Societies' tightness moderates age differences in perceived justifiability of morally debatable behaviors

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Abstract Research on age differences in moral judgment tends to focus on children and adolescents. The current study examined age differences in perceived justifiability of morally debatable behaviors across adulthood cross-culturally. A large cross-cultural dataset consisting of 25,142 individuals of varying ages (15–95 years old) from 20 societies was drawn from the World Values Survey. Hierarchical linear modeling was used to test age differences in perceived justifiability of morally debatable behaviors on issues pertaining to honesty and fairness as well as the moderating effect of societies' tightness. Across societies, older adults judged moral transgression less leniently than did younger adults. However, this pattern was moderated by the societies' tightness, such that age was a stronger predictor of perceived justifiability of morally debatable behaviors in loose societies relative to tight societies. The current study highlights the importance of examining moral development from the lifespan development perspective. The findings may illuminate potential mechanisms for inter-generational misunderstanding about moral issues.

Keywords Morally debatable behaviors · Age difference · Tightness · World Values Survey · Cross-cultural differences · Social values

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Research on age differences in moral judgment tends to focus on life stages before early adulthood (Eisenberg-Berg and Mussen 1978; Hart and Carlo 2005; Kohlberg and Kramer 1969; Murphy and Gilligan 1980). However, because individuals' emotional and cognitive development continues throughout adulthood (Carstensen 2006; Gross et al. 1997; Hess and Auman 2001; Leclerc and Hess 2007), different ages in adulthood may also be associated with moral judgment differences. Moreover, such patterns may emerge differently in different cultural contexts (e.g., Fung et al. 2010; Li and Fung 2012). Using a large cross-national sample, the current study examines how moral judgments, in particular, perceived justifiability of morally debatable behaviors, are made among adults of varying ages across cultures.

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Age differences in moral judgment across lifespan

Two lines of research suggest that moral judgments made by older adults may be stricter (less contextually sensitive) than those made by younger adults. First of all, older adults are presumably more aware of their mortality than younger adults are. With the salient thought of one's own mortality, the terror management theory suggests that older adults are more likely to adhere closely to their cultural worldview in order to derive a sense of symbolic immortality (Greenberg

et al. 1990; Rosenblatt et al. 1989). As moral standards constitute an essential part of one's cultural worldview, older adults may adhere more closely to culturally valued moral standards compared to younger adults, thus make harsher judgments about transgressions of those standards. In fact, a study that compared younger and older adults on their moral judgments following the mortality salience manipulation found that the effect of mortality salience in causing a harsher punishment of moral transgression was found only among younger participants—older participants generally suggested a harsher punishment with or without the mortality salience manipulation (Maxfield et al. 2007). This pattern suggests that mortality salience may be chronically high among older adults, so they would defend culturally valued moral rules more rigidly compared with younger adults.

Second, research indicates that older adults are more likely to make dispositional attribution for an action that results in negative consequences compared to younger counterparts (Blanchard-Fields 1994; Blanchard-Fields and Kalinauskas 2009). To the extent that such a pattern applies to judgments of moral transgressions, this finding suggests that older adults are more likely to seek dispositional factors in understanding moral transgressions (e.g., persons involved were greedy or selfish) than situational factors (e.g., economic hardship of one's family). This pattern, in turn, suggests that older adults may regard moral transgressions less excusable than younger adults given that dispositional attribution likely affords more decisive explanation of moral transgression than external attribution (which is inherently complex).

In sum, these two lines of research suggest that older adults may regard moral transgression as less justifiable relative to younger adults. The terror management theory suggests that older adults' greater awareness of mortality may lead to stricter applications of cultural standards pertaining to moral issues. The theory based on age difference in attribution style suggests that older adults' greater reliance on dispositional attribution may lead to stricter judgments of moral transgressions. Although specific mechanisms drawn from the two theories differ (e.g., role of mortality salience), both theories predict a pattern of stricter (less contextually-sensitive) moral judgments among older adults. Importantly, both theories have garnered supporting evidence across multiple cultural contexts suggesting their generality (Burke et al. 2010; Park and Gutchess 2006).

