Group Processes & Intergroup Relations
G P I R

Article

Group Processes & Intergroup Relations
1–15

DOI: 10.1177/1368430218781012
journals.sagepub.com/home/gpi
SAGE

Moral foundations explain unique variance in political ideology beyond resistance to change and opposition to equality

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Abstract

Moral foundations theory (MFT), while inspiring much empirical work, has been the target of both methodological and theoretical criticism. One important criticism of MFT is that, in its attempt to explain variability in political ideology, it only repackages the core motives (resistance to change and opposition to equality) and does not actually provide additional explanatory potential. Indeed, some previous studies show that moral foundations do not explain variability in ideology beyond other relevant variables, and that the relation between moral foundations and political orientation is mediated by other ideological variables. In the present research, we examined whether moral foundations can explain variability beyond the core motives in samples from Turkey and the United States. Contrary to some previous findings, we found that moral foundations explain unique variance in general, social, and economic conservatism. These findings suggest that the moral foundations proposed by MFT cannot be reduced to other variables that have been used in the literature to measure ideological proclivities.

Keywords

economic conservatism, moral foundations, opposition to equality, political orientation, resistance to change, social conservatism

Paper received; revised version accepted.

Liberals and conservatives are among the most often studied societal groups, and recent work has revealed interesting differences in the definition of morality that members of these groups tend to adopt. Understanding whether these differences are simply reducible to existing psychological explanations or whether they represent something about morality that goes beyond those variables is important, both theoretically and in terms of practical concerns regarding how to bridge the divide between these societal groups. The present research examined this issue using samples from two cultures (Turkey and US).

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The modern political psychology literature has been greatly influenced by a meta-analysis by Jost, Glaser, Kruglanski, and Sulloway (2003) showing that liberals and conservatives can be distinguished on two "core ideological motives" called resistance to change and opposition to equality. That is, conservatives, compared to liberals, tend to support maintaining the societal status quo and the hierarchical organization of groups in society. These core motives largely correspond to two long-standing constructs in the literature, specifically, resistance to change corresponding to right-wing authoritarianism (RWA) and opposition to equality corresponding to social dominance orientation (SDO; Federico, Ergun, & Hunt, 2014).

Moral foundations theory (MFT; Haidt, 2007) was advanced mostly independently of the political psychology literature, focusing instead on a criticism of the moral psychology literature in terms of its tendency to overemphasize reasoning over intuition. It could be argued that MFT led to a paradigmatic shift in the study of morality. Earlier conceptions of morality were more Western-centric, individualistic, and heavily emphasized justice and harm concerns. On the other hand, MFT, based on Shweder, Much, Mahapatra, and Park's (1997) anthropological work, drew attention to the importance of concerns about loyalty, authority, and divinity, thereby expanding the definition of morality (Graham et al., 2011).

According to MFT, a major source of moral intuitions is the concern to not "harm" other sentient beings, itself stemming from the instinct to protect and provide nurturance for offspring. The fairness foundation stems from the need to protect group harmony from deceitful agents that attempt to take advantage of ingroup members. The loyalty foundation is related to coalition formation and self-sacrifice for the sake of tribal welfare and defense against outgroups. The authority foundation stems from the need to establish and maintain a hierarchical organization in the name of societal order. The sanctity foundation is related to the need to regulate worldly desires in the name of leading a physically and spiritually clean life (see Haidt, 2007, 2012). Graham, Haidt, and Nosek (2009) argued that the care and fairness foundations are more closely related to the protection of individual rights, thereby referring to them as "individualizing" foundations. They referred to the remaining three foundations as "binding" because they focus mostly on strengthening group ties and regulating selfishness among ingroup members. Research has shown that liberals emphasize individualizing foundations in their understanding of morality, whereas conservatives appear to give similar weight to all five foundations (Graham et al., 2009). MFT partly owes its popularity to its potential to explain differences between political groups (see Haidt, 2012) and thus, has often been treated as a theory of ideology rather than morality (see for criticism, Smith, Alford, Hibbing, Martin, & Hatemi, 2017; see also Haidt, 2016, for a countercriticism of the methods used by Smith et al., 2017).

