Personality and Individual Differences 99 (2016) 149–154

Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

Validation of the Moral Foundations Questionnaire in Turkey and its relation to cultural schemas of individualism and collectivism

Onurcan Yilmaz [a,*], Mehmet Harma [b], Hasan G. Bahçekapili [a], Sevim Cesur [c]

[a] Department of Psychology, Dogus University, Turkey
[b] Department of Psychology, Istanbul Kemerburgaz University, Turkey
[c] Department of Psychology, Istanbul University, Turkey

ARTICLE INFO

Article history:
Received 12 February 2016
Received in revised form 23 April 2016
Accepted 29 April 2016
Available online 16 May 2016

Keywords:
Moral foundations
Cultural prime
Individualism
Collectivism
Turkey

ABSTRACT

Although Moral Foundations Theory (MFT) is claimed to be universally applicable, the data brought to bear in its support come from a self-selected population with mostly English-speaking participants. To the best of our knowledge, the theory has not been hitherto tested in a predominantly Muslim country with non-western moral and religious sensibilities. In Study 1, we replicated previous findings using Turkish participants by showing through confirmatory factor analyses that the 5-factor structure of MFT provided a better fit than alternative models. In Study 2, the participants' cultural schemas of individualism and collectivism were experimentally manipulated to see the distinctness and separate manipulability of the five individual foundations. The individualism prime led to an increased concern with the harm dimension whereas the collectivism manipulation led to an increased concern with the loyalty dimension. Taken together, the findings suggest that the 5-factor model of morality is the best fitting model in Turkey as well and that it is useful in predicting the results of cultural prime manipulations.

1. Introduction

Mental structures behind moral judgments have been intensively studied for the past 50 years (Darley & Shultz, 1990; Haidt, Koller & Dias, 1993; Kohlberg, 1969; Nichols, 2002; Nichols & Folds-Bennett, 2003; Piaget, 1965; Rozin, Lowery, Imada & Haidt, 1999; Shweder, Much, Mahapatra & Park, 1997), mostly emphasizing harm and justice-based morality. The Moral Foundations Theory (MFT), however, created a paradigm shift in moral judgment research by criticizing Kohlberg's justice-based morality guided by reasoning (Kohlberg, 1969), and offered a multi-foundational model of morality guided by intuitions (Graham, Haidt & Nosek, 2009; Graham et al., 2013; Haidt & Joseph, 2004; Haidt, 2001, 2007, 2012). According to MFT, previous conceptualizations of moral psychology have an implicit bias toward a western, liberal and individualistic understanding of morality which is in fact adopted by a small minority in the world (see Henrich, Heine & Norenzayan, 2010). The theory envisions morality as being based on five separate intuitive foundations each of which is supposed to be an adaptation designed to solve different adaptive problems. The care/harm foundation is defined as the motivation to care for one's offspring and those in need and to protect them from coming to harm. The fairness/cheating foundation is the motivation to act in accordance with justice norms within one's group and to detect those who freeride by benefitting from the group without paying any costs. The loyalty/betrayal foundation is the motivation to protect the interests of one's group against rival groups. The authority/subversion foundation is the motivation to respect those higher than oneself in the social hierarchy and thus to preserve the social order. Finally, the sanctity/degradation foundation is the motivation to be pure both physically and spiritually, to respect the sacred and to suppress carnal desires. While liberals mostly define morality in terms of only the care/harm and fairness/justice dimensions, conservatives see all five dimensions as more or less equally important (Haidt, 2007, 2012). Graham et al. (2009) call the care and fairness dimensions the "individualizing foundations" designed to protect the rights of the individual and the other three dimensions the "binding foundations" designed to protect group harmony by suppressing selfishness.

This multidimensional conception of morality is claimed to have an evolutionary basis and thus to be universal. To test the cross-cultural validity of the five-factor model, Graham et al. (2011) applied confirmatory factor analyses to data collected from various locations in the world based on the English version of the Moral Foundations Questionnaire (MFQ). They showed that the five-factor model provides a better fit than the individualizing/binding two-factor model and Shweder et al.'s (1997) three-factor model based on autonomy (harm and fairness), community (loyalty and authority) and divinity (sanctity). Independent studies in Korea (Kim, Kang & Yun, 2012), Italy (Bobbio, Nencini & Sarrica, 2011), Germany (Bowman, 2010), New Zealand

* Corresponding author at: Department of Psychology, Dogus University, 34722, Acibadem, Istanbul, Turkey.
E-mail address: oyilmaz@dogus.edu.tr (O. Yilmaz).

http://dx.doi.org/10.1016/j.paid.2016.04.090
0191-8869/

(Davies, Sibley & Liu, 2014) and Sweden (Nilsson & Erlandsson, 2015) again demonstrated a better fit for the five-factor model (but see Davis et al., 2015). However, in all these cross-cultural studies, especially those in non-English speaking cultures, the degree of fit is below traditional criteria. Furthermore, as far as we know, no study has tested the validity of the five factors in a predominantly Muslim country in their native language. This kind of test has an obvious bearing on the cross-cultural validity of the five-factor model.