Age differences in perceived justifiability of morally debatable behaviors across cultures: the role of tightness–looseness

There have been many theoretical and empirical endeavors to illuminate cultural differences in morality (Graham et al. 2011; Haidt and Graham 2007; Miller and Bersoff

1992; Shweder 1997). One important finding is that the influence of culture on moral judgments varies across domains of moral judgment. In particular, Vauclair and Fischer (2011) found such differences in analyzing items assessing the perceived justifiability of morally debatable behaviors administered in the World Values Survey (WVS; World Values Survey Association 2009). Specifically, while there was evidence for cross-cultural variations in moral judgments pertaining to personal-sexual issues (e.g., euthanasia, abortion), little culture-level variance was found for moral judgments pertaining to dishonest–illegal issues, assessed by such items like “cheating on taxes if you have a chance,” and “someone accepting a bribe in the course of his/her duties.” In other words, although there was much participant-level variance in the responses to both sets of items, the participants' cultural background predicted only the variance for the responses pertaining to personal-sexual issues. Vauclair and Fischer (2011) suggested that little influence of culture on justice and fairness judgments reflects the universal importance of these values to incentivize social cooperation across different cultures.

This consideration, combined with the literature review earlier, suggests that individuals across cultures moralize dishonest–illegal issues, and within each culture, older adults are likely to adhere more closely to such culturally prescribed standards than younger adults. A question this research addresses is whether such age difference in moral judgments pertaining to dishonest–illegal issues manifests uniformly across cultures or moderated by some cultural characteristics. To the best of our knowledge, available evidence does not answer this question.

In particular, we expect societies' tightness (vs. looseness) to moderate age differences in perceived justifiability of morally debatable behaviors. The concept of tightness–looseness refers to the “strength of social norms and the degree of sanctioning within societies” (Gelfand et al. 2006, p. 1226). Tight societies have stronger social norms and demand more severe punishment for individuals who violate social norms, whereas loose societies allow greater flexibility at the individual level and are more tolerant of deviance. Contemporary cross-cultural variation in tightness–looseness may stem from differences in past socio-ecological conditions. For example, the cultures' tightness correlated with past population density and resource scarcity—presumably, in densely populated and resource scarce environments, stringent norm enforcement was needed for resource management (Gelfand et al. 2011). Moreover, in regard to contemporary socio-cultural environment, societal tightness–looseness has been found to predict freedom of the media, civil liberty, as well as the strength of situational constraints in the society (Gelfand et al. 2011).

Societies' orientation toward tightness–looseness is particularly relevant to judgment pertaining morally debatable behaviors because moral rules reflect an essential aspect of social norms. The strength of social norms in a society may greatly influence whether individuals in the society are free to make personal judgment regarding morally debatable behaviors or obliged to follow the moral rules rigidly. We expect that in tight societies the hypothesized age differences in judgments on morally debatable behaviors may only emerge in an attenuated form because faithful adherence to normative moral principles is culturally enforced for all age groups. In contrast, in loose societies, the age differences may be more evident, with cultural norms on morality faithfully adhered among older adults but less so among younger adults. This expectation is also in line with the argument that people gradually internalize their cultural values in the aging process (Fung 2013; Fung and Jiang 2015).

The present study

To summarize, the current study aims to examine age-related variations in perceived justifiability of morally debatable behaviors across adulthood and across cultures. We predict that across cultures, older adults would consider morally debatable behaviors as less justifiable compared with younger adults. Nevertheless, societies' tightness is expected to moderate the extent of age-related variance on moral judgment, with age differences being less evident in tight societies compared with loose societies.