While MFT has inspired a remarkable amount of empirical work in a short time period, it has also received a variety of methodological and theoretical criticism. For instance, on the methodological front, researchers cite the suboptimal cross-cultural fit values of the Moral Foundations Questionnaire (MFQ)—MFT's primary measurement tool (e.g., Davies, Sibley, & Liu, 2014; Nilsson & Erlandsson, 2015; Yalçındağ et al., 2017; Yilmaz, Harma, Bahçekapili, & Cesur, 2016). On the theoretical front, an often-cited criticism is that MFT lacks the ability to provide insight into the domain of political psychology beyond that provided by long-standing constructs such as RWA and SDO. This criticism can be taken as arguing that MFT merely repackages these constructs (Federico, Weber, Ergun, & Hunt, 2013; Jost, 2012; Kugler, Jost, & Noorbaloochi, 2014; Milojev et al., 2014; Sinn & Hayes, 2016). More specifically, the claim is that individualizing foundations represent the opposite of SDO, and that binding foundations overlap with RWA. Indeed, studies conducted with U.S.-based American (Kugler et al., 2014) and Swedish (Nilsson & Erlandsson, 2015) participants have indicated that the relationship between binding

foundations and political orientation is mediated largely by resistance to change (which is in turn related to RWA), and that the relationship between individualizing foundations and political orientation is mediated largely by opposition to equality (which is related to SDO). Furthermore, a factor-analytic study by Sinn and Hayes (2016) indicated that binding foundations correspond to authoritarianism, and that individualizing foundations correspond to universalist values. Moral foundations were also unable to explain variance in political orientation beyond SDO, authoritarianism, and universalism.

These studies, in turn, have their limitations. For instance, Kugler et al. (2014) have assumed causal influence in the direction of political identity/orientation to core motives to moral foundations. It is possible to claim the opposite direction of causality. It seems difficult to resolve this issue via mediation analyses in the absence of experimental manipulation because causality is ambiguous in correlational designs (see Lemmer & Gollwitzer, 2017). In Sinn and Hayes's (2016) study, one could argue that universalism already captures an important portion of moral concerns and therefore, controlling for universalism could have obscured any unique relation between moral foundations and political outcomes. More generally, there appears to be scarce evidence on whether these relations would hold in non-Western cultures or in nations with different political-cultural history and climate.

Based on this reading of the literature, we tested whether moral foundations are capable of explaining unique variance in political orientation beyond the core motives identified by Jost et al. (2003), in both a predominantly Muslim, Turkish sample and a U.S.-based American sample drawn from Amazon Mechanical Turk. Political orientation is defined on a left-to-right continuum in Turkey and a liberal-to-conservatism continuum in the US. The distinction between social and economic attitudes is not very clear in Turkey but is quite important in the U.S. context. Thus, we tested whether MFQ explains unique variance in general political orientation in Turkey, and in general, social, and economic orientation in the US.

Turkish Sample

Participants

We determined our stopping rule temporally, sending the participant pool at Boğaziçi University (Istanbul) an online invitation with a deadline of 2 weeks. Participants were given extra course credit for completing the survey. A total of 475 undergraduates (M_{age} = 20.51, SD = 2.24; 183 males, 291 females, one unreported) participated in the study. All participants were native Turkish speakers. The majority of the participants (79.8%) defined themselves as ethnically Turkish.

Measures and Procedures

Completing the online survey took approximately 20 minutes. The core motives—resistance to change and opposition to equality—were measured using scales composed by Sarıbay, Olcaysoy-Ökten, and Yılmaz (2017) and used in previous studies (Yilmaz & Saribay, 2016, 2018). Sarıbay et al. (2017) initially used some items meaningful in Turkish culture from the Social Dominance Orientation Scale (Pratto, Sidanius, Stallworth, & Malle, 1994), Right-Wing Authoritarianism Scale (Altemeyer & Hunsberger, 1992), F-scale (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950), Social and Cultural Attitudes Scale (Küçüker, 2007), Egalitarianism–Inegalitarianism Scale (Kluegel & Smith, 1983), and items measuring resistance to change used by Jost et al. (2007). They performed a factor analysis and supported the existence of two factors representing resistance to change and opposition to equality. They also showed the reliability and validity of these two scales in three subsequent studies by indicating the relation of these scales to other conservatism scales such as social conservatism, political orientation, and belief in a just world. Eight items measured resistance to change (e.g., "The love of Westernization will result in the assimilation of our [Turkish] culture and identity"). Seventeen items measured opposition to equality (e.g., "If people were treated more equally we would have fewer problems in this country" [reverse-coded]). Responses were measured on a 7-point

Likert-type scale (1 = *strongly disagree*, 7 = *strongly agree*). Reliabilities (Cronbach's αs) were sufficient (resistance to change: α = .78; opposition to equality: α = .89).

