A Cross-Cultural Examination on Global Orientation and Moral Foundations

Xiaomeng Hu[1], Sylvia Xiaohua Chen[2], Yijie Zhu[2], David A. Wilder[3], Li Zhang[1], Feng Yu[4], Kaiping Peng[1*]

[1] Department of Psychology, Tsinghua University, Beijing 100084, China

[2] Department of Applied Social Sciences, The Hong Kong Polytechnic University, Hong Kong, China

[3] Department of Psychology, Rutgers University-New Brunswick, Piscataway 08901, U.S.A

[4] Institute of Social Psychology, Xi'an Jiaotong University, Shaan Xi 710049, China

Author Note

Correspondence concerning this manuscript should be addressed to Dr. Kaiping Peng

Department of Psychology, School of Social Sciences, Tsinghua University, Weiqing Building,

Haidian District, Beijing, China 100084. E-mail: pengkp@mail.tsinghua.edu.cn

Abstract

The present research attempts to establish a conceptual and empirical link between global orientations and moral foundations across three cultural populations. American domestic students, Chinese domestic students, and Chinese international students completed a set of measures that assessed their global orientations, moral foundations and demographic information. Results indicated that 1) multicultural acquisition was positively associated with endorsements of both individualizing and binding values; 2) Ethnic protection was positively linked only to binding values; 3) The relation patterns between global orientations and moral foundations were mostly consistent across cultures. These findings advance our understanding of the mapping relations between how people respond to globalization and their explicit value endorsements.

1. Introduction

Globalization is defined as the interaction and integration among the peoples, governments, and companies of different nations (Chiu, Gries, Torelli, & Cheng, 2011). This rapid and large-scale process has considerably reshaped people's lifestyles, mobility patterns, cultural identities, and value systems in profound ways (Chiu, Gries, Torelli, & Cheng, 2011; Yang et al., 2011). Philosophers, economists, sociologists, and political scientists have hotly debated the beneficial and detrimental effects of globalization on human societies at a macro level (Giddens, 2000; Rodrik, 1997; Singer, 2002). Social psychologists also became particularly interested in learning how globalization impacts psychological processes at the individual level (Chiu, Gries, Torelli, & Cheng, 2011; Gelfand, Lyons, & Lun, 2011; Yang et al., 2011).

Interestingly, prior work suggests globalization has affected our mindsets in paradoxical ways. At the societal level, cultures, on the one hand, are becoming increasingly homogeneous in response to globalization and large-scale modernization, such as the rise of individualism in Japan (Hamamura, 2011) and China (Yu et al., 2016). On the other hand, traditional societies and value systems have persisted in culturally specific ways (Inglehart & Baker, 2000), such as the persisting caste system in India and the value of filial piety in China. At the individual level, some view globalization as a life enhancement, while others experience it as an identity threat (Gelfand, Lyons, & Lun, 2011). Thus the question naturally follows: is globalization truly a double-edged

sword? On the bright side, globalization brings enormous benefits to millions of people around the world. For instance, it creates a large number of job opportunities across nations and cities (e.g., call centers in India and rural-to-urban migrant workers in China) and makes high-quality education accessible to people across the globe especially for developing countries (e.g., Coursera-style MOOCs). On the dark side, globalization may exacerbate detrimental or even inhumane processes such as global terrorism, climate change, extreme poverty, and public health issues (e.g., epidemics of HIV/AIDS or Zika virus).

A growing body of empirical work has examined how globalization affects individuals' psychological functioning such as lay perceptions of globalization (Chiu, Hong, & Dweck, 1997; Yang et al., 2011), potential upsides and downsides of globalization (Chiu, Gries, Torelli, & Cheng, 2011), differing psychological reactions to foreign cultural inflow (e.g., exclusionary and integrative responses) (Torelli, Chiu, Tam, Au, & Keh, 2011), influence on identity development (Arnett, 2002), to just name a few. Furthermore, people increasingly possess higher levels of multicultural experiences as a result of globalization and cultural mobility. Past research shows that multicultural experiences can enhance creativity in problem-solving (Leung, 2008), cognitive flexibility (Gino et al., 2012), generalized trust (Cao et al., 2013) and reduce intergroup bias (Tadmor, Hong, Chao, Wiruchnipawan, & Wang, 2012).

Aiming to capture individual differences in response to globalization, Chen and colleagues

(2016) proposed a construct termed "global orientations" (GO) which consists of two subdimensions: multicultural acquisition and ethnic protection. Specifically, people who score high on multicultural acquisition proactively engage in multicultural interactions and cultural learning. Conversely, people who score high on ethnic protection defensively protect their cultural heritage and prevent cultural contamination from foreign cultures. Existing studies show that this two-factor construct is applicable across majority and minority groups, multicultural and monocultural cultural contexts, Westerners and Easterners, as well as immigrants and sojourners (Chen et al., 2016). Evidence has also demonstrated its unique predictive utility on an array of attitudinal and behavioral outcomes including psychological adaptation, attitudes towards ethno-cultural groups, multicultural ideology, personality characteristics, and acculturation strategies (Chen et al., 2016).