We adopted data from the Morally Debatable Behaviors Scale (MDBS, Harding and Phillips 1986) fielded in the fifth wave of World Values Survey (WVS) as a measure of individuals' perceived justifiability toward morally debatable behaviors. Because our focus is on the age-related variance within each culture rather than mean level difference across cultures, we only included items about morally debatable behaviors pertaining to dishonest–illegal issues, which has been suggested as a universally moralized domain (Vauclair and Fischer 2011). For societal tightness–looseness, we adopted the tightness score for each society reported in Gelfand and colleagues' study (2011).

Method

Sample

Data from 20 societies were available both in the fifth wave of WVS (World Values Survey Association 2009) and in Gelfand and colleagues' (2011) cross-cultural study on

tightness. All the 20 societies were examined in the current study with a total sample size of 25,142. The age range within each society was quite large ($M_{\text{age, range}} = 69$ years), providing a good sample for testing age differences. Gender (0 = male; 1 = female) was approximately balanced in this dataset (12,066 males, 13,024 females, and 34 non-respondents). Across societies, the percentage of female participants ranged from 43 to 66 % ($M = 52$ %). The respondents' household income was assessed by an item asking respondents to evaluate their own household income comparing to others in the society on a ten-point scale, from the “lowest decile” (1) to the “highest decile” (10). The mean income level ranged from 3.34 to 6.46 across societies ($M = 4.62$). Please refer to Table 1 for a complete list of the 20 societies and detailed information about the sample characteristics in each society. As gender differences in moral judgment has been revealed in previous research (Jaffee and Hyde 2000), and social class has also been found to be related to prosocial orientation (Piff et al. 2010), gender and household income were included as the covariates in our analyses.

Measures

Perceived justifiability of morally debatable behaviors

We analyzed the four items (i.e., “claiming government benefits to which you are not entitled,” “avoiding a fare on public transport,” “cheating on taxes if you have a chance,” and “someone accepting a bribe in the course of his/her duties”) from the Morally Debatable Behaviors Scale (MDBS) included in the WVS (World Values Survey Association 2009) regarding dishonest–illegal issues. Vauclair and Fischer (2011) conducted confirmatory factor analysis and structural equation modeling with data from all 84 countries represented in the WVS and confirmed the metric invariance by fitting a multi-group confirmatory factor analysis model with imposed equality constraints on the factor loadings across countries (NFI = 0.91; CFI = 0.91; RMSEA = 0.01). In the scale, respondents were asked to indicate the extent to which each behavior was justifiable on a 10-point scale, from “never justifiable” (1) to “always justifiable” (10). The responses to the four items were aggregated. Higher scores indicated more lenient moral judgment. The Cronbach's alpha for the four items ranged from 0.64 to 0.90 across the 20 societies included in the current study ($M = 0.75$).

Tightness of the society

We adopted the tightness score for each society from Gelfand et al. (2011). In their study, participants from different societies completed a six-item scale that measured