Participants were also asked to complete the Turkish adaptation of the MFQ (Yilmaz et al., 2016; see also Graham et al., 2011). The MFQ consists of two sections (30 items) with a 6-point Likert-type scale, and is intended to measure the extent to which participants endorse the five unique moral foundations proposed by MFT (Cronbach's αs for care = .64, fairness = .68; loyalty = .75; authority = .80; sanctity = .82; individualizing = .78; binding = .91). The first section focuses on how participants define morality (e.g., "Whether or not someone did something to betray his or her group"). The second section focuses on participants' acceptance of a set of morally relevant statements (e.g., "I think it's morally wrong that rich children inherit a lot of money while poor children inherit nothing"). The average of six items (three from each section) comprises the score for a particular moral foundation.

Participants were asked to respond to the single-item political orientation question (1 = *left*, 7 = *right*), to indicate their level of religiosity (1 = *not at all religious*, 7 = *very religious*), and to answer basic demographic questions (age, gender, etc.). The order of the scales was randomized.

Results

Table 1 demonstrates the correlations among variables. As predicted, all ideological measures (i.e., resistance to change, opposition to equality, and right-wing political orientation) are positively correlated with each other. In addition, all binding foundations (i.e., loyalty, authority, sanctity) and individualizing foundations (i.e., harm and fairness) are positively correlated with each other.

Tests for collinearity and multicollinearity revealed that data were suitable for multiple regression analyses. To test the independent effect of MFQ on political orientation, a hierarchical multiple regression analysis was carried out predicting political orientation (1 = leftist, 7 = rightist) while controlling for resistance to change and opposition to equality. In the analysis, ideology measures were entered first, followed by the MFQ. In Step 1, both opposition to equality (β = .135, p = .008) and resistance to change (β = .444, p < .001) were significant independent predictors. In Step 2, in addition to opposition to equality (β = .131, p = .020) and resistance to change (β = .196, p = .003), authority (β = .151, p = .029) and sanctity (β = .293, p < .001) made significant contributions and explained extra variances on political orientation. When we controlled for age (in years), gender (0 = female, 1 = male), and self-reported religiosity from 1 (*not at all religious*) to 7 (*highly religious*), the significant contribution of sanctity did not change (see Table 2 for the results when demographics were controlled for in the first step). When we used two superordinate categories (individualizing vs. binding) instead of five different foundations, binding made a significant contribution (β = .339, p < .001), while individualizing did not (β = −.035, p = .472). When we controlled for the same demographic variables in the first step, the results of the regression did not change (see Table 3 for the results when the demographics were controlled for in the first step).

These results suggest that binding foundations account for variance in political orientation beyond that explained by opposition to equality and resistance to change, in contrast to some previous findings (e.g., Sinn & Hayes, 2016). In addition, this unique effect is mostly driven by the sanctity and the authority foundations, but controlling for religiosity (which is highly related to sanctity) did not change the main results. This supports the view that MFT does not simply repackage the previous conceptualizations of ideology and cannot be reduced to other ideological variables.

However, this study had some limitations. For instance, we used a one-item religiosity measure, and replicating these results with a different, reliable religiosity measure would be important since sanctity and religiosity can be closely related (Graham & Haidt, 2010). In addition, unlike the US, social and economic attitudes are not well differentiated in Turkey (Öniş, 2007). Thus, we conducted the same test in a U.S. sample using a different religiosity measure.

Table 1. Correlations of measures with political orientation, resistance to change, opposition to equality, harm, fairness, loyalty, authority, sanctity, individualizing, binding foundations in Turkish sample.