When Globalization Meets Morality

Although there is a flourishing literature on the psychology of globalization and the psychology of morality respectively, the moral dimension has been largely absent in the discourse of globalization psychology (Gelfand, Lyons, & Lun, 2011). Fortunately, recent work has probed the intersection of globalization and morality. Not surprisingly, the paradoxical effects of globalization also manifest in the moral domain. On the one hand, globalization promotes the idea of respect for universal duties and rights such as global justice and gender equality. On the other

hand, moral disagreements and value conflicts among major civilizations (Huntington, 1996) can be exacerbated and polarized by frequent intercultural contacts and enhanced global interconnectedness (e.g., Islamic vs. Western culture). Real world examples include street protests against opening up a mosque near Ground Zero in New York City (The New York Times, 2010) and online protests against opening up a Starbucks coffee shop in the Forbidden City in Beijing (The New York Times, 2007). Empirical evidence does suggest higher levels of multicultural experiences are positively associated with postconventional moral judgments (Narvaez, 2014) and intercultural sensitivity (Endicott, 2003). Another line of work revealed that disgust responses were linked with cultural mixing (i.e., simultaneous exposure to cultural elements from more than two cultures) (Cheon, Christopoulos, & Hong, 2016; Chiu, 2009). Moreover, the breadth of foreign experiences (i.e., experiences in multiple foreign countries) increased moral relativism, which in turn leads to more unethical behavior (Lu, Quoidbach, Gino, Chakroff, Maddux, & Galinsky, 2017).

The moral foundations theory (MFT) is one of the most influential and well-recognized contemporary social psychological approaches to conceptualizing and understanding human morality (Graham et al, 2013). MFT maintains that there exist five moral contents that can be found across cultures with cultural variations in the importance attached to each (Graham et al, 2013). These foundations include: Care/Harm, Fairness/Cheating, Loyalty/Betrayal,

Authority/Subversion, and Sanctity/Degradation. We endorse the central tenets of MFT and embrace its culturally pluralistic approach. MFT Researchers make a further distinction among the five foundations to form a two-factor model. Care and fairness cluster together and are termed "Individualizing Foundations", while loyalty, authority, and sanctity cluster together and are termed "Binding Foundations" (Graham et al., 2013). In the context of American culture, endorsements of individualizing foundations is related to protecting individual rights such as autonomy and independence, whereas endorsements of binding foundations is related to protecting legitimate groups, communities, and institutions such as family, country, and government.

Global Orientations and Moral Foundations

Theoretically speaking, examining individuals' moral patterns through the lens of globalization transcends the conventional academic discourse of between-cultural and within-cultural variations by orienting us towards how "an emergent third culture" (Benet-Martínez, Leu, Lee, & Morris, 2002) impacts individuals' moral thoughts and behaviors. Novel theoretical perspectives and conceptual formations may emerge by deconstructing the dimensions of globalization and intersecting them with the moral domain. Practically speaking, as globalization broadens and deepens, individuals are getting more exposed to multicultural experiences. To function effectively in a global context, individuals are required to be well prepared to interact

with people from diverse cultural backgrounds and divergent moral worldviews.

Extant research on global orientations has not yet examined its impacts on individuals' moral functioning and value endorsements. Furthermore, MFT research to date has mostly focused on either the relations between political ideology and moral foundations or cultural variations of foundation endorsements. The former discourse is considerably ideologically charged and bound to the cultural contexts of American politics. The latter has not taken into account how and why individuals' moral differences are affected by the integrative process of globalization. Directly linking global orientations and moral foundations would thereby help us better understand the interplay between individual differences in responses to globalization and explicit value endorsements. Some psychologists have highlighted the importance of investigating the moral foundations of globalization and have proposed that MFT may be a suitable framework (Gelfand, Lyons, & Lun, 2011).

2. The Present Research

To our knowledge, the current investigation is one of the first attempts to examine whether and how global orientations will predict value endorsements, and whether these relation patterns will be culturally similar or vary substantially across cultures. The curent research seeks to unveil the relations between global orientations and endorsements of moral foundations among three cultural groups: American domestic college students, Chinese domestic college students, and

Chinese International college students. Drawing upon past findings, we hypothesized that multicultural acquisition would positively predict endorsements of both individualizing and binding foundations (H1). Individuals who scored high on multicultural acquisition should view foreign cultures as intellectual resources, embrace cultural diversity, and promote cultural innovation. They should therefore place greater emphasis on individualizing values such as care, compassion, justice, egalitarianism, etc. Moreover, individuals who tend to protect their cultural heritage should also endorse binding foundations such as loyalty, authority, sanctity, etc. This prediction may seem counterintuitive but we reasoned that because people who are high on multicultural acquisition should hold favorable attitudes towards foreign cultures, they should show equal respect for all moral principles (even if they endorse binding values to a much lesser extent than individualizing ones). This prediction is consistent with what Chen and colleagues (2016) reported. They found that multicultural acquisition positively predicted both individualism and collectivism, independent and interdependent self-construal, and individuating and modest behavior (Chen et al., 2016). Conversely, we anticipated that ethnic protection should positively predict binding foundations but negatively predict individualizing foundations (H2). Individuals who are high on ethnic protection should see foreign cultures as identity threats and are more motivated to affirm their cultural identity and preserve their own cultural heritage. They should

put much more weight on moral concerns like loyalty, authority, sanctity, etc.

