**ORIGINAL RESEARCH ARTICLE** 



# Emotional reactions to self-inconsistency and self-conflict in Japan and the U.S.

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# Abstract

This research compared Japanese and American individuals' reactions to experiencing inconsistency or conflict between two roles (i.e., identities, relationships, selfaspects). Past research has established that trait-level well-being and role inconsistency are negatively related in the U.S. but unrelated in Japan. We extended on past work by (1) experimentally manipulating an experience of inconsistency in both countries to establish causality, and (2) identifying if the previously-observed cultural differences in role inconsistency are distinct from cultural differences in role conflict. Participants from universities in Japan and the U.S. were randomly assigned to write about how their behavior differs in two roles or relationships (inconsistency condition), interference between two roles or relationships (conflict condition), or descriptions of two roles or relationships (control condition). Inconsistency decreased moral self-regard in the U.S. but not in Japan, whereas conflict decreased moral self-regard in both cultures. Americans had a more globally negative reaction to role conflict, but only inconsistency reduced their feelings of authenticity. In other words, the negative relationship between inconsistent roles and well-being observed in the U.S. appears both causal in nature and distinct from the effect of conflict within the self-concept. In addition, although inconsistency does not elicit negative reactions in Japan, role conflict does reduce positive feelings about the self.

Keywords Self-concept · Culture · Identity · Role conflict · Role inconsistency

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# Introduction

People possess multiple identities (e.g., roles, relationships), which develop when psychological traits are connected to internalized roles and domains (Collyer et al. 2018; McConnell 2011). Research on multiple identities, or self-aspects, generally focuses on their intraindividual consequences (Browman et al. 2018; Brown 2018; McConnell et al. 2009; Shih et al. 1999), but the manner in which self-concept characteristics influence the individual can vary by culture (e.g., Church et al. 2014). Western cultures encourage seeing the self as an independent construct with a core essence that does not change across situations (Markus and Kitayama 1991), and as such, inconsistency between identities is related to distress and poor well-being among people from these cultures (e.g., English and Chen 2011; Sheldon et al. 1997; Suh 2002). The purpose of this research was to test if inconsistency within the self directly causes negative feelings, and if the pattern of cultural differences observed for inconsistency (i.e., two roles or identities differing in their associated traits and behaviors) is distinct from patterns observed for conflict within the self (i.e., two roles or identities creating problems for one another). We were specifically interested in differences between Japan and the U.S.

## Variability in the self-concept

The self-concept is a person's mental representation of him or herself, and this representation is connected with numerous other concepts in memory (Klein 2012; McConnell 2011). Given its elaborate nature, the entire self-concept is not accessible at every moment (Roccas and Brewer 2002; Wheeler et al. 2007). Instead, the person's current, or "working," self-concept is dynamic and variable, to the point that the person's self-definition can change depending on current goals or contexts (Markus and Nurius 1986; Markus and Wurf 1987).

Although all individuals have the potential to possess a multifaceted self-concept, actual self-concept organization varies considerably (McConnell 2011). For example, people differ in the number and interrelatedness of their self-aspects (i.e., self-complexity; Linville 1985) and whether they compartmentalize positively and negatively valenced parts of the self (i.e., evaluative organization; Showers 1992). These characteristics of self-concept organization can have either positive or negative effects on well-being, with the direction depending on certain moderating factors (e.g., current stressors; McConnell et al. 2009). Putting aside this interaction between actual self-concept organization and various stressors, whether the individual *believes* multiple identities are desirable is influenced by cultural values.