	1	2	3	4	5	6	7	8	9	10
1. POL	–	.520***	.400***	−.011	−.133**	.398***	.508***	.506***	−.077	.531***
2. RC		–	.603***	−.087	−.231***	.630***	.717***	.621***	−.173***	.731***
3. OE			–	−.358***	−.495***	.340***	.482***	.299***	−.471***	.418***
4. Harm				–	.607***	.244***	.083	.228***	.910***	.200***
5. Fair					–	.100*	−.082	.102*	.881***	.043
6. Loyal						–	.735***	.687***	.196***	.895***
7. Auth							–	.695***	.007	.896***
8. Sanc								–	.188***	.899***
9. Ind									–	.140**
10. Bind										–

Note. POL = political orientation; RC = resistance to change; OE = opposition to equality; Harm = harm; Fair = fairness; Loyal = loyalty; Auth = authority; Sanc = sanctity; Ind = individualizing; Bind = binding.
*p < .05. **p < .01. ***p < .001.

Table 2. Hierarchical multiple regression: Standardized regression coefficients predicting right-wing political orientation with five moral foundations in Turkish sample.

Right-wing political orientation (Turkish sample)				
	Step 1	Step 2	Step 3	Adjusted R^2
Demographics				.378***
Gender	−.029	.010	.015	
Age	.123**	.068	.075	
Religiosity	.602***	.479***	.425***	
Political ideology				.436***
Resistance to change		.176	.180**	
Opposition to equality		.141	.074	
Moral foundations				.444***
Care			.054	
Fairness			−.023	
Loyalty			−.081	
Authority			.095	
Sanctity			.128*	

*p < .05. **p < .01. ***p < .001.

U.S. Sample

Participants

A total of 523 Amazon Mechanical Turk participants took part in the study.[1] However, those who did not complete the measures and those who participated from outside the US were excluded from the analyses. The remaining sample is comprised of 426 participants (M_{age} = 38.67, SD = 13.81; 235 female, 160 male).

Measures and Procedures

The online survey took approximately 20 minutes to complete. In addition to the Moral Foundations Questionnaire (Cronbach's αs for care = .76,

Table 3. Hierarchical multiple regression: Standardized regression coefficients predicting right-wing political orientation with two superordinate moral foundation categories in Turkish sample.

Right-wing political orientation (Turkish sample)				
	Step 1	Step 2	Step 3	Adjusted R^2
Demographics				.378***
Gender	.123**	.068	.066	
Age	−.029	.010	.008	
Religiosity	.602***	.479***	.441***	
Political ideology				.436***
Resistance to change		.141*	.70	
Opposition to equality		.176***	.186**	
Moral foundations				.441***
Individualizing			.020	
Binding			.125*	

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

fairness = .77; loyalty = .76; authority = .77; sanctity = .85; individualizing = .86; binding = .91), resistance to change (e.g., "Society should be quicker to throw out old ideas and traditions and to adopt new thinking and customs" [reverse-coded]; Kerlinger, 1984) and opposition to equality ("It is unjust to try to make groups equal"; Ho et al., 2015) were measured using four items each, drawn from the literature. Since there appears to be no established scale in English to measure resistance to change, we collected four face-valid items from the literature (one item from Duckitt, Bizumic, Krauss, & Heled, 2010; two items from Jost et al., 2007; one item from Kerlinger, 1984). We also used all four items in the Egalitarianism subscale of Ho et al.'s (2015) new SDO (short version) scale (see Appendix for full items).[2] The reliabilities of both scales were satisfactory (Cronbach's αs for resistance to change = .70; opposition to equality = .81; combined = .80). To test structural validity, we performed a principal component analysis with varimax rotation with Kaiser normalization. These eight items showed sufficient item-total reliabilities. The analysis initially yielded three factors with eigenvalues greater than 1. However, a close examination of the Cattell scree plot test suggested a two-factor structure explaining 59.56% of the total variance and corresponding to the Resistance to Change and Opposition to Equality subscales. Next, we conducted a confirmatory factor analysis with Mplus 7.11 (Muthén & Muthén, 1998–2011), using covariance matrix and the maximum likelihood of prediction to test this two-factor model. The results revealed that the model had a good fit, $\chi^2(17) = 74.950$, CFI = .95, TLI = .92, RMSEA = .09, 90% CI [0.07 −0.11], SRMR = .07.