One of the main goals of the present study is to test the five-factor model in the Turkish culture. Turkey is a non-western, predominantly Muslim country and thus sufficiently different from the US samples. In addition, Turkish political structure is complex where there are more than two major political parties and where the traditional left–right or liberal–conservative spectrum is difficult to apply. Basic political values in Turkey are thought to be unstable (see Öniş, 2007, 2009, for a detailed discussion). For example, the social democrat CHP (Republican People's Party) and the ultra-nationalist MHP (Nationalist Movement Party) managed to form an alliance in the 2014 presidential elections. Therefore, Öniş (2007) claims that there is no European-style social democracy in Turkey and describes Turkish democracy as a lopsided one. Furthermore, political Islamists, who are traditionally classified as being right-wing, sometimes demonstrate left-wing sensitivities such as being pro welfare state and against capitalism and caring for the poor (Özbudun, 2006). It could therefore be illuminating to test the validity of the five-factor model in Turkish culture and to see how it relates to political ideology in Turkey.

Since Turkey is a country where collectivistic and individualistic values are enmeshed with each other (see Imamoğlu & Karakitapoğlu-Aygün, 1999; Kagitcibasi & Ataca, 2005; Kara, 2007), Turkish people can be expected to harbor both of these cultural thinking styles. It is also known that cultural thinking styles can influence one's basic values and moral judgments (Miller, Bersoff & Harwood, 1990; Shearman, 2008; Smith & Schwartz, 1997). Given that political attitudes are not stable in Turkey (see Öniş, 2007), it can be surmised that moral judgments are not stable either but can differ according to cultural thinking styles. Therefore, priming certain cultural patterns (e.g., individualism vs. collectivism) and making them accessible in people's minds and seeing whether this influences the moral foundations people rely on might be important to understand the content of the moral foundations in Turkey (for a review of similar manipulations, see Oyserman, Coon & Kemmelmeier, 2002). For example, demonstrating that the individualistic prime influences the individualizing, but not the binding, foundations whereas the collectivistic prime influences the binding, but not the individualizing, foundations would imply that these foundations are indeed separate. In other words, demonstrating the separate manipulability of the moral foundations could support the two- or the five-factor model of the Moral Foundations Theory.

The aim of the present set of studies is two-fold. First, a confirmatory factor analysis was done on the Turkish version of the MFQ to see whether the five-factor structure, as reported in the original study by Graham et al. (2011), provides a better fit than the three-factor structure proposed by Shweder et al. (1997) or the two-factor structure in terms of the individualizing and binding foundations (Study 1). Study 2 used a contextual prime (individualist culture vs. collectivist culture manipulation) to see whether people's basic moral orientations can shift between individualizing and binding foundations.

2. Study 1

2.1. Method

2.1.1. Participants

A total of 1436 participants took part in the study, the majority being undergraduate students (888 female, 513 male, 35 unreported; mean age = 22.88, $SD = 9.63$). All participants were native Turkish speakers. The majority identified themselves as Muslim ($n = 1058$). Of the remaining participants, 89 were atheists, 203 believed in God but were not affiliated with a religion, 27 reported affiliation with a religion other than Islam and 59 did not respond.

2.1.2. Materials

The Moral Foundations Questionnaire, the psychometric properties of which were identified by Graham et al. (2011), was translated into Turkish through the method of translation-back translation. The questionnaire consists of 30 6-step Likert-type items and asks the participant to what degree he or she agrees with five moral dimensions. There are two sections in the questionnaire: judgments and relevance. In the first, the participants rate the importance of each of the criteria when they make moral judgments (e.g., "Whether or not someone did something to betray his or her group"). In the second, the participants rate the degree to which they agree with each of the moral judgments (e.g., "I think it's morally wrong that rich children inherit a lot of money while poor children inherit nothing"). For each moral dimension, a composite score was formed by taking the average of six items (three items from the first section, three items from the second). In addition, a single 1 (left) to 7 (right) Likert-type self-placement question was asked to determine the political orientation of the participants. Higher scores represent more rightist political orientation.

