disgust (Olatunji et al., 2008). Olatunji (2008) found that conservative sexual attitudes were most strongly related to the core disgust subscale of the DS-R (although he did not include a measure of overall political orientation). Most recently, Inbar et al. (2009) found a relationship between the core disgust subscale of the DS-2 (which has substantial overlap with the core disgust subscale of the DS-R) and self-reported conservatism.

In short, the evidence for a relationship between contamination disgust and political ideology is mixed—some researchers have reported evidence consistent with it, while others have found that core disgust is most strongly associated with conservative attitudes. We therefore addressed this question directly in the current studies. Given the substantial improvements over earlier scales, we used the DS-R (Haidt, McCauley, & Rozin, 1994, modified by Olatunji et al., 2007) to assess the strength of the relationship between political orientation and the three domains of contamination, core, and animal-reminder disgust. In addition, we examined these relationships in an American sample (Study 1) as well as in an international sample of respondents from 121 different countries (Study 2). We reasoned that as the left–right political dimension is found across many nations (Jost et al., 2003), a consistent cross-cultural association between contamination disgust and conservatism would support the argument that there is a basic relationship between interpersonal contamination concerns and political ideology. If, on the other hand, the relationship between disgust and conservatism is due to the political controversy surrounding specific disgust-relevant issues (such as gay rights; Inbar et al., 2009) in some countries, we would expect much more variation in the relationship between disgust and political orientation across cultures and would have little reason to expect political orientation to be related to interpersonal contamination concerns in particular.

Finally, we built on the extant research in one other important respect—by investigating whether DS is related to political *behavior* as well as political attitudes. We did so in two ways. First, we asked a subset of our American respondents who completed the survey in 2008 how they planned to vote in that year's presidential election. Second, by combining our data with state-by-state vote totals from that election, we were able to test the link between state-level DS and voting (for a similar approach, see Rentfrow, Jost, Gosling, & Potter, 2009). As far as we are aware, this is the first investigation of whether DS is related to political behavior in addition to political attitudes.

Study 1
Participants and Measures

Participants in Study 1 were 25,588 Americans (50.9% female, median age = 40) who visited YourMorals.org between June

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2007 and May 2010 and completed at least the core measures described below. YourMorals.org is a data collection platform where participants are invited to take part in any of 30 to 40 different studies and are given feedback about their morality, personality, and ideology. Participants usually find YourMorals.org through publicity about psychological research or by typing keywords related to morality into an Internet search engine.

Core Measures

Political self-identification. At registration, participants were asked, "When it comes to politics, do you usually think of yourself as liberal, moderate, conservative, or something else?" The current sample consists of participants who selected one of the first seven options: *very liberal* (19.5%), *liberal* (41.6%), *slightly liberal* (16.5%), *moderate/middle-of-the-road* (10.5%), *slightly conservative* (4.9%), *conservative* (5.4%), and *very conservative* (1.5%). As our primary interest was in respondents who fell somewhere on the liberal/conservative political spectrum, participants who chose *don't know/not political*, *libertarian*, and *other* are not included here.

Disgust sensitivity. Participants completed the 25-item DS-R (Haidt et al., 1994, modified by Olatunji et al., 2007), which measures individual differences in the propensity to feel disgust across three domains: contamination disgust, core disgust, and animal-reminder disgust. DS scores are stable over time and predict people's willingness to perform actual disgusting actions (Rozin, Haidt, McCauley, Dunlop, & Ashmore, 1999). The DS-R asks respondents to rate their agreement with 13 statements (e.g., "I never let any part of my body touch the toilet seat in a public washroom") on a scale from 0 (Strongly disagree) to 4 (Strongly agree), and to rate how disgusting they would find 12 specific situations (e.g., "You take a sip of soda, and then realize that you drank from the glass that an acquaintance of yours had been drinking from") on a scale from 0 (Not disgusting at all) to 4 (Extremely disgusting).

Demographics. At registration, participants indicated their gender, year of birth, education, religious affiliation, and frequency of religious attendance.

Secondary Measures

The following additional measures were completed by subsets of the full sample:

Personality traits. A total of 9,235 participants completed the 44-item Big Five Personality Inventory (John & Srivastava, 1999), a widely used measure of five fundamental personality traits: openness to experience, conscientiousness, agreeableness, extraversion, and neuroticism.

Political orientation by issue domain. Respondents were asked to indicate "how liberal (left wing) or conservative (right wing)" they were separately for "social issues" (n = 403), "economic issues" (n = 394), and "foreign-policy issues" (n = 380). The first seven response options were the same as for the overall political self-identification item (*very liberal* to *very conservative*); participants could also select *don't know* and *can't pick one label* (these participants are not included here).