Participants were also asked to respond to the one-item general, social, and economic conservatism measures ("How would you place your political views generally speaking?"; "When it comes to social issues, how liberal or conservative are you?"; "When it comes to economic issues, how liberal or conservative are you?"; 0 = *extremely liberal*, 10 = *extremely conservative*). They also completed a religiosity measure comprised of six religious belief items (Pennycook, Cheyne, Seli, Koehler, & Fugelsang, 2012). The scale asks participants to indicate their beliefs in religious concepts such as heaven, hell, miracles, afterlife, angels and demons, and an immaterial soul (Cronbach's α = .94). The order of the measures and the items within each measure were randomized.

Table 4. Correlations of measures with political orientation, social conservatism, economic conservatism, resistance to change, opposition to equality, fairness, loyalty, authority, sanctity, individualizing, binding foundations in U.S. sample.

	1	2	3	4	5	6	7	8	9	10	11	12
1.POL	−	.913***	.863***	.521***	.490***	−.199***	−.275***	.368***	.413***	.442***	−.262***	.456***
2.SCON		−	.765 ***	.546***	.479***	−.201***	−.279***	.398***	.439***	.480***	−.265***	.490***
3.ECON			−	.435***	.493***	−.186***	−.256***	.339***	.351***	.333***	−.229***	.385***
4.RC				−	.384***	−.117*	−.180***	.415***	.485***	.443***	−.171***	.497***
5.OE					−	−.423***	−.495***	.177***	.198***	.147**	−.493***	.192***
6.Harm						−	.721***	.188***	.197***	.168***	.929***	.206***
7.Fair							−	.166***	.177***	.111*	.929***	.173***
8.Loyal								−	.717***	.607***	.201***	.868***
9.Auth									−	.687***	.212***	.899***
10.Sanc										−	.150**	.882***
11.Ind											−	.214***
12.Bind												−

Note. POL = political orientation; SCON = social conservatism; ECON = economic conservatism; RC = resistance to change; OE = opposition to equality; Fair = fairness; Loyal = loyalty; Auth = authority; Sanc = sanctity; Ind = individualizing; Bind = binding.
*$p < .05$. **$p < .01$. ***$p < .001$.

Results

Table 4 demonstrates the correlations among variables. As predicted, all ideological measures (i.e., resistance to change, opposition to equality, general political conservatism, as well as social and economic conservatism) are positively correlated with each other, indicating the convergent validity of Resistance to Change and Opposition to Equality Scales. In addition, all binding foundations (i.e., loyalty, authority, sanctity) and individualizing foundations (i.e., harm and fairness) are positively correlated with each other.

Tests for collinearity and multicollinearity revealed that data are suitable for multiple regression analyses. To test the independent effect of MFQ on political orientation, three sets of analyses were carried out predicting general, social, or economic conservatism while controlling for resistance to change and opposition to equality. In the first analysis predicting general political orientation, ideology measures were entered first, followed by the MFQ. In Step 1, both opposition to equality ($\beta = .344$, $p < .001$) and resistance to change ($\beta = .384$, $p < .001$) were significant independent predictors. In Step 2, in addition to opposition to equality ($\beta = .263$, $p < .001$) and resistance to change ($\beta = .214$, $p < .001$), fairness ($\beta = -.116$, $p = .046$) and sanctity ($\beta = .222$, $p < .001$) made significant contributions and explained additional variance in general political orientation. When we controlled for age, gender, and religious belief, the significant contribution of sanctity did not change ($\beta = .182$, $p = .004$; see Table 5 for the results when the demographics were controlled for in the first step). When we used the two superordinate constructs (individualizing vs. binding) instead of the five separate foundations, both individualizing ($\beta = -.160$, $p = .001$) and binding ($\beta = .339$, $p < .001$) foundations made significant contributions. When we controlled for the same demographic variables in the first step, the results of the regression did not change (see Table 6 for the results when the demographics were controlled for in the first step).