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Method

Participants and Procedure

Samples were recruited from three different cultural groups. The first sample included a total of 805 American domestic college students (61.9% females; M_{age}=19.45, SD_{age}=2.66; 40.9% European Americans, 6.7% African Americans, 7.7% Latino/Hispanic Americans, 32.2% Asian Americans, 4.2% multiracial and 8.3% others; 48.2% Christian, 5% Jewish, 7.3% Muslim, 11.1% Atheist and 28.4% others). They were recruited from Human Subject Pool at an American public university. Participants completed a set of online questionnaires in English via Qualtrics. Those who were non-domestic students, failed the test items were excluded. Each participant was debriefed and received 0.5 research credits as compensation. The second sample was recruited from multiple universities/colleges in Mainland China through psychology courses (e.g., Beijing Normal University, Jiangxi University of Science and Technology). Participants who were non-domestic students or failed the test items were excluded. A total of 331 participants were included for the final analyses (31.1% female; M age=20.97, SD age=2.12; 89.1% Han Chinese; 87.9% Atheists). Participants completed a set of online questionnaires in Mandarin Chinese via Qualtrics. Each participant was thanked and paid $5 as compensation. The third sample was collected from the human subject pool at an American public university and online platforms. Those who were not Chinese international college students currently studying in the U.S. or failed the test items

were excluded, resulting in a total of 216 participants in the final analyses (31.9% female; $M_{age}=22.51$, $SD_{age}=3.80$; 89.8% Han Chinese; 79.6% Atheists). Participants completed a set of online questionnaires using Mandarin Chinese via Qualtrics. The cross-cultural equivalency of all measures has been validated by either direct adoption of published versions or translation-back-translation (Brislin, 1970). All participants were debriefed and paid $10 as compensation. There were 1352 valid participants in total in this study.

Measures

Global Orientations Scale. The 25-item Global Orientations Scale (GOS) assessed individual differences in responses to globalization (Chen et al., 2016). It consists of two factors termed multicultural acquisition and ethnic protection. Endorsement of each item was assessed with a 7-point Likert scale. Larger values indicate greater endorsements of cultural learning or cultural protection. Sample items were "Cultural diversity is beneficial to a society" and "Immigrants and ethnic minorities should forget their cultures of origin as much as possible for better adaptation to their new environment". Cronbach's alphas were 0.86 and 0.82 for American sample, 0.89 and 0.74 for Chinese sample, and 0.93 and 0.84 for Chinese international sample, respectively.

Moral Foundations Questionnaire. The 30-item Moral Foundations Questionnaire (MFQ) (Graham, Nosek, Haidt, Iyer, Koleva, & Ditto, 2011) assessed the emphasis an individual places

on each of the five moral foundations: care, fairness, loyalty, authority, and sanctity. Larger values indicate greater endorsements of those moral values. Cronbach's alphas were: 0.57(Care), 0.62 (Fairness), 0.64 (Loyalty), 0.61 (Authority) and 0.70 (Sanctity) for American sample, 0.56(Care), 0.41 (Fairness), 0.60 (Loyalty), 0.55 (Authority) and 0.61 (Sanctity) for Chinese sample, 0.63(Care), 0.62 (Fairness), 0.66 (Loyalty), 0.65 (Authority) and 0.73 (Sanctity) for Chinese international sample, respectively. Further analysis revealed that the sixth item of Fairness subscale had very low item-total correlations in all the three samples (0.21 in American sample, -0.05 in Chinese sample and -0.03 in Chinese international sample). Therefore, we excluded this item in the final analysis. The Cronbach's alphas of 5-item Fairness subscale were 0.68, 0.53 and 0.72 for the three samples respectively. Due to the low reliability of care, fairness, and authority, results should be interpreted with caution.

General Demographics. Participants were asked to provide their general demographic information including gender, age, race/ethnicity, education level, religious affiliation, average yearly household and individual income.

Measurement Invariance

Measurement invariance was examined across the three samples using Mplus 7.4 before the final analysis. Measurement invariance was tested by using increasingly restrictive equality constraints to evaluate model fit. Based on recommendations of Pendergast, Embse, Kilgus, and

Eklund (2017), we firstly specified a model in which factor loadings were allowed to differ across groups (configural model) and then compared the fit of configural model to a model with the factor loadings constrained across groups (metric model).