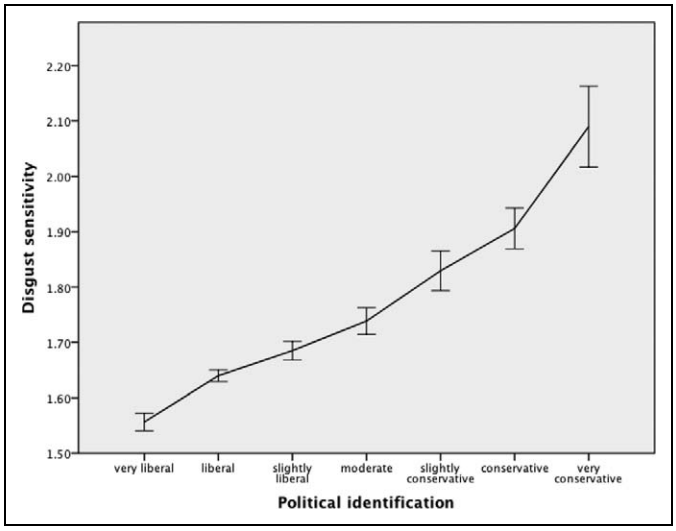

Figure 1. Disgust sensitivity by political orientation (Study 1). Error bars are 95% confidence intervals.

Voting intentions. A total of 1,568 participants who visited YourMorals.org prior to the 2008 U.S. Presidential election indicated how they planned to vote by choosing one of the following: *Definitely voting for John McCain* (7.8%), *Likely voting for John McCain* (2.2%), *Leaning toward voting for John McCain* (2.1%), *Undecided* (7.5%), *Leaning toward voting for Barack Obama* (2.3%), *Likely voting for Barack Obama* (7.4%), and *Definitely voting for Barack Obama* (70.7%). (Participants could also indicate that they were planning to vote for neither candidate. Those who did so are not included here.)

Results

Because our sample was extremely large, p values are very small (and not especially meaningful). We therefore report effect sizes rather than p values. Any differences can be assumed to be significant at $p < .01$ unless otherwise stated.

DS and Political Orientation

We first averaged participants' responses to the 25 items of the DS-R (α =.86) to obtain an overall DS score for each participant. As Figure 1 shows, we replicated the previously reported relationship between DS and political orientation: More conservative participants were more disgust sensitive. Treating political orientation as a categorical variable showed significant differences in DS between every group, and treating political orientation as a continuous variable likewise revealed a significant correlation between DS and conservatism, r = .17. As the top row of Table 1 shows, conservatism was differentially

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Table 1. Correlation Between Disgust Scale–Revised (DS-R) Subscales and Political Orientation

	Entire Scale	Contamination	Core	Animal-Reminder
Conservatism: (overall)	.17[a]	.27[a]	.13[a]	.09[a]
Conservatism (social)	.20[a]	.30[a]	.12[b]	.15[b]
Conservatism (economic)	.09	.17[a]	.04	.08
Conservatism (foreign policy)	.15[b]	.24[a]	.07	.13[b]

[a]$p < .001$. [b]$p < .05$. Overall conservatism $n = 25{,}588$; social conservatism $n = 403$; economic conservatism $n = 394$; foreign policy $n = 380$.

Table 2. Parameters From Regression Models Predicting Self-Reported Conservatism From Disgust Sensitivity and Control Variables[a]

Disgust sensitivity	*b* (SE)	*p*	η^2_p
Entire scale	.309 (.024)	<.001	.018
Contamination	.376 (.019)	<.001	.04
Core	.231 (.022)	<.001	.012
Animal-reminder	.098 (.018)	<.001	.003
Control variables			
	b (SE)	*p*	η^2_p
Gender (F = 0; M = 1)	.451 (.028)	<.001	.027
Age	.006 (.001)	<.001	.004
Education	–.076 (.007)	<.001	.013
Religious affiliation	–	<.001	.077
Religious attendance	.146 (.011)	<.001	.020
Agreeableness	–.248 (.024)	<.001	.012
Conscientiousness	.171 (.02)	<.001	.008
Extraversion	–.014 (.017)	.407	.000
Openness	–.438 (.023)	<.001	.037
Neuroticism	–.13 (.019)	<.001	.005

[a]Values in the upper section are from individual regressions with DS subscale and all control variables as predictors. Values in the lower section are from a simultaneous regression model with all control variables (but not DS) as predictors.

associated with the contamination ($\alpha = .56$), core ($\alpha = .75$), and animal-reminder ($\alpha = .78$) subscales: The relationship was strongest for the contamination subscale, followed by the core disgust and finally the animal-reminder subscales.