Table 1 Descriptive information across 20 societies

Society	N	Tightness	GDP per capita	Justifiability		Age			Sex ^a	Income
				Mean (SD)	α	Mean (SD)	Min	Max		Mean (SD)
Australia	1421	4.4	37482.04	1.90 (1.41)	0.81	50.45 (16.86)	18	95	55 %	5.16 (2.98)
Brazil	1500	3.5	4742.50	3.05 (1.83)	0.64	39.96 (15.68)	18	84	58 %	4.25 (2.14)
Britain	1041	6.9	37880.97	2.13 (1.47)	0.77	45.69 (18.54)	15	94	51 %	6.30 (2.58)
China	2015	7.9	1777.42	2.26 (1.71)	0.71	44.76 (13.32)	18	70	54 %	3.96 (1.87)
France	1001	6.3	34001.85	2.75 (1.75)	0.69	47.14 (18.20)	18	92	52 %	3.61 (2.03)
Hong Kong	1252	6.3	26105.05	2.14 (1.41)	0.80	44.31 (15.81)	18	90	52 %	4.45 (2.10)
India	2001	11.0	734.44	3.13 (2.62)	0.90	41.37 (14.71)	18	93	43 %	3.69 (2.15)
Italy	1012	6.8	30299.26	1.80 (1.16)	0.72	45.62 (15.62)	18	74	50 %	4.19 (2.73)
Japan	1096	8.6	36016.18	1.67 (1.13)	0.74	48.15 (15.74)	18	79	56 %	4.69 (2.85)
Malaysia	1201	11.8	5285.55	3.63 (1.86)	0.84	31.84 (11.93)	15	72	50 %	5.88 (1.73)
Mexico	1560	7.2	7945.76	3.36 (2.11)	0.66	39.69 (15.72)	18	87	51 %	4.88 (2.94)
the Netherlands	1050	3.3	39156.87	1.83 (1.24)	0.68	44.56 (17.80)	15	89	51 %	3.34 (2.04)
New Zealand	954	3.9	27347.59	1.89 (1.45)	0.80	49.25 (16.39)	18	89	55 %	6.46 (2.88)
Norway	1025	9.5	65324.05	2.04 (1.25)	0.70	45.78 (16.06)	18	79	50 %	5.29 (2.82)
Poland	1000	6.0	7963.10	2.15 (1.33)	0.66	45.96 (17.82)	18	92	49 %	4.03 (1.86)
South Korea	1200	10.0	17959.00	2.17 (1.40)	0.78	41.38 (14.01)	20	91	50 %	4.88 (1.77)
Spain	1200	5.4	26043.51	2.20 (1.57)	0.82	46.21 (18.49)	18	98	50 %	4.50 (1.68)
Turkey	1346	9.2	7087.81	1.52 (1.00)	0.72	36.48 (13.86)	18	82	50 %	3.39 (2.35)
Ukraine	1000	1.6	1835.77	3.25 (2.02)	0.82	42.38 (16.77)	18	90	66 %	4.35 (1.89)
USA	1249	5.1	42329.65	2.04 (1.46)	0.79	47.96 (17.03)	18	91	50 %	5.04 (1.86)

N sample size, SD standard deviation, α Cronbach's alpha

^a The percentage of female respondents

the general tightness–looseness level of their society. Sample items were “There are many social norms that people are supposed to abide by in this country” and “In this country, there are very clear expectations for how people should act in most situations.” Each item was rated from “*strongly disagree*” (1) to “*strongly agree*” (6). Reliability, validity, and measurement invariance of the scale were tested and confirmed. Moreover, there was high within-culture agreement in participants' rating of tightness, so a society-level mean score of tightness was calculated for each society. This aggregated mean tightness score was used in the current study. A higher score indicates a higher level of tightness. Gelfand and colleagues (2011) confirmed the structural equivalence of the scale across cultures by conducting exploratory factor analysis and Procrustes Factor Analysis (mean identity coefficient across nations = 0.98). The scale also demonstrated good reliability at societal level (Cronbach's α = 0.85).

Societal wealth

We obtained the per capita GDP of each society from the United Nations Statistics Division (2010) as the measurement of societal wealth. In cross-cultural research, national wealth is often statistically controlled for, in view of its

association with various historical, ecological, and socio-political factors. Some of these factors are conceptually relevant to tightness–looseness (e.g., resource scarcity, crime rate, corruption) (Gelfand et al. 2011). Thus, we conducted the analyses both with and without controlling for societal wealth.

Results

Analytical procedure

We examined the hypothesis with hierarchical linear modeling (HLM; Raudenbush et al. 2010). Individual-level variables were standardized within societies, except for gender (0 = male; 1 = female). We also standardized society-level variables.

First, we examined the hypothesis without controlling for societal wealth. The Level 1 HLM equation was set as

$$\text{Judgment}_{ij} = \beta_{0j} + \beta_{1j}\text{Age}_{ij} + \beta_{2j}\text{Gender}_{ij} + \beta_{3j}\text{Income}_{ij} + e_{ij}.$$

In this equation, Judgment_{ij} represented judgment for respondent i in society j regarding morally debatable

behaviors. On the other side of equation, Age_{ij} represented the respondent's age and β_{1j} was the coefficient indicating how age was related to judgment in society j . Similarly, Gender_{ij} and Income_{ij} represented the gender and household income for respondent i in society j , while β_{2j} and β_{3j} indicated the effects of gender and income on judgment in society j .