In the second hierarchical multiple regression analysis, we investigated the independent effect of MFQ on social conservatism. All the steps were identical to the previous analysis. In Step 1, both opposition to equality ($\beta = .314$, $p < .001$) and resistance to change ($\beta = .422$, $p < .001$) were

Table 5. Hierarchical multiple regression: Standardized regression coefficients predicting general political conservatism with five moral foundations in U.S. sample.

General political conservatism (U.S. sample)				
	Step 1	Step 2	Step 3	Adjusted R^2
Demographics				.149***
Gender	−.041	.007	.019	
Age	.002	−.046	−.020	
Religiosity	.398***	.242***	.112*	
Political ideology				.399***
Resistance to change		.297***	.207***	
Opposition to equality		.342***	.270***	
Moral foundations				.429***
Care			−.055	
Fairness			−.094	
Loyalty			.043	
Authority			.081	
Sanctity			.182**	

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

Table 6. Hierarchical multiple regression: Standardized regression coefficients predicting general political conservatism with two superordinate moral foundation categories in U.S. sample.

General political conservatism (U.S. sample)				
	Step 1	Step 2	Step 3	Adjusted R^2
Demographics				.149***
Gender	−.041	.007	.025	
Age	.002	−.046	−.017	
Religiosity	.398***	.242***	.127*	
Political ideology				.399***
Resistance to change		.297***	.205***	
Opposition to equality		.342***	.268***	
Moral foundations				.431***
Individualizing			−.146**	
Binding			.269***	

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

significant independent predictors. In Step 2, in addition to opposition to equality ($\beta = .221$, $p < .001$) and resistance to change ($\beta = .238$, $p < .001$), fairness ($\beta = -.133$, $p = .018$) and sanctity ($\beta = .249$, $p < .001$) made significant contributions and explained additional variance in social conservatism. When we controlled for age, gender, and religious belief, the significant contributions of fairness ($\beta = -.130$, $p = .032$) and sanctity did not change ($\beta = .230$, $p < .001$; see Table 7 for the results when the demographics were controlled for in the first step). When we used the two superordinate constructs (individualizing vs. binding) instead of the five separate

Table 7. Hierarchical multiple regression: Standardized regression coefficients predicting social conservatism with five moral foundations in U.S. sample.

Social conservatism (U.S. sample)				
	Step 1	Step 2	Step 3	Adjusted R^2
Demographics				.159***
Gender	−.052	−.006	.010	
Age	.022	−.034	.002	
Religiosity	.408***	.240***	.082	
Political ideology				.410***
Resistance to change		.337***	.228***	
Opposition to equality		.309***	.213***	
Moral foundations				.461***
Care			−.068	
Fairness			−.130*	
Loyalty			.059	
Authority			.085	
Sanctity			.230**	

*p < .05. **p < .01. ***p < .001.

Table 8. Hierarchical multiple regression: Standardized regression coefficients predicting social conservatism with two superordinate moral foundation categories in U.S. sample.

Social conservatism (U.S. sample)				
	Step 1	Step 2	Step 3	Adjusted R^2
Demographics				
Gender	−.052	−.006	.018	.159***
Age	.022	−.034	.005	
Religiosity	.408***	.240***	.102*	
Political ideology				.410***
Resistance to change		.337***	.225***	
Opposition to equality		.309***	.212***	
Moral foundations				.461***
Individualizing			−.193***	
Binding			.326***	

*p < .05. **p < .01. ***p < .001.

foundations, both individualizing ($\beta = -.195$, $p < .001$) and binding ($\beta = .378$, $p < .001$) foundations made significant contributions. When we controlled for the same demographic variables in the first step, the results of the regression did not change (see Table 8 for the results when the demographics were controlled for in the first step).

In the last hierarchical multiple regression analysis, we investigated the independent effect of MFQ on economic conservatism. All the steps were identical to the previous analysis. In Step 1, both opposition to equality ($\beta = .373$, $p < .001$) and resistance to change ($\beta = .310$, $p < .001$) were significant independent predictors. In Step 2, in addition to opposition to equality ($\beta = .313$,

Table 9. Hierarchical multiple regression: Standardized regression coefficients predicting economic conservatism with five moral foundations in U.S. sample.