2.2. Results and discussion

2.2.1. Data analytical strategy

To examine the factor structure of MFQ, we ran several confirmatory factor analyses (CFA) using MPlus 6.12 (Muthén & Muthén, 1998–2011). All calculations were based upon the covariance matrix and the maximum likelihood method was used as input. We tested five theoretical models for the full 30-item MFQ as well as separate model tests for the judgment and relevance subscales (see Table 1). The five-factor model was estimated with one latent factor for each moral foundation, the respective scale items as manifest variables, and estimated relations between all latent factors. The hierarchical model estimated the relations between the latent factors for two related superordinate factors. Three-factor model estimated sanctity as a separate superordinate factor and estimated loyalty and authority as latent variables. Then, we compared those examined models by using Chi-Square difference test to find out the best-fitted model.

We assessed model fit using the Chi-Square Model Fit index, the Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), the Akaike Information Criteria (AIC), and the Standardized Root Mean Square Residual (SRMR). We also used χ^2/df as an additional model fit index because the Chi-Square test of absolute model fit is sensitive to sample size. A RMSEA value below .06 is considered a good fit (Hu & Bentler, 1999; Steiger, 2007), while SRMR values less than .08 are indicative of an acceptable fit (Hu & Bentler, 1999). The CFI is one of the most widely reported fit indices, with Hu and Bentler (1999) recognizing values equal to, or greater than, .95 on this index as a good fit. However, previous work on MFQ from countries speaking non-English language showed that model fit fell short of conventional fit criteria (Bobbio et al., 2011; Bowman, 2010; Davies et al., 2014; Kim et al., 2012; Nilsson & Erlandsson, 2015). This inconsistency is considered to be due to the complex nature of moral judgments (see Davies et al., 2014; Nilsson & Erlandsson, 2015 for similar discussions). To examine the predictive validity of the MFQ, we also correlated subscales of MFQ with one-item political ideology score. The two-factor model examined individualizing and binding foundations as separate factors. Finally, we examined a single-factor model in which all observed variables loaded to a single factor, to compare with the aforementioned models.

2.2.2. Structural validity

As presented in Table 1, fit indices yielded different patterns for different factor models. Model fit pattern of the judgment and relevance

Table 1
Fit indices of the Moral Foundations Questionnaire.

	χ^2	df	χ^2/df	AIC	CFI	RMSEA	90% CI	SRMR
Relevance items								
1. Five-factor model	820.04	77	10.65	68,056.46	.90	.08	[.07, .08]	.07
2. Hierarchical model	1138.83	81	14.06	68,367.24	.86	.10	[.09, .11]	.09
3. Three-factor model	1216.82	84	14.49	68,439.24	.85	.10	[.09, .11]	.08
4. Two-factor model	1332.90	86	15.50	68,551.31	.84	.10	[.09, .11]	.09
5. Single-factor model	2684.47	87	30.86	69,900.89	.66	.14	[.14, .15]	.11
Judgment items								
1. Five-factor model	462.67	77	6.01	70,482.39	.91	.06	[.05, .06]	.04
2. Hierarchical model	527.43	81	6.51	70,539.15	.89	.06	[.05, .07]	.05
3. Three-factor model	585.28	84	6.97	70,591.01	.88	.06	[.05, .07]	.06
4. Two-factor model	601.31	86	6.99	70,603.03	.87	.06	[.05, .07]	.06
5. Single-factor model	1122.13	87	12.90	71,121.85	.75	.09	[.08, .09]	.07
Full MFQ items								
1. Five-factor model	3372.87	390	8.65	138,858.31	.78	.06	[.05, .07]	.08
2. Hierarchical model	4390.87	394	11.14	139,304.99	.71	.08	[.08, .10]	.09
3. Three-factor model	4483.34	397	11.29	139,391.47	.70	.08	[.08, .09]	.08
4. Two-factor model	4575.15	399	11.47	139,479.28	.70	.09	[.08, .10]	.09
5. Single-factor model	7107.47	400	17.77	142,009.60	.52	.11	[.08, .10]	.12

item subscale tests were similar to those of the full scale (30-item MFQ). The CFAs of the subscales showed a better overall fit of the data compared with the full scale. Although the CFI for the best fitting models were well below the suggested acceptable fit index of .95 (Hu & Bentler, 1999), following Kenny's (2014) suggestion, we used RMSEA and SRMR as model fit measures. Since the zero order correlations between items in the MFQ tend to be relatively low and CFI estimates deviations from the hypothesized model using the observed data from the null model in which the variables are assumed to be uncorrelated, we did not use low CFI scores as an automatic rejection of the models (Kenny, 2014; see also Davies et al., 2014).