We next repeated this analysis controlling for age, gender, education (coded as a continuous variable from 1 = *some high school* to 9 = *graduate or professional degree*), frequency of religious attendance (coded as a continuous variable from 0 = *never* to 5 = *one or more times each week*), religious affiliation (coded as a categorical variable; participants chose from a list including the major world religions, various Christian denominations, "Atheist/None," and "Spiritual but not religious"), and the Big Five personality traits of openness, conscientiousness, agreeableness, extraversion, and neuroticism. As Table 2 shows, DS remained significantly associated with conservatism, $b = .309$, $\eta^2_p = .018$. Repeating this analysis for each DS-R subscale showed that again the relationship was strongest for the contamination subscale ($b = .376$, $\eta^2_p = .04$), followed by the core disgust subscale ($b = .231$, $\eta^2_p = .012$), and finally the animal-reminder subscale ($b = .098$, $\eta^2_p = .003$).

Table 3. Predictors of Barack Obama's State-by-State Victory Margin Over John McCain in the 2008 U.S. Presidential Election

	b (SE)	t	p	η^2_p
Contamination DS	–77.71 (33.0)	–2.36	.023	.106
Median household income	.001 (.000)	3.33	.002	.191
% White residents	–.544	–2.51	.016	.118

Finally, we examined the subset of participants who indicated their political orientation separately for social issues, economic issues, and foreign policy. Table 1 shows the relationship between DS (including the three DS-R subscales) and self-reported political ideology in these three domains. Consistent with prior research (Inbar et al., 2009; Terrizzi, et al., 2010), social conservatism was most strongly related to DS ($r = .20$, $p < .001$), followed by foreign policy ($r = .15$, $p = .004$) and economic conservatism ($r = .09$, $p = .07$). Across domains, the contamination subscale again was most strongly related to conservatism (rs = .17-.30).

DS and Voting in the 2008 U.S. Presidential Election

Voting intentions. We coded voting intentions from one to seven, with higher numbers indicating a greater likelihood of voting for Barack Obama. DS was associated with a lower likelihood of voting for Obama, $r = -.10$. This relationship was strongest for the contamination subscale ($r = -.21$), weaker for the core subscale ($r = -.07$), and nonsignificant for the animal-reminder subscale ($r = -.04$, $p = .17$).

A subset of the sample ($n = 15{,}728$) provided their 5-digit ZIP codes, which allowed us to determine their state of residence. This group consisted of residents of all 50 states and the District of Columbia, roughly in proportion to their representation in the U.S. population. The most common states of residence were California ($N = 2{,}023$, 12.9% of sample), New York ($N = 1{,}820$, 11.57%), and Texas ($N = 888$, 5.64%). Least common were Wyoming ($N = 17$), South Dakota ($N = 20$), and North Dakota ($N = 25$). We computed average scores on the contamination subscale of the DS-R for each state and D.C., and then regressed Barack Obama's state-by-state margin of victory over John McCain in the 2008 presidential election on contamination scores, state median household income, and the percentage of the population identifying as White (U.S. Census, 2010). As Table 3 shows, both median household income and percentage of Whites predicted Obama's victory margin. Of more theoretical interest, so did disgust: The higher a state's average contamination DS, the less likely it was to vote for Obama over McCain, $b = -77.71$, $t(47) = -2.36$, $p = .02$, $\eta^2_p = .11$. All else equal, an increase in contamination DS of 1 standard deviation (SD) meant a 2.19 point reduction in Obama's margin of victory in that state.[1]

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Table 4. Correlations Between Disgust Scale–Revised (DS-R) Subscales and Conservatism by Geographic Region[a]

	n	Entire Scale	Contamination	Core	Animal-Reminder
Asia (East)	176	.24	.28	.17	.22
Asia (South)	238	.32	.31	.24	.28
Asia (Southeast)	158	.22	.30	.16	.15*
Australia/NZ	646	.19	.26	.15	.12
Canada	1,383	.21	.28	.14	.16
Europe (Eastern)	248	.25	.33	.19	.15
Europe (Western)	1,160	.21	.23	.18	.13
Latin America	430	.21	.26	.18	.11
Middle East	141	.20	.22	.16*	.14*
U.K.	832	.17	.22	.12	.12

[a]Unless otherwise noted, all correlations are significant at $p < .05$.
*$p < .10$.