Economic conservatism (U.S. sample)				
	Step 1	Step 2	Step 3	Adjusted R^2
Demographics				.072***
Gender	−.048	.003	.008	
Age	.046	.007	.035	
Religiosity	.275***	.131**	.039	
Political ideology				.325***
Resistance to change		.250***	.180**	
Opposition to equality		.382***	.314***	
Moral foundations				.341***
Care			.017	
Fairness			−.147*	
Loyalty			.090	
Authority			.043	
Sanctity			.097	

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

$p < .001$) and resistance to change ($\beta = .199$, $p < .001$), fairness ($\beta = -.136$, $p = .028$) made a significant contribution, but sanctity ($\beta = .107$, $p = .070$) did not. When we controlled for age, gender, and religious belief, the significant contribution of fairness ($\beta = -.147$, $p = .028$) did not change (see Table 9 for the results when the demographics were controlled for in the first step). When we used the two superordinate constructs (individualizing vs. binding) instead of the five separate foundations, both individualizing ($\beta = -.107$, $p = .034$) and binding ($\beta = .226$, $p < .001$) foundations made significant contributions. When we controlled for the same variables in the first step, the results of the regression did not change (see Table 10 for the results when the demographics were controlled for in the first step).

These results conceptually replicate the findings obtained in the Turkish sample and extend the findings to social and economic conservatism.

General Discussion

The present research used two samples (Turkey and US) to test the argument that MFT repackages long-standing political psychological constructs, such as the core ideological motives of resistance to change and opposition to equality, and does not itself explain unique variance in ideological variables. In both samples, MFQ appeared to explain variance in general political orientation beyond that explained by the core motives. Specifically, in both samples, the moral foundation of sanctity explained unique variance in general political orientation, whereas, in the U.S. sample, fairness and sanctity explained unique variance in social conservatism. Only fairness explained unique variance in economic conservatism. When MFQ responses were organized in terms of two superordinate foundations (individualizing vs. binding), both scale reliability and predictive power increased. These findings are inconsistent with Sinn and Hayes's (2016) argument that MFT simply repackages extant constructs.

Implications

Since its introduction, MFT has received wide attention as well as criticism. Some researchers argue that MFT misrepresents both morality and political ideology (e.g., Gray, Schein, & Ward,

Table 10. Hierarchical multiple regression: Standardized regression coefficients predicting economic conservatism with two superordinate moral foundation categories in U.S. sample.

Economic conservatism (U.S. sample)				
	Step 1	Step 2	Step 3	Adjusted R^2
Demographics				
Gender	−.048	.003	.018	
Age	.046	.007	.031	
Religiosity	.275***	.131**	.044	
Political ideology				
Resistance to change		.250***	.179**	
Opposition to equality		.382***	.321***	
Moral foundations				
Individualizing			−.120*	
Binding			.205**	

*p < .05. **p < .01. ***p < .001.

2014) or that people rely not on five foundations but only on harm to construct their moral judgments (Schein & Gray, 2015). The unique contribution of MFT to political psychology is questioned with the argument that binding foundations are captured by RWA and resistance to change, and that individualizing foundations are captured by (reverse) SDO and opposition to equality (Federico et al., 2013; Jost, 2012; Kugler et al., 2014; Milojev et al., 2014; Sinn & Hayes, 2016). The present research used local adaptations of these constructs (see Clifford, Jewell, & Waggoner, 2015) to show that MFQ responses are indeed associated with political orientation in a predominantly Muslim, Turkish sample, accounting for core ideological motives. In a second, U.S.-based American MTurk sample, we extended these findings into the domain of social and economic attitudes. Using slightly different items to measure the core motives, we showed that MFQ responses again were associated with unique variance. These findings indicate that the MFQ has unique explanatory potential in the domain of ideology and does not simply repackage extant constructs. On the other hand, in their comprehensive test of whether MFT is a viable alternative in the domain of ideology, Smith et al. (2017) found that there is weak evidence, if at all, for the heritability of moral foundations and that variability (across time) in moral foundations is not reliably related to variability in political attitudes. These findings question MFT's utility as an ideological theory. The current data cannot resolve this debate or substantively support the general utility of MFT in this domain. However, our findings do suggest that the concepts and operationalizations provided by MFT are not necessarily reducible to two widely used ideological variables.