For the full MFQ items, the five-factor model, ($\chi^2(390) = 3372.87$, CFI = .78, RMSEA = .06, (90% CI [.05–.07]), SRMR = .08, was significantly better than the hierarchical two-factor model ($\Delta\chi^2(4) = 1017.13$, $p < .001$), the three-factor model ($\Delta\chi^2(4) = 1110.47$, $p < .001$), and the two-factor model ($\Delta\chi^2(4) = 1202.28$, $p < .001$). Even though fit estimates of our models are lower in absolute terms as provided above, these results are in line with Graham et al.'s (2011) findings. Internal consistency scores of subscales were satisfactory ($\alpha_{care/harm} = .60$; $\alpha_{fair/justice} = .57$; $\alpha_{ingroup} = .66$; $\alpha_{authority} = .78$; $\alpha_{purity} = .76$).

2.2.3. Predictive validity

To investigate the predictive validity of the MFQ, we correlated participants' political orientation scores with subscales of MFQ. Results yielded significant associations between political orientation and the subscales except the harm dimension of morality. Contrary to the literature, right-wing political orientation was negatively associated with the fairness dimension ($r = -.15$, $p < .001$). It was also positively correlated with all the binding foundations (authority, $r = .31$, $p < .001$; loyalty, $r = .16$, $p < .001$; sanctity, $r = .34$, $p < .001$). We conducted a hierarchical regression analysis to investigate the unique contribution of MFQ dimensions on political orientation. Results revealed that authority ($\beta = .18$, $p < .01$) and sanctity ($\beta = .33$, $p < .001$) positively predicted right-wing political orientation, whereas fairness predicted negatively ($\beta = -.16$, $p < .001$; $R^2 = .24$, $p < .001$).

These results demonstrate that five-factor model is better than the alternative ones in a pre-dominantly Muslim country, thus replicating the previous findings (Graham et al., 2011). The significant relation between political orientation and the fairness dimension indicates that, unlike in the US, fairness is a moral principle that distinguishes the left and the right in Turkey like the binding foundation. More specifically, fairness is significantly more important for those on the left than those on the right (for a similar result in New Zealand, see Davies et al., 2014, in Sweden see Nilsson & Erlandsson, 2015). What differentiates these two political views on fairness might be differences in the level of opposition to equality (see Jost, Glaser, Kruglanski & Sulloway, 2003). According to Jost et al.'s (2003) meta-analysis, the two culture-free characteristics of conservatism are opposition to equality and resistance to change. Concordantly, Nilsson and Erlandsson (2015) showed that the relation between the binding foundations and political ideology is mostly mediated by resistance to change, whereas the relation between the fairness foundation and political ideology is mostly mediated by opposition to equality in Sweden. Thus, the latter finding is consistent with the idea that fairness is less important for rightists (conservatives) in Turkey because they are more opposed to equality. There is also some evidence that rightists have significantly higher levels of both opposition to equality and resistance to change than leftists in Turkey (Yilmaz, 2015; Yilmaz & Saribay, in press). If this interpretation is true, what is unexpected and needs to be explained is not that leftists and rightists differ in terms of fairness in Turkey, but that they do not differ in the U.S. We thus encourage further research to elucidate the U.S. condition rather than the Turkish one.

3. Study 2

As there has not been a lot of research showing how experimental manipulations influence moral foundations (e.g., Napier & Luguri, 2013; Van Berkel, Crandall, Eidelman & Blanchar, 2015; Wright & Baril, 2011), we tried to manipulate the cultural schemas of individualism and collectivism of Turkish participants to better understand the content of the moral foundations in Turkey. More specifically, we hypothesized that collectivism priming leads to a shift toward binding foundations, whereas individualism priming leads to a shift toward individualizing foundations.

3.1. Method

3.1.1. Participants

A power analysis indicated that, for an estimated effect size of .3 and 80% power to detect an effect, 111 participants would be required. We therefore used 111 undergraduates from Dogus University as participants (69 women, 42 men, mean age = 20.84, $SD = 1.54$). All participants were native Turkish speakers. The majority identified themselves as Muslim ($n = 86$). Of the remaining participants, 10 were atheists, 12 believed in God but were not affiliated with an organized religion, and three were unreported. Participants were randomly assigned to the individualism cultural thought prime ($n = 37$), collectivism cultural thought prime ($n = 37$) or the neutral prime ($n = 37$) group.

3.1.2. Materials and procedure

Participants were tested in groups of 3–5 using paper and pencil. To prime individualist or collectivist cultures, thought prime technique was used (see Trafimow, Triandis & Goto, 1991). In the individualism group, participants were asked three open-ended questions to make them think about their own individuality ("Write down three sentences to describe yourself; Write down three sentences that describe in what way you are different from others; Write down three sentences that describe why it could be advantageous to step forward and make oneself known among others"). In the collectivism group, participants were asked three open-ended questions to make them think about the groups they belonged ("Write down three sentences to describe the groups you belong; Write down three sentences that describe in what way you are like others; Write down three sentences that describe why it could be advantageous to mix with and become enmeshed with others"). In the neutral group, participants answered two open-ended questions totally unrelated to the individualism–collectivism issue (e.g., Write down the emotions thinking about watching TV evokes in you). Since no participant left any question blank, the entire sample was included in the analyses.