Study 2

In Study 1, we found that in a large sample of Americans, more politically conservative respondents reported greater DS. This relationship was strongest for contamination disgust, which also predicted voting in the 2008 U.S. presidential election. Individuals who were more disgust sensitive were more likely to report planning to vote for John McCain over Barack Obama, and states with higher average contamination DS were more likely to actually vote for John McCain over Barack Obama. However, these results leave open the question of whether the relationship between conservatism and DS is unique to the United States, or whether it holds more broadly. In this study, we sought to answer this question by assessing the relationship between DS and conservatism in a large non-U.S. sample.

Participants and Measures

Participants in Study 2 were 5,457 individuals born and raised outside the United States (40.4% female, median age = 34, 121 different countries) who visited YourMorals.org between June 2007 and May 2010 and completed (in English) at least the DS measures and political self-identification measures described above. Because the definition of *liberal* and *conservative* can vary by country, participants were told that "'Liberal' is intended to include the Left, progressives, and in some countries socialists. 'Conservative' is intended to include the Right, traditionalists, and in some countries Christian Democrats." The sample consisted of participants who identified as *very liberal* (20.5%), *liberal* (42.7%), *slightly liberal* (14.3%), *moderate* (13.2%), *slightly conservative* (5.1%), *conservative* (3.4%), and *very conservative* (0.8%). Participants who chose *don't know/not political*, *libertarian*, and *other* were excluded from analyses.

Results

We first averaged participants' responses to the 25 items of the disgust scale ($\alpha = .85$) to obtain an overall DS score for each participant. As in the U.S. sample, there was a positive relationship between DS and conservatism, $r = .22$. Also as in the U.S. sample, conservatism was differentially associated with the contamination ($\alpha = .55$), core ($\alpha = .74$), and animal-reminder ($\alpha = .78$) subscales. The relationship was strongest for the contamination subscale ($r = .27$), followed by the core disgust subscale ($r = .16$) and finally the animal-reminder subscale ($r = .15$).

DS and Political Orientation by Geographic Region

To investigate whether the relationship between DS and conservatism differed by geographic region, we analyzed data separately for participants from 10 major world regions and countries: United Kingdom ($n = 832$), Canada ($n = 1{,}383$), Australia/New Zealand ($n = 644$), Western Europe ($n = 1{,}160$), Eastern Europe ($n = 248$), Latin America ($n = 430$), the Middle East and North Africa ($n = 141$), South Asia ($n = 238$), East Asia ($n = 176$), and Southeast Asia ($n = 158$).[2] As Table 4 shows, DS was significantly correlated with conservatism in every region. Consistent with the U.S. results, in every region contamination disgust showed the strongest relationship with conservatism, ranging from $r = .22$ (United Kingdom) to $r = .33$ (Eastern Europe).

General Discussion

In two large samples—one consisting of Americans and one consisting of natives of 121 countries throughout the world—we found that DS was positively associated with political conservatism. Across both samples, the relationship between DS and conservatism was strongest for disgust at interpersonal contamination (as measured by the DS-R subscale of contamination disgust). In the U.S. sample, we found that DS predicted intentions to vote for John McCain (the more conservative candidate) over Barack Obama in the 2008 U.S. presidential election, and that a state's average level of contamination disgust was positively associated with McCain's vote share in that state.

These results offer the strongest evidence to date of a relationship between DS and political orientation, as the current studies were able to address a number of limitations present

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in earlier work. In Study 1, the relationship between DS and conservatism held when controlling for a number of individual-difference variables, including gender, age, education, religious affiliation and attendance, and the Big Five personality factors of agreeableness, conscientiousness, extraversion, neuroticism, and openness to experience. In Study 2, we found that the relationship between DS and political orientation held across every major world region for which we had a sufficient number of respondents, showing the robustness of the DS-conservatism relationship. Although there are undoubtedly meaningful differences in the cultural and political landscape across these countries that cannot be captured in the current study, these results strongly suggest that the DS-conservatism relationship is not a product of the unique characteristics of U.S. (or, more broadly, Western democratic) political systems. Rather, it appears that DS is related to conservatism across a wide variety of cultures, geographic regions, and political systems.

The Relationship Between Contamination Disgust and Conservatism

In both studies, and in every world region, we found that contamination disgust was most strongly associated with political conservatism. These results are consistent with research linking contamination disgust to a "behavioral immune system," that may have evolved in order to shield individuals from exposure to novel pathogens or parasites (Faulkner, Schaller, Park, & Duncan, 2004; Park et al., 2003; Schaller & Duncan, 2007). The emotion of disgust may thus serve to encourage avoidance of out-groups who are likely to expose individuals to novel pathogens—for example, out-groups who differ in their practices regarding cleanliness, food preparation, and sexual behavior. A particularly strong desire to avoid contamination—that is, an especially active behavioral immune system—may be the basis for some of the attitudes that consistently differ across conservatives and liberals (such as attitudes toward sexuality and immigration). This argument is also consistent with recent experimental work demonstrating that reminders of cleanliness promote a more conservative political orientation (Helzer & Pizarro, in press).