What explains the discrepancy between the mentioned criticism of MFT and our findings? First of all, studies differ in their exact choice of ideological measurements. We focused on the two core ideological motives purported to underlie conservatism (i.e., resistance to change and opposition to equality) in Jost et al.'s (2003) conservatism as motivated social cognition approach. The only other variables included in our regression models were age, gender, and religiosity. In contrast, Sinn and Hayes (2016) included, besides demographic and ideological variables, Schwartz's (2003) universalism and the Identification with All Humanity Scale (McFarland & Brown, 2008), both of which are closely related to morality. Naturally, the inclusion of more morally relevant constructs may have caused the unique variance explained by MFQ to drop. Our contention is that a more parsimonious test of the current

question should focus on core ideological variables and basic demographics alone.

Our findings draw attention particularly to sanctity as a moral foundation that explains variability in general political orientation and social conservatism, as well as fairness that explains variability in the latter and is the sole predictor (with MFT dimensions) of economic conservatism. Even when opposition to equality, which is conceptually close to fairness, is controlled for, fairness explained unique variance in economic conservatism.

The current effort had the strength of providing evidence from two cultures, one of which is outside those commonly studied in the political psychology and morality literature. Interestingly, the findings from both cultures very much agreed. As a limitation, neither our undergraduate Turkish sample nor our MTurk American sample is representative of their respective culture. Future tests with representative samples could be very valuable. However, it is worth noting that Clifford et al. (2015) found that MTurk and the representative national samples yield nearly identical results for value-based models of ideology. In addition, our findings, like most in this domain, stem from correlational data, and are based on one-item political orientation questions as outcome variables. Using these one-item measures in our study, however, provided the advantage of making our results comparable to earlier research, which had also relied solely on this measure. Future research that tests the same question using manipulations of either the core motives or moral foundations while using more detailed outcome measures should prove highly valuable in providing evidence regarding the causal nature of the relations between these constructs.

Conclusion

MFT has inspired a remarkable amount of research on various topics and across the world. While a consistent picture of how moral foundations are related to various constructs from ideology to values has begun to emerge, theoretical weaknesses have also come under scrutiny. A major weakness is the limited ability of moral foundation to explain differences in political attitudes and beliefs (e.g., Sinn & Hayes, 2016). Indeed, Smith et al. (2017) have questioned the utility of MFT in the political domain by demonstrating the lack of stability (and genetic heritability) in moral foundations. Our findings suggest that moral foundations cannot simply be reduced to the core motives underlying ideological proclivities, namely resistance to change and opposition to equality. Research suggests that moral versus nonmoral claims evoke different responses in people (Skitka & Morgan, 2014) and MFT helps us reason about whether a given claim is likely to be moralized. Therefore, even if the variance that MFT shares with political orientation could be attributed completely to other factors (such as core ideological motives), we think that MFT is still valuable in terms of highlighting the fact that people may respond to particular ideological issues (e.g., obedience) as if they are moral in nature.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Notes

1. This survey included other variables analyzed in Yilmaz and Saribay (2017). That report focused on the relation between analytic thinking tendency and conservatism. None of the morality-related data have been presented elsewhere.
2. Since we specifically aimed to focus on the core motives, we did not include other items such as SDO's Dominance subscale. There were no items other than those we report here (and other than those that were included for separate theoretical purposes, which were previously reported in Yilmaz & Saribay, 2017).

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Appendix

Resistance to change (U.S. sample)

1. I would be reluctant to make any large-scale changes to the social order.
2. I have a preference for maintaining stability in society, even if there seem to be problems with the current system.
3. Society should be quicker to throw out old ideas and traditions and to adopt new thinking and customs. (Reverse-coded.)
4. Traditional values, customs, and morality have a lot wrong with them. (Reverse-coded.)

Opposition to equality (U.S. sample)

1. It is unjust to try to make groups equal.
2. Group equality should not be our primary goal.
3. We should work to give all groups an equal chance to succeed. (Reverse-coded.)
4. We should do what we can to equalize conditions for different groups. (Reverse-coded.)