After the manipulation phase, the participants were given the MFQ used in the previous study (Cronbach α's for harm = .55; fairness = .60; loyalty = .48; authority = .67; sanctity = .67; individualizing = .71; binding = .81). They were then asked to fill a demographic information form which included a 1–7 (left to right) Likert-type political orientation question.

3.2. Results and discussion

A one-way multivariate analysis of variance (MANOVA) was conducted to test the hypothesis that there would be significant differences between manipulation groups (i.e., individualism, collectivism, and neutral) in terms of moral foundation scores. A statistically significant MANOVA effect was found, Wilks' Lambda = .77, $F(10, 111) = 2.90$, $p < .001$, $\eta p^2 = .12$. Prior to conducting a series of follow-up ANOVAs, the homogeneity of variance assumption was tested for all five subscales of MFQ. Based on a series of Levene's F tests, the homogeneity of variance assumption was satisfied. There were two significant main effects on harm and loyalty, $F(2, 108) = 4.91$, $p < .01$, $\eta^2 = .08$, and $F(2, 108) = 6.06$, $p < .001$, $\eta^2 = .10$, respectively.

A series of post hoc analyses (Tukey) were performed to examine individual mean differences across the three manipulation groups and all five MFQ subscales. The results revealed significant differences in post hoc mean comparisons. Specifically, the individualism prime group ($M = 3.81$, $SD = 0.66$; 95% CI [3.59, 4.03]) scored significantly higher on harm than the neutral group ($M = 3.28$, $SD = 0.80$; 95% CI [3.02, 3.55]), $p < .01$. There was no significant difference between the collectivism group and the neutral group ($p = .14$), or the individualism group ($p = .10$) (see Figure 1).

The three groups did not differ significantly in terms of fairness, although there was a marginally significant difference, $F(2, 108) = 2.71$, $p = .07$, $\eta p^2 = .05$. The effect, however, disappeared when political orientation was controlled, $F(2, 107) = 2.09$, $p = .13$, $\eta p^2 = .04$. The individualism prime group scored somewhat higher on fairness ($M = 4.16$, $SD = 0.73$; 95% CI [3.93, 4.38]) than the neutral group ($M = 3.79$, $SD = 0.61$; 95% CI [3.59, 4.05]), and the collectivism group ($M = 4.05$, $SD = 0.61$; 95% CI [3.80, 4.26]).

The collectivism prime group ($M = 3.77$, $SD = 0.60$; 95% CI [3.57, 3.97]) scored significantly higher on loyalty than the neutral group ($M = 3.36$, $SD = 0.48$; 95% CI [3.20, 3.53]), $p = .004$, and the individualism group ($M = 3.23$, $SD = 0.91$; 95% CI [2.93, 3.53]), $p < .001$ (see Figure 2). There was no significant difference between the individualism and the neutral groups ($p = .40$). The groups did not differ in terms of authority and sanctity scores (both p's > .60), and the results remain constant when political orientation was controlled (both p's > .48).

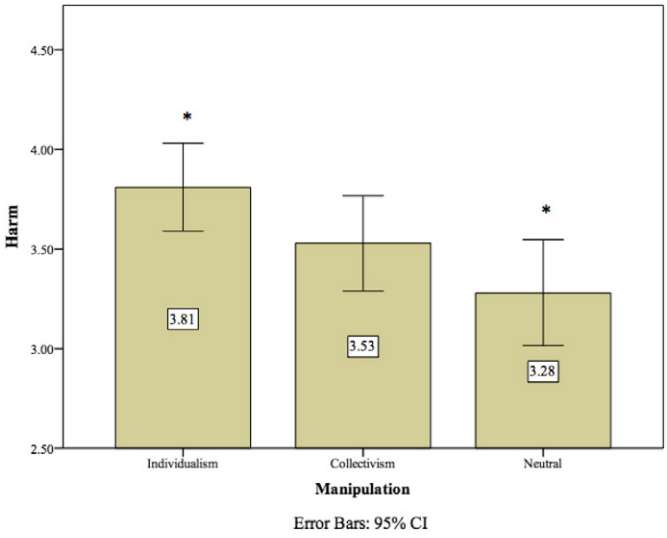

Figure 1. Mean comparisons of harm across manipulation group.