We should note that in both studies, the reliability of the contamination subscale was low (Study 1 $\alpha = .56$; Study 2 $\alpha = .55$). These reliabilities are similar to those reported by other researchers using the same scale. For example, Olatunji et al. (2008) found α reliabilities for the contamination subscale from .37 to .61 across four studies. This low internal consistency may be due to the subscale's small number of items (5), diversity of item content, or both. For exploratory purposes, we examined whether any one item especially lowered reliability, but this was not the case. We also examined (using data from Study 1) whether any one item was especially correlated with conservatism. The item "As part of a sex education class, you are required to inflate a new unlubricated condom, using your mouth" showed an especially strong relationship with conservatism ($r = .30$), possibly due in part to its sexual associations. However, the other 4 items correlated with conservatism individually as well, with rs from .11 to .22. In contrast, the average correlation of the remaining 20 DS-R items with conservatism was .06. Thus, it is not the case that the association between contamination disgust and conservatism is solely due to a subset of the subscale items.

Sample Limitations

Although our sample of respondents was large, as well as demographically and geographically diverse, one limitation is that respondents were self-selecting volunteers who logged onto the YourMorals.org website in order to complete our measures. The alternative strategy of seeking a randomly selected representative sample of individuals, although it would protect against the problems associated with self-selection, would bring significant disadvantages given the goals of the current investigation. Because of the considerable expense associated with collecting a nationally representative sample of respondents, we would likely have been limited to the use of very few items to measure each construct of interest. By recruiting volunteers, we were able to use full versions of well-validated scales to assess each construct and were able to collect these data from a much larger set of respondents (across the United States and the world) than would have been feasible using traditional random sampling techniques.

Nonetheless, one consequence of using this particular volunteer sample is that we have more liberal respondents than conservatives in the data set. While the observed liberal skew would likely make it more difficult to find the documented relationship between political orientation and DS, we nonetheless thought it important to verify that the relationship between disgust and ideology is not an artifact of our oversampling of political liberals. In order to do so, we split both our U.S. and international samples into liberals (those who described themselves as very liberal, liberal, or slightly liberal) and conservatives (those who described themselves as very conservative, conservative, or slightly conservative). Despite the fact that doing so obviously restricted the range of ideology, we nonetheless found a significant correlation between DS and political ideology in both liberal and conservative groups in the United States, liberal $r(19{,}871) = .08$, $p < .0001$; conservative $r(3029) = .11$, $p < .0001$, and internationally, liberal $r(5{,}459) = .22$, $p < .0001$; conservative $r(510) = .13$, $p = .002$. Thus, it does not appear that the relationship between disgust and conservatism is due to the predominance of political liberals in our sample.

While the relationship between DS and political orientation was documented for the first time only recently, a number of studies are providing converging evidence supporting it. The current studies were intended to advance our understanding about the nature of this relationship. We did so first by demonstrating that the link between DS and political orientation is robust: It remained significant even when accounting for potentially confounding demographic and individual difference variables, it is not limited to the United States (and is thus not likely to be a quirk of the U.S. political climate), and it is predictive of

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voting intentions as well as (at a group level) actual voting behavior. In addition, we demonstrated that one particular type of DS—the tendency to be disgusted by interpersonal contamination threats—is most predictive of political orientation. This evidence supports the argument that disgust in response to threats of contamination is a basic source of political ideology. Individuals who are more likely to experience this kind of disgust are more likely to end up endorsing political views consistent with protecting against the possibility of contamination from other individuals and groups—views that generally fall on the conservative end of the political spectrum.

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Notes

1. We also performed this analysis using the full Disgust Scale–Revised (DS-R) and the other two subscales. None of these significantly predicted state-level voting.
2. This analysis excludes the region of sub-Saharan Africa, as there were not enough respondents in this region ($n = 41$) for us to conduct any meaningful analyses.

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Bios

Yoel Inbar is an assistant professor of social psychology at Tilburg University. His research focuses on emotion, judgment, and morality.

David Pizarro is an assistant professor in the psychology department at Cornell University. His primary interests are in human morality, emotion, and the overlap between the two.

Ravi Iyer is a moral psychology researcher at the University of Southern California and data scientist at Ranker.com. He is especially interested in the implications of moral psychology for understanding current events.

Jonathan Haidt is a professor of psychology at the University of Virginia. He studies the emotional basis of morality and political ideology.

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