To explain, cultures differ in the extent to which people believe the self is flexible and contextually determined. This is one component of self-construal, which refers to the degree to which social groups and interpersonal relationships are integrated into the self (e.g., Cross et al. 2000; Markus and Kitayama 1991; Singelis 1994). A prototypical comparison is between individuals in East Asia (e.g., China, Korea, Japan) and the West (e.g., Australia, Canada, England, United States), with self-construals being more interdependent in East Asia and more independent in the West (Markus and Kitayama 1991; Varnum et al. 2010). Although self-construal is primarily defined in terms of the self's social orientation, an interdependent self-construal is additionally characterized by seeing the self as fluid and context-dependent whereas an independent self-construal involves seeing the self as having a relatively fixed essence (Heine 2010; Markus and Kitayama 1991). As such, people with an independent self-construal tend to endorse the idea of a context-independent "true self" (Chen 2018). This view of a fixed self is interesting, given that Westerners also report having multiple self-aspects (McConnell 2011). In other words, even if their actual self-concept—as it exists in the cognitive network of memory—is multifaceted and variable, that variability might be perceived as mere deviations from their true self (Strohminger et al. 2017).

## Cultural values and the self

The extent to which a culture values a fixed self versus a flexible self has consequences for the individual. In a comparison of eight cultures, self-reported inconsistency between different roles or identities was associated with poorer well-being in individualistic countries like the U.S., but it was generally unassociated with wellbeing in Japan (Church et al. 2014). This pattern is also present in related ethnic subcultures. For example, within the U.S., East Asian Americans report having more role inconsistency than White Americans, but role inconsistency is only related to feeling inauthentic among White Americans (English and Chen 2011). In the U.S., acting inauthentic to one's "true self" is even seen as immoral and evokes feelings of impurity (Gino et al. 2015).

Inconsistency within the self is treated as a key component of authenticity (Chen 2018; Sheldon et al. 1997), and authenticity is increasingly considered to be universally important for well-being (Church et al. 2008; Schmader and Sedikides 2018; Wood et al. 2008). The relationship between inconsistency and feelings of authenticity depends on how inconsistency is defined, such as inconsistency between identities versus inconsistency over time, and which type of inconsistency leads to feelings of inauthenticity also varies culturally (Chen 2018; English and Chen 2007; Suh 2002).

East Asians' greater experience of and comfort with self-inconsistency may extend from multiple cultural factors, such as adopting an interdependent selfconstrual or a holistic cognitive style (English and Chen 2007). Holistic thought involves embracing contradiction, perceiving relatedness among elements in the world, and being sensitive to context (Nisbett et al. 2001). Western culture, in contrast, promotes an analytic cognitive style, which involves pursuing invariant laws, focusing on discrete objects, and identifying stable attributes (Nisbett et al. 2001). Differences in interdependence versus independence have been proposed to cause cultural differences in cognitive style and psychological functioning (Kühnen and Oyserman 2002; Markus and Kitayama 2010; Varnum et al. 2010), and self-construal is often found to mediate cultural differences on various measures (e.g., Lewis et al. 2008; see Han and Humphreys 2016, for a review). At the same time, however, there is also evidence that broader cognitive styles and cultural values exert a direct effect without mediation by self-construal (Brown et al. 2017; Church et al. 2012; English and Chen 2007; Levine et al. 2003; Matsumoto 1999). It is likely that individual minds (e.g., the self, perception, behavior) and cultural phenomenon (e.g., institutions, values, customs) have continuous, bidirectional influences on one another (Markus and Kitayama 2010).

Possessing multiple different identities creates inconsistency within the self, but inconsistent identities do not necessarily conflict or interfere with one another. The critical assumption in the current research is that *conflict* within the self is distinct from inconsistency (i.e., simple variation). Therefore, the cultural factors that encourage comfort with inconsistency, such as sensitivity to context and adjusting oneself to achieve social harmony (English and Chen 2007; Kanagawa et al. 2001; Morling et al. 2002), will be independent from feelings about conflict within the self. Identities usually reflect roles, relationships, and situations that are rooted in social interactions (Collyer 2018; Deaux 1993; McConnell 2011), and therefore conflict between them should covary with or reflect conflicting social goals.

Common examples of conflict are work and family roles disrupting one another (Ramarajan and Reid