Instead of putting the original data into measurement invariance examination, we conducted item parceling based on the past work of Hall, Snell and Foust (1999). We created three parcels for multicultural acquisition (parcel 1: item 1,2,3,4; parcel 2: item 5,6,7,12,13; parcel 3: item 8,9,10,11) and ethnic protection (parcel 1: item 1,5,9,10; parcel 2: item 2,3,4,11; parcel 3: item 6,7,8,12), care (parcel 1: item1,3; parcel 2: item 2,4; parcel 3: item 5,6), fairness (parcel 1: item1; parcel 2: item 2,3; parcel 3: item 4,5), loyalty (parcel 1: item1,4; parcel 2: item 2,3; parcel 3: item 5,6), authority (parcel 1: item1,4; parcel 2: item 2,6; parcel 3: item 3,5) and purity (parcel 1: item1,5; parcel 2: item 2,4; parcel 3: item 3,6) respectively.

Firstly, we tested measurement variance of Global Orientation scale. The configural model indicated good model fit ($\chi^2_{(24)}$ = 59.07, p < 0.001, RMSEA = 0.057, CFI = 0.987). The factor loadings ranged from 0.49 to 0.90 (multicultural acquisition) and 0.60 to 0.85 (ethnic protection), 0.69 to 0.91 (multicultural acquisition) and 0.47 to 0.91 (ethnic protection), 0.77 to 0.91 (multicultural acquisition) and 0.62 to 0.87 (ethnic protection) respectively for American, Chinese and Chinese international samples. The metric model was then evaluated by constraining the factor loadings across groups ($\chi^2_{(32)}$ = 74.63, p < 0.001, RMSEA = 0.054, CFI = 0.984). Compared to the

configural model, the chi-square difference test was not significant ($\Delta\chi^2/\Delta df$ = 1.94, p = 0.164).

Additional fit indices also provided evidence for metric invariance across the three groups

(ΔRMSEA = -0.003, ΔCFI = 0.003) (see Table 1).

As for Individualizing foundations, configural model showed acceptable model fit ($\chi^2_{(24)}$ =

166.44, p < 0.001, RMSEA = 0.115, CFI = 0.906). The factor loadings were also acceptable, with

0.34-0.77 (care) and 0.46-0.70 (fairness), 0.30-0.88 (care) and 0.36-0.59 (fairness), 0.52-0.68

(care) and 0.63-0.70 (fairness) for American, Chinese and Chinese international samples.

However, metric model didn't reach very good model fit ($\chi^2_{(32)}$ = 207.67, p < 0.001, RMSEA =

0.110, CFI = 0.884). The chi-square difference test was significant ($\Delta\chi^2/\Delta df$ = 5.15, p = 0.023),

and ΔCFI = 0.022. According to modification indices, we relieved the constraint of factor loading

of parcel 1 in care subscale for American sample and achieved a better model fit ($\chi^2_{(31)}$ = 184.62,

p < 0.001, RMSEA = 0.105, CFI = 0.899). Compared the configural model, the partial metric

invariance model had a nonsignificant chi-square change ($\Delta\chi^2/\Delta df$ = 2.56, p = 0.107) and lower

CFI change (ΔCFI = 0.007). The results indicated only partial metric invariance for individualizing

foundations (see Table 1).

As for binding foundations, configural invariance model achieved good model fit ($\chi^2_{(72)}$ =

181.98, p < 0.001, RMSEA = 0.058, CFI = 0.957), with acceptable factors loadings --- 0.45-0.63

(loyalty), 0.58-0.65 (authority) and 0.46-0.76 (purity), 0.38-0.63 (loyalty), 0.52-0.60 (authority)

and 0.57-0.63 (purity), 0.51-0.75 (loyalty), 0.55-0.64 (authority) and 0.65-0.84 (purity) for

American, Chinese and Chinese international samples, respectively. The metric invariance model

also indicated good model fit ($\chi^2_{(84)} = 272.41$, $p < 0.001$, RMSEA = 0.071, CFI = 0.927). However,

the chi-square change was significant ($\Delta\chi^2/\Delta df = 7.54$, $p = 0.006$) with a high CFI change (ΔCFI

= 0.030). After freeing the factor loading of parcel 2 in loyalty for American sample based on

modification indices, the partial metric model reached a better model fit ($\chi^2_{(83)} = 209.32$, $p < 0.001$,

RMSEA = 0.058, CFI = 0.951) with a nonsignificant chi-square change ($\Delta\chi^2/\Delta df = 2.49$, $p = 0.115$)

and lower CFI change (ΔCFI = 0.006) compared to the configural model. The results also indicated

only partial metric invariance for binding foundations

(see Table 1).

Table 1: Measurement invariance of the main variables

		χ^2	df	$\Delta\chi^2/\Delta df$	p	RMSEA	CFI
Global Orientation							
	Configural model	59.07	24		<0.001	0.057	0.987
	Metric model	74.63	32	1.94	<0.001	0.054	0.984
Individualizing Foundation							
	Configural model	166.44	24		<0.001	0.115	0.906
	Metric model	207.67	32	5.15	<0.001	0.110	0.884
	Partial metric model	184.62	31	2.60	<0.001	0.105	0.899
Binding foundation							
	Configural model	181.98	72		<0.001	0.058	0.957
	Metric model	272.41	84	7.54	<0.001	0.071	0.927
	Partial metric model	209.32	83	2.49	<0.001	0.058	0.951

Multigroup analysis of the relationship between Global Orientation and Moral Foundation.

Although only partial metric invariance could be achieved by the two parts of moral

foundation, factor loading of only one parcel for each part should be freed for only one sample

(American). Therefore, we still continued analyzing the prediction of Global orientation on Moral

Foundations.

We conducted a multigroup analysis for the path model (controlling for gender and age) (see

Figure 1). Firstly, we restricted all the paths equally across the three samples and then checked the

model fit. This restricted model (Model 1) achieved a good but not perfect model fit ($\chi^2_{(8)} = 23.93$,

$p = 0.002$, RMSEA $= 0.067$, CFI $= 0.975$) (see Table 2). Multicultural acquisition could both

positively predict individualizing foundations ($b = .23$, $se = .02$, $t = 11.50$, $p < 0.001$, Cohen's

$f^2=.10$) and binding foundations ($b = .17$, $se = .02$, $t = 5.15$, $p < 0.001$, Cohen's $f^2=.02$), and ethnic

protection could only positively predict binding foundations ($b = .19$, $se = .02$, $t = 8.38$, $p < 0.001$,

Cohen's $f^2=.05$) but not individualizing foundations ($b = -.02$, $se = .02$, $t = -1.18$, $p = 0.237$) (see

Figure 2).

As the modification indices of Model 1 indicated that the prediction of ethnic protection on

individualizing foundations be different between American sample and the other two samples, we

freed the coefficient from ethnic protection to individualizing foundations in Model 2 and check

the model fit. As shown in Table 2, Model 2 reached a better and perfect model fit ($\chi^2_{(7)} = 10.57$,

$p = 0.159$, RMSEA $= 0.034$, CFI $= 0.994$). Ethnic protection could predict negatively

individualizing foundations in American sample (b = -.06, se = .02, t = -3.02, p = 0.003, Cohen's

f^2=.01) but positively in the other two Chinese samples (b = .06, se = .03, t = 1.97, p = 0.049,

Cohen's f^2=.01) (see Figure 3 and 4).

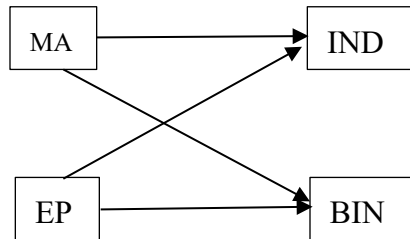Figure 1: The proposed multigroup path model

**MA = multicultural acquisition, EP = ethnic protection, INDI = individualizing foundations, BIND = binding foundations.

Table 2: Multigroup analysis

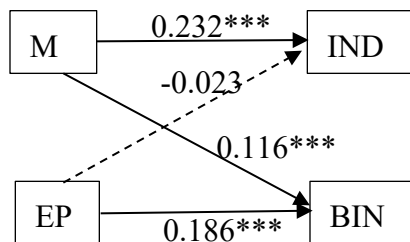|	χ^2	df	p	RMSEA	CFI
Model 1	23.93	8	0.002	0.067	0.975
Model 2	10.57	7	0.159	0.034	0.994

Figure 2: Result for Model 1

**MA = multicultural acquisition, EP = ethnic protection, INDI = individualizing foundations, BIND = binding foundations.
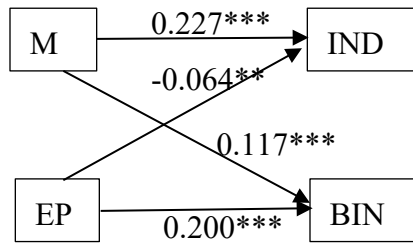
Figure 3: Result for Model 2, American sample

**MA = multicultural acquisition, EP = ethnic protection, INDI = individualizing foundations, BIND = binding foundations.
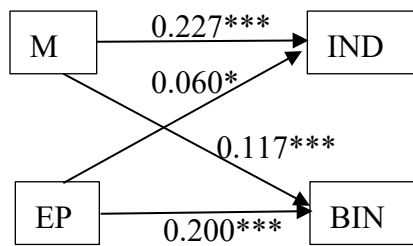

Figure 4: Result for Model 2, Chinese sample

**MA = multicultural acquisition, EP = ethnic protection, INDI = individualizing foundations, BIND = binding foundations.

3. General Discussion

Summary of Findings

The current study investigated the relation patterns between global orientations and moral foundations across three cultural populations. Across three groups, we found that multicultural acquisition positively predicted endorsements of both individualizing and binding values, and ethnic protection positively predicted endorsements of binding foundations. Interestingly, the relation patterns between global orientations and individualizing values slightly varied across cultures.

The Predictive Power of Global Orientations

Why do people who are high on multicultural acquisition consistently show greater endorsements of all moral foundations? One possibility may be multicultural ideology. People who score high in multicultural acquisition show greater respect for cultural diversity so they are more likely to appreciate diverse moral principles and therefore endorse both individualizing and binding moral foundations. Another interpretation might be bicultural identity integration (Benet-Martínez et al., 2002). People who are high on multicultural acquisition should be more capable of integrating their multicultural identities and can therefore integrate seemingly incompatible moral beliefs and incorporate them into a meaningful coherence.

Why do people who are high in ethnic protection consistently show greater endorsement of

binding foundations? People who are high in ethnic protection more likely believe that their culture is much superior to others so they emphasize loyalty, authority and sanctity values that reflect their ethnocentric views and deemphasize care and fairness values. Alternatively, people who are high in ethnic protection may perceive individualizing and binding values as incompatible.

The Moderating Role of Culture

Why is the relation between ethnic protection and endorsement of individualizing foundations slightly different across the three cultural groups? One possible explanation is that because American college students are much more exposed to multicultural interactions compare to Chinese college students, they may have to make moral trade-offs among competing moral concerns such as deemphasizing individual rights and human welfare. Conversely, Chinese college students are much less immersed in multicultural contexts so they may not have to make moral compromises and thus are more likely to endorse a broader set of moral values. Chinese international students may become divided and polarized so the two opposing relationships coexist.

Implications and Future Directions

Together, our research shed new light on the interplay of globalization and morality by offering conceptual formulations and direct empirical evidence to map out how individual differences in response to globalization can exert psychological influences on diverse moral

beliefs. Our results also show the unique explanatory power of global orientations in accounting for the variances of moral endorsements in addition to political ideology, personality traits, and demographic factors. Practically speaking, unpacking the complex relations between global orientations and moral foundations may offer us novel insights on how to maximize the benefits of globalization and minimize the detriments of moral disagreements and value conflicts.

Our research entailed some limitations. First, all of our samples consisted of college students who were not culturally representative. More diverse community and international samples are needed to further validate the generalizability and reproducibility of our findings. Second, all of our data were cross-sectional in nature thus limiting our ability to make any causal claims. Experimental evidence or longitudinal work is needed to infer causal relationships.

Nonetheless, our findings contribute to the growing body of research seeking to map out morality in this increasingly globalizing world. Promising future directions may entail but not limited to the following. First, researchers can validate the robustness of the predictive utility of global orientations on moral endorsements by replicating and extending our findings. Second, experimental work can be conducted by manipulating global orientations in lab settings to test its causal influence on moral functioning. Third, future work can tap into how and why differing global experiences reshape individuals' pre-existing value systems. To conclude, it is our hope that this initial investigation will inspire more researchers to further probe the dynamic interplay

between globalization-related constructs and moral patterns. We are convinced that this line of

research is both theoretically insightful and practically meaningful that worth pursuing for 21st-

century moral psychologists.

Disclosure of conflict of interest

The authors declared that they had no conflicts of interest with respect to their authorship or the

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Table 1

Means, Standard Deviations, and Zero-Order Correlations Among the Key Measures for

American Domestic Students (N=805)

	Mean	SD	1	2	3	4	5	6
1. MA	5.62	0.88	-					
2. EP	3.09	0.93	-.32***	-				
3. IND	4.82	0.58	.36***	-.22***	-			
4. BIN	3.87	0.70	.04	.24***	.23***	-		
5. PI	3.23	1.44	-.19***	.24***	-.22***	.40***	-	
6.OP	3.25	0.63	.28***	-.15***	.10**	.04	-.11**	-

Note: MA=Multicultural acquisition; EP=Ethnic protection; IND=Individualizing foundations;

BIN= Binding foundations; PI=Political ideology; OP=Openness to experience.

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

Table 2

Means, Standard Deviations, and Zero-Order Correlations Among the Key Measures for Chinese

Domestic Students (N=331)

	Mean	SD	1	2	3	4	5
1. MA	5.72	0.69	-				
2. EP	3.90	0.63	-.09	-			
3. IND	4.68	0.52	.32***	.10	-		
4. BIN	4.40	0.56	.11	.24*	.61***	-	
5. OP	3.73	0.53	.39***	-.20***	.14***	-.06**	-

Note: MA=Multicultural acquisition; EP=Ethnic protection; IND=Individualizing foundations;

BIN= Binding foundations; OP=Openness to experience.

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

Table 3

Endorsements of Moral Foundations as A Function of Ethnic Protection and Culture

Independent Variable	Individualizing	Binding
EP	0.026 (0.024)	0.149*** (0.027)
Culture	-0.356*** (0.093)	0.104 (0.105)
Culture*EP	0.078*** (0.024)	0.029 (0.027)
R2	0.027	0.178
Overall F	10.617	81.719

Note. MA=multicultural acquisition; EP=ethnic protection; Culture=American domestic students vs. Chinese domestic students. For each culture group, we regressed out the control variables within group, and then concatenated the residuals of the two groups to compose the dependent variables. Unstandardized regression coefficients are displayed, with standard errors in parentheses.

***$p < .001$.

Table 4

Means, Standard Deviations, and Zero-Order Correlations Among the Key Measures for Chinese

International Students (N=216)

	Mean	SD	1	2	3	4	5	6
1. MA	6.02	0.82	-					
2. EP	3.76	0.89	-.12	-				
3. IND	4.68	0.64	.46***	-.04	-			
4. BIN	4.20	0.71	.13	.25***	.58***	-		
5. OP	4.03	0.58	.36***	-.15*	.11	-.17*	-	
6. CA	2.10	0.63	-.62***	.31***	-.37***	-.15*	-.24***	-

Note: MA=Multicultural acquisition; EP=Ethnic protection; IND=Individualizing foundations;

BIN= Binding foundations; OP=Openness to experience; CA=Cultural adaptation.

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

Table 5

Endorsements of Moral Foundations as A Function of Multicultural Acquisition and Culture

Independent Variable	Individualizing	Binding
MA	0.289*** (0.043)	0.160*** (0.049)
D1	1.079*** (0.289)	0.114 (0.324)
D2	0.622 (0.358)	0.502 (0.401)
D1*MA	-0.147** (0.048)	-0.068 (0.054)
D2*MA	-0.095 (0.060)	-0.044 (0.068)
R^2	0.092	0.153
Overall F	27.135	48.521

Note. MA=multicultural acquisition; EP=ethnic protection; D1=American domestic students vs.

Chinese international students; D2=Chinese domestic students vs. Chinese international students.

For each culture group, we regressed out the control variables within group, and then concatenated

the residuals of the two groups to compose the dependent variables. Unstandardized regression

coefficients are displayed, with standard errors in parentheses.

**p < .01.   ***p < .001.
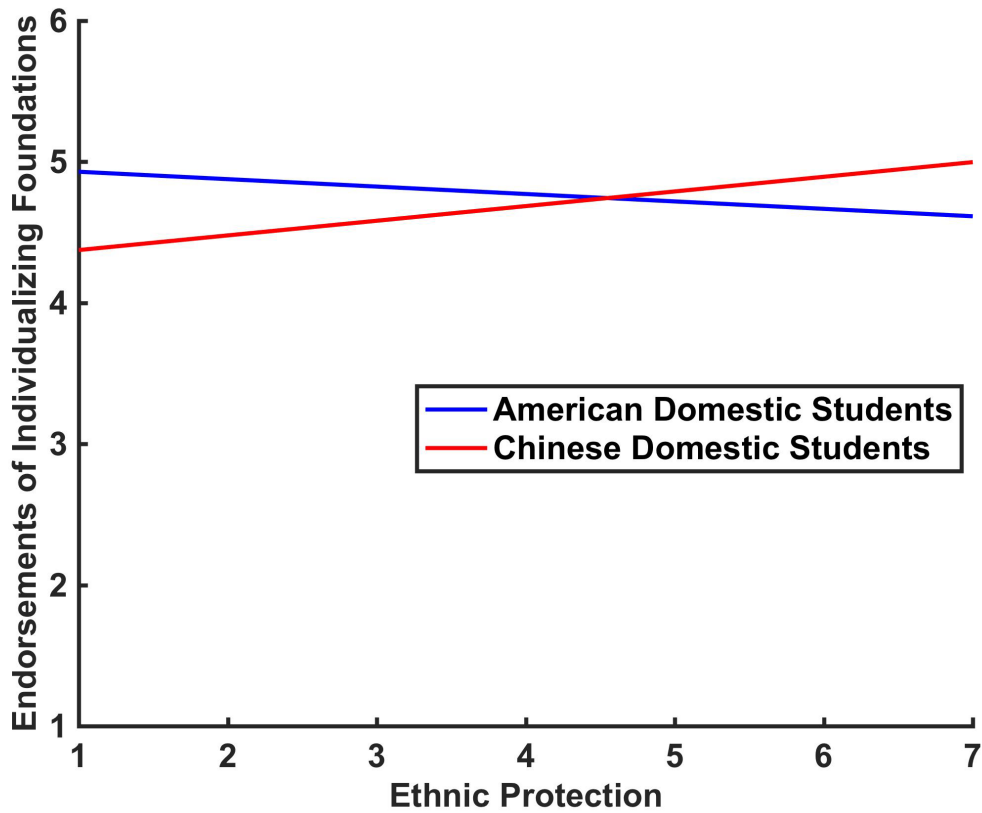
Figure 1: Interaction Effects between Ethnic Protection and Culture on Individualizing Foundations

Caption: Ethnic protection negatively predicted endorsements of individualizing foundations among American domestic college students, whereas positively predicted endorsements of individualizing foundations among Chinese domestic college students.
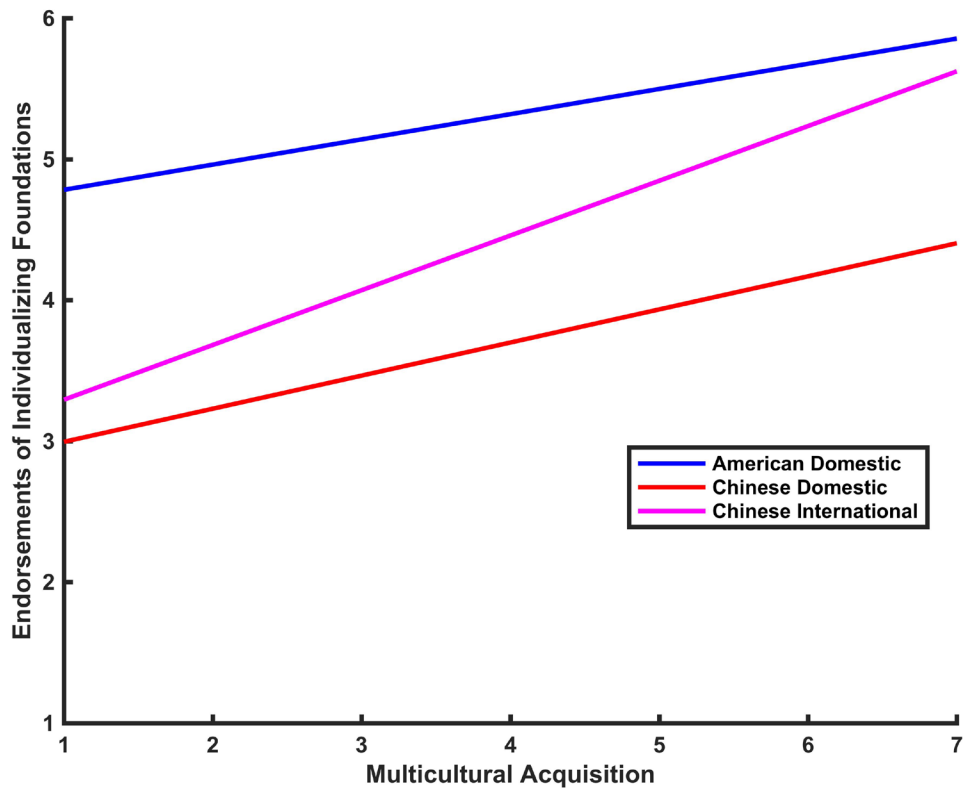
Figure 2: Interaction Effects between Multicultural Acquisition and Culture on Individualizing

Foundations

Caption: Multicultural acquisition positively predicted endorsements of individualizing

foundations across the three samples. However, the magnitude of the relationship was different.

The slope of the relationship between multicultural acquisition and individualizing foundations

was significantly steeper for Chinese international students than for American domestic college

students. No other significant interaction effects were found.

Cultural Adaptation

b=.19 (*SE*=.04)***   *b*=.25 (*SE*=.10)*

Ethnic Protection   Binding
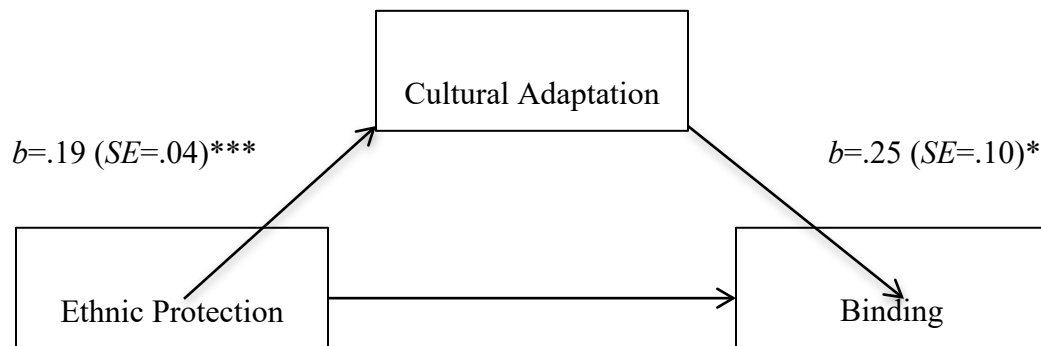
Direct effect, *b*=.22 (*SE*=.06) ***

Indirect effect, *ab*=-.05 (*SE*=.02) 95% CI =[-.10, -.01]

Figure 3. Mediation model of cultural adaptation between ethnic protection and binding foundations. Both direct and indirect effects are reported. Cultural adaptation partially mediated the link between ethnic protection and binding foundations. Unstandardized coefficients are displayed and standard errors are represented in the parentheses.

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