When MFQ was conceived of as two-factored, the individualizing foundation scores were, as predicted, found to differ among groups, Wilks' Lambda = 0.87, $p < .01$, $\eta p^2 = .07$; $F(2, 108) = 5.23$, $p = .007$, $\eta p^2 = .088$. The results remained constant when political orientation was controlled for, $F(2, 107) = 4.62$, $p = .012$, $\eta p^2 = .079$. The individualism prime group scored higher on individualizing foundation ($M = 3.99$, $SD = .56$; 95% CI [3.79, 4.18]) than the neutral group ($M = 3.54$, $SD = .64$; 95% CI [3.34, 3.73]), $p = .005$, and the collectivism group ($M = 3.79$, $SD = .59$; 95% CI [3.60, 3.99]), $p = .345$. On the other hand, contrary to our hypothesis, the groups did not differ in terms of the binding foundation scores, $F(2, 108) = 1.25$, $p = .291$, $\eta p^2 = .023$, even when political orientation was controlled for, $F(2, 107) = 2.03$, $p = .136$, $\eta p^2 = .037$.

The findings demonstrate that attitudes regarding harm and loyalty can change as a result of being exposed to an individualism or collectivism prime. Just as an analytic thinking prime can change the presumably stable religious beliefs (see Gervais & Norenzayan, 2012; Shenhav, Rand, & Greene, 2012; Yilmaz, Karadöller & Sofuoglu, 2016), a contextual prime can change the presumably stable moral beliefs (see also Talhelm et al., 2015). The fact that the collectivism prime changed attitudes regarding loyalty might be seen as unsurprising since the prime specifically asks the participants to think about the groups they belong to and presumably directly activates thoughts of group loyalty.

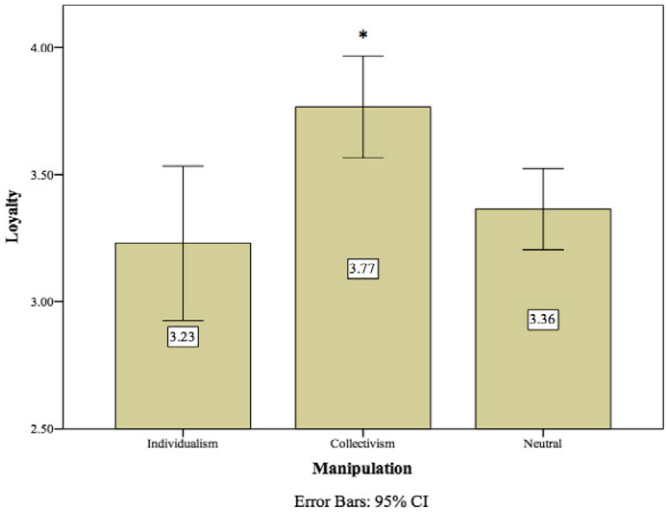

Figure 2. Mean comparisons of loyalty across manipulation groups.

However, the finding is still significant given that it was attitudes regarding loyalty alone, and not regarding authority, that changed. This finding provides further support for the view that the loyalty and the authority dimensions are indeed separate as envisioned in the five-factor model (Graham et al., 2013; Haidt, 2007) and not just different aspects of an overarching community dimension as envisioned in the three-factor model (Shweder et al., 1997).

4. Conclusion

This set of studies provides empirical support for the MFQ for the first time in a predominantly Muslim country. As in the case of the original (Graham et al., 2009, 2011), the 5-factor model, although somewhat below the standard criteria of fitness, provided the best fit among the alternatives. However, since the fitness advantage of the 5-factor model over the 2-factor model was slim, one can also conclude that the five foundations, although separate from each other, can be meaningfully classified into the two hierarchical foundations of "individualizing" and "binding".

Furthermore, the results of Study 2 indicate that moral values and judgments are not stable in people's minds but instead could be manipulated by contextual factors: the care foundation becomes more important when individualism is primed whereas the loyalty foundation becomes more important when collectivism is primed. This provides further support for the distinctness and separate manipulability of the five individual foundations within the two more encompassing "individualizing" and "binding" foundations.

In addition, the results of Study 2, indicate that, in a county like Turkey where political intuitions are not stable and can easily change in accordance with the circumstances (see Öniş, 2007, 2009), a cultural prime can modify people's presumably stable moral intuitions. It is known that analytic/holistic culture thought primes in the US and China can modify people's less stable current political preferences but not the relatively more stable political attitudes (Talhelm et al., 2015). Thus, the experimental modifiability of moral intuitions demonstrated in Study 2 needs to be studied more systematically by replication attempts in, for example, European countries where moral/political intuitions are presumably more stable, and also in traditional Middle Eastern countries where such intuitions are presumably less stable.