The Level 2 HLM equations were set as

$$\beta_{0j} = \gamma_{00} + \gamma_{01}\text{Tightness}_j + u_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}\text{Tightness}_j + u_{1j}$$

$$\beta_{2j} = \gamma_{20} + \gamma_{21}\text{Tightness}_j + u_{2j}$$

$$\beta_{3j} = \gamma_{30} + \gamma_{31}\text{Tightness}_j + u_{3j}$$

This equation specified tightness level (Tightness_j) as a predictor of β_{1j} (i.e., the association between age and judgment in each society) and β_{2j} (the gender differences in moral judgment in each society).¹ Tightness was not specified as the predictor of β_{3j} because the effect of household income was found to be non-significant in the preliminary analysis. Next, the same model was analyzed controlling for societal wealth. Hence, the Level 2 HLM equations were set as

$$\beta_{0j} = \gamma_{00} + \gamma_{01}\text{GDPPC}_j + \gamma_{02}\text{Tightness}_j + u_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}\text{GDPPC}_j + \gamma_{12}\text{Tightness}_j + u_{1j}$$

$$\beta_{2j} = \gamma_{20} + \gamma_{21}\text{GDPPC}_j + \gamma_{22}\text{Tightness}_j + u_{2j}$$

$$\beta_{3j} = \gamma_{30} + \gamma_{31}\text{Tightness}_j + u_{3j}$$

Findings

Results of the two HLM models were presented in Table 2. In Model 1, which did not control for societal wealth, age was significantly related to less lenient judgment regarding morally debatable behaviors ($b = -0.224$, $SE = 0.028$, $P < 0.001$). As predicted, this pattern was moderated by society-level tightness ($b = 0.098$, $SE = 0.027$, $P = 0.002$). This interaction, probed by the procedure outlined in Preacher et al. (2006), revealed that although age was related to less lenient judgments both in loose (tightness at $M - 1SD$) and tight (tightness at $M + 1SD$) societies, this association was stronger in loose societies ($b = -0.325$, $SE = 0.040$, $P < 0.001$) than in tight societies ($b = -0.123$, $SE = 0.039$, $P = 0.005$). The pattern is consistent with our prediction that age differences in judgment regarding morally debatable

behaviors would be weaker in tight societies where adherence to moral norms is culturally enforced for all age groups. Gender was a significant predictor ($b = -0.153$, $SE = 0.038$, $P < 0.001$) of judgment on morally debatable behaviors. The negative coefficient suggests that women tend to consider morally debatable behaviors as less justifiable than men. This pattern, however, was not moderated by tightness ($b = -0.014$, $SE = 0.037$, ns).

These patterns remained after controlling for societal wealth (Model 2). Age was negatively associated with lenient judgment regarding morally debatable behaviors ($b = -0.189$, $SE = 0.025$, $P < 0.001$), and the association was moderated by society-level tightness ($b = 0.084$, $SE = 0.023$, $P = 0.002$) (Fig. 1). In particular, the negative association between age and more lenient judgment was stronger in loose societies ($b = -0.276$, $SE = 0.035$, $P < 0.001$) than in tight societies ($b = -0.103$, $SE = 0.033$, $P = 0.006$). Figure 1 also suggests that while younger adults in tight societies considered morally debatable behaviors as less justifiable compared with their counterparts in loose societies, older adults in tight societies were actually more lenient in their judgment compared with those in loose societies. As same as Model 1, gender was a significant predictor of judgment ($b = -0.114$, $SE = 0.036$, $P = 0.006$) with women making more rigid judgment regarding morally debatable behaviors. The effect of gender was not moderated by tightness ($b = -0.030$, $SE = 0.033$, ns). Finally, the main effect of tightness was not significant in predicting perceived justifiability of morally debatable behaviors in either model (Model 1: $b = 0.079$, $SE = 0.139$, ns ; Model 2: $b = 0.023$, $SE = 0.124$, ns).

Discussion

This research found that across cultures age is associated with differences in perceived justifiability of morally debatable behaviors. Specifically, older adults perceive morally debatable behaviors as less justifiable than younger adults. The relation between age and judgment on morally debatable behaviors, however, was moderated by societies' tightness such that the effect associated with age difference was more pronounced in loose societies relative to tight societies. Our interpretation of this pattern is that in tight societies adherence to moral norms may be culturally enforced for all age groups.

An interesting pattern to note is that while young adults in tight societies, compared to those in loose societies, manifest less tolerance regarding morally debatable behaviors, older adults in tight societies showed more tolerance compared to those in loose societies. This pattern may suggest that in tight societies, the social norms for

¹ One alternative possibility for the present hypothesis is that societies' tightness may have the general effect of constraining individual differences, beyond age differences. To test this possibility, the moderating effect on gender difference was analyzed.

Table 2 Coefficients and standard errors from HLM analysis

	Model 1		Model 2	
	Coefficient (SE)	df	Coefficient (SE)	df
Intercept				
Intercept	2.422 (0.139)***	18	2.571 (0.139)***	17
Tightness	0.079 (0.139)	18	0.023 (0.124)	17
GDP per capita	–	–	–0.300 (0.120)*	17
Age				
Intercept	–0.224 (0.028)***	18	–0.189 (0.025)***	17
Tightness	0.098 (0.027)**	18	0.084 (0.023)**	17
GDP per capita	–	–	–0.069 (0.022)**	17
Income				
Intercept	–0.024 (0.041)	19	–0.024 (0.040)	19
Gender				
Intercept	–0.153 (0.038)***	18	–0.114 (0.036)**	17
Tightness	–0.014 (0.037)	18	–0.030 (0.033)	17
GDP per capita	–	–	–0.080 (0.032)*	17

Perceived justifiability of morally debatable behaviors was the criterion variable

SE standard error, df degree of freedom

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

Fig. 1 Age differences in perceived justifiability of morally debatable behaviors in societies of varying tightness level. SD standard deviation

morally debatable behaviors are not zero-tolerance, but a certain level of acceptance. Both younger and older adults' justifications for moral transgressions tend to be closer to this socially approved level. This process entails both relatively harsher judgments among younger adults and more lenient judgments among older adults compared to their counterparts in loose societies, respectively.

Relevant to the above point, the main effect of tightness on perceived justification of morally debatable behaviors was not significant in the current sample, suggesting that the average levels of acceptance of morally debatable behaviors pertaining dishonest–illegal issues were similar across societies. The results further support Vaclair and Fischer's (2011) argument that issues pertaining to honesty and fairness are moralized across societies to facilitate social living. Tightness of the society does not appear to influence the average level of tolerance but constrains the age-related variance in people's judgments.

To our knowledge, this is the first study that has investigated age-related differences in perceived justifiability of morally debatable behaviors cross-culturally. Our prediction of age difference in the judgments was based on two theories, the terror management theory and the theory of age difference in attribution style. Although our focus in this research was not to determine which of these two theories accounts the data better, to some extent, the finding that the age difference was moderated by tightness–looseness seems to fit better with the terror management theory in that both mortality salience and tightness–looseness implicate closer adherence to cultural norm. Nevertheless, as the current research did not determine which of these factors underlies the observed pattern, these possibilities need to be examined carefully in future research.

We observed gender differences in perceived justifiability of morally debatable behaviors. The finding indicated that across societies women consider morally debatable behaviors as less justifiable than do men. We speculate that

as women hold more relational self-construal (Cross and Madson 1997; Kashima et al. 1995), social relationships and social interactions are more crucial for their self-concept and well-being (Clancy and Dollinger 1993). Thus, women may be more motivated to protect the moral norms which implicate cohesion of social group. This may be why female participants appeared less tolerant to behaviors that deviate from the moral norms. Another point to note is that tightness of the society does not moderate gender differences across cultures, suggesting that societal tightness does not simply constrain all individual differences within the society. Some individual differences (e.g., gender differences in judging morally debatable behaviors) are still evident in tight societies. Future research should test the detailed mechanism regarding these issues.

The current study contributes to the literatures of moral development and cross-cultural psychology of aging. First, we examined judgment on morally debatable behaviors from a perspective of lifespan development. Previous studies on judgment on moral transgressions largely focused on adolescence. In contrast, the current study examined the relationship between age and judgment on morally debatable behaviors in adulthood using a representative sample from 20 different societies. The age effects on perceived justifiability of morally debatable behaviors found in this study broaden scientific understanding of moral development across the lifespan. Second, the current findings shed light on the importance of culture when examining lifespan development. Although much research in this area has demonstrated the moderating role of culture in age-related differences (e.g., Fung et al. 2010), a systematic examination of society-level moderators (which requires samples from a number of societies) has been relatively rare (for an example, see Li and Fung 2012). The current study adds to this line of research in showing the role of culture in shaping aging processes. Third, the current study contributes to the literature of cross-cultural psychology by highlighting the critical role of tightness–looseness. As mentioned before, tightness–looseness is a unique cultural dimension, which has received less attention than some traditional cultural dimensions, such as individualism–collectivism, power distance, and uncertainty avoidance (Gelfand et al. 2006). The current findings highlight the importance of tightness–looseness in analyzing individuals' attitudes and behaviors related to social norm. Practically, the current finding illuminates a possible reason for cross-generational misunderstanding. As older and younger adults have different tendencies in making morality related judgments, they may have conflicting opinions toward the same behavior (e.g., lying with beneficent purposes). Hence, understanding age differences in morality related judgments can foster mutual understanding between the older and younger generations, which is particularly essential given the unprecedented aging of the population.

We acknowledge a few limitations of this study. The first is the cross-sectional nature of the current data. As such, the identified age differences in moral judgments could be interpreted as reflecting developmental changes, generational differences (i.e., cohort effect), or a combination of the two effects. For example, one alternative possibility is that the moderating effect of tightness–looseness may reflect faster cultural change in loose societies (so that the cohort effect is more prominent), instead of larger age-related variations. Longitudinal data are needed to clarify this issue, although conducting such a study cross-culturally would be extremely challenging. Second, judgment on morally debatable behavior was a four-item measure in the current study. These four behaviors constitute only a small sample of morally debatable behaviors. Nevertheless, this measure has known validity (Vauclair and Fischer 2011) and has reasonably good internal consistency across cultures, indicated by the Cronbach's alpha (ranged from 0.64 to 0.90; $M = 0.75$). It is important that future research extends the current finding to a larger set of morally debatable behaviors. Third, the mean ratings for the items on moral justification were relatively low across societies (ranging from 1.52 to 3.63 on a 10-point Likert scale). For this reason, issues associated with floor effect might have affected our interpretations. However, to the extent that such issues would generally lower the power to identify predictors of the affected variable, it suggests that the effects of age and culture identified here might have been more pronounced if measures of moral judgment had larger variance. Fourth, the current study is based on the 20 societies that were available in both the fifth wave of WVS (World Values Survey Association 2009) and the study on tightness of societies (Gelfand et al. 2011). It is important to further test the current pattern in societies not examined in the current analysis.

To conclude, the current study found that older adults make less lenient judgments about morally debatable behaviors relative to younger adults. Although the age differences were found across cultures, the age-related variation was more pronounced in loose societies relative to tight societies. These findings highlight the role of culture in shaping how age differences manifest in a given cultural context.

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