In conclusion, although the psychometric properties of the MFQ are less than ideal, the results suggest that the MFT is a useful theoretical framework to understand moral and political intuitions. Low fitness and reliability values found in most independent standardization studies might be due to the fact that the MFQ simplifies moral judgments that are presumably much more complex in reality. In this respect, one can conclude that, at least in non-English speaking countries, the MFQ is not the ideal device to measure the theoretical framework of the MFT. One alternative is to use some moral scenarios (e.g., Clifford, Iyengar, Cabeza & Sinnott-Armstrong, 2015) that are faithful to the MFT framework. Since these scenarios are comprised of vignettes that provide more contextual background for the moral dilemmas in question, they might be more cross-culturally valid.

References

Bobbio, A., Nencini, A., & Sarrica, M. (2011). Il Moral Foundation Questionnaire: Analisi della struttura fattoriale della versione italiana [The Moral Foundations Questionnaire: Analysis of the factor structure of the Italian version]. *Giornale di Psicologia*, *5*, 7–18.

Bowman, N. (2010). German translation of the Moral Foundations Questionnaire — Some preliminary results. <http://onmediatheory.blogspot.se/2010/07/germantranslation-of-moral-foundations.html>. (Retrieved from 2015 5 8).

Clifford, S., Iyengar, V., Cabeza, R., & Sinnott-Armstrong, W. (2015). Moral foundations vignettes: A standardized stimulus database of scenarios based on moral foundations theory. *Behavior Research Methods*, *47*(4), 1178–1198.

Darley, J. M., & Shultz, T. R. (1990). Moral rules: Their content and acquisition. *Annual Review of Psychology*, *41*, 525–556.

Davies, C. L., Sibley, C. G., & Liu, J. H. (2014). Confirmatory factor analysis of the mMoral Foundations Questionnaire: Independent scale validation in a New Zealand sample. *Social Psychology*, *45*, 431–436.

Davis, D. E., Rice, K., Van Tongeren, D. R., Hook, J. N., DeBlaere, C., Worthington, E. L., Jr., & Choe, E. (2015, September 7). The moral foundations hypothesis does not replicate well in black samples. *Journal of Personality and Social Psychology*. http://dx.doi.org/10.1037/pspp0000056 (Advance online publication).

Gervais, W. M., & Norenzayan, A. (2012). Analytic thinking promotes religious disbelief. *Science*, *336*, 493–496.

Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology*, *96*, 1029–1046.

Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology*, *101*, 366–385.

Graham, J., Haidt, J., Koleva, S., Motyl, M., Iyer, R., Wojcik, S., & Ditto, P. H. (2013). Moral foundations theory: The pragmatic validity of moral pluralism. *Advances in Experimental Social Psychology*, *47*, 55–130.

Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review*, *108*(4), 814–834.

Haidt, J. (2007). The new synthesis in moral psychology. *Science*, *316*, 998–1002.

Haidt, J. (2012). *The righteous mind: Why good people are divided by politics and religion*. New York: Pantheon.

Haidt, J., & Joseph, C. (2004). Intuitive ethics: How innately prepared intuitions generate culturally variable virtues. *Daedalus*, *133*, 55–66.

Haidt, J., Koller, S. H., & Dias, M. G. (1993). Affect, culture, and morality, or is it wrong to eat your dog? *Journal of Personality and Social Psychology*, *65*, 613–628.

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, *33*, 61–83.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*, 1–55.

Imamoğlu, E. O., & Karakitapoğlu-Aygün, Z. (1999). 1970'lerden 1990'lara değerler: Üniversite düzeyinde gözlenen zaman, kuşak ve cinsiyet farklılıkları [Value preferences from 1970s to 1990s: Cohort, generation and gender differences at a Turkish university]. *Turkish Journal of Psychology*, *14*, 1–22.

Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin*, *129*, 339–375.

Kagitcibasi, C., & Ataca, B. (2005). Value of children and family change: A three decade portrait from Turkey. *Applied Psychology: An International Review*, *54*, 317–337.

Kara, M. A. (2007). Applicability of the principle of respect for autonomy: The perspective of Turkey. *Journal of Medical Ethics*, *33*, 627–630.

Kenny, D. A. (2014). Measuring model fit. (Retrieved from) http://davidakenny.net/cm/fit.htm

Kim, K. R., Kang, J. -S., & Yun, S. (2012). Moral intuitions and political orientation: Similarities and differences between Korea and the United States. *Psychological Reports: Sociocultural Issues in Psychology*, *111*, 173–185.

Kohlberg, L. (1969). *Stage and sequence: The cognitive-developmental approach to socialization*. New York: Rand McNally.

Miller, J. G., Bersoff, D. M., & Harwood, R. L. (1990). Perceptions of social responsibilities in India and the United States: Moral imperatives or personal decisions? *Journal of Personality and Social Psychology*, *58*, 33–47.

Muthén, L. K., & Muthén, B. O. (1998–2011). *Mplus user's guide* (6th ed.). Los Angeles, CA: Muthén & Muthén.

Napier, J. L., & Luguri, J. B. (2013). Moral mind-sets abstract thinking increases a preference for "individualizing" over "binding" moral foundations. *Social Psychological and Personality Science*, *4*(6), 754–759.

Nichols, S. (2002). Norms with feeling: Toward a psychological account of moral judgment. *Cognition*, *84*, 223–236.

Nichols, S., & Folds-Bennett, T. (2003). Are children moral objectivists? Children's judgments about moral and response-dependent properties. *Cognition*, *90*, B323–B332.

Nilsson, A., & Erlandsson, A. (2015). The moral foundations taxonomy: Structural validity and relation to political ideology in Sweden. *Personality and Individual Differences*, *76*, 28–32.

Öniş, Z. (2007). Conservative globalists versus defensive nationalists: Political parties and paradoxes of Europeanization in Turkey. *Journal of Southern Europe and the Balkans Online*, *9*, 247–261.

Öniş, Z. (2009). Conservative globalism at the crossroads: the justice and development party and the thorny path to democratic consolidation in Turkey. *Mediterranean Politics*, *14*, 21–40.

Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin*, *128*, 3–72.

Özbudun, E. (2006). Changes and continuities of the Turkish party system. *Representations*, *42*, 129–137.

Piaget, J. (1965). *The moral judgment of the child*. New York: Free Press.

Rozin, P., Lowery, L., Imada, S., & Haidt, J. (1999). The CAD triad hypothesis: A mapping between three moral emotions (contempt, anger, disgust) and three moral codes (community, autonomy, divinity). *Journal of Personality and Social Psychology*, *76*, 574–586.

Shearman, S. M. (2008, May). *Culture, values, and cultural variability: Hofstede, Inglehart, and Schwartz's approach. Paper presented at the annual convention of the international communication association*. QC, Canada: Montreal.

Shenhav, A., Rand, D. G., & Greene, J. D. (2012). Divine intuition: Cognitive style influences belief in God. *Journal of Experimental Psychology: General*, *141*(3), 423–428.

Shweder, R. A., Much, N. C., Mahapatra, M., & Park, L. (1997). The "big three" of morality (autonomy, community, and divinity), and the "big three" explanations of suffering.

In A. Brandt, & P. Rozin (Eds.), *Morality and health* (pp. 119–169). New York, NY: Routledge.
Smith, P. B., & Schwartz, S. H. (1997). Values. In J. W. Berry, M. H. Segall, & C. Kagitcibasi (Eds.), *Handbook of cross-cultural psychology. 3.* (pp. 77–118). Boston: Allyn & Bacon.
Steiger, J. H. (2007). Understanding the limitations of global fit assessment in structural equation modeling. *Personality and Individual Differences*, *42*, 893–898.
Talhelm, T., Haidt, J., Oishi, S., Zhang, X., Miao, F. F., & Chen, S. (2015). Liberals think more analytically (more "WEIRD") than conservatives. *Personality and Social Psychology Bulletin*, *41*, 250–267.
Trafimow, D., Triandis, H., & Goto, S. (1991). Some tests of the distinction between the private self and the collective self. *Journal of Personality and Social Psychology*, *60*, 649–655.
Van Berkel, L., Crandall, C. S., Eidelman, S., & Blanchar, J. C. (2015). Hierarchy, dominance, and deliberation: Egalitarian values require mental effort. *Personality and Social Psychology Bulletin*, *41*(9), 1207–1222.
Wright, J. C., & Baril, G. (2011). The role of cognitive resources in determining our moral intuitions: Are we all liberals at heart? *Journal of Experimental Social Psychology*, *47*(5), 1007–1010.
Yilmaz, O. (2015). *An investigation of the reciprocal relationship between cognitive style and political ideology.* (Unpublished master's thesis) Istanbul, Turkey: Boğaziçi University.
Yilmaz, O., & Saribay, S. A. (in press). An attempt to clarify the link between cognitive style and political ideology: A non-western replication and extension. Judgment and Decision Making.
Yilmaz, O., Karadöller, D. Z., & Sofuoglu, G. (2016). Analytic thinking, religion and prejudice: An experimental test of the dual-process model of mind. *The International Journal for the Psychology of Religion*. http://dx.doi.org/10.1080/10508619.2016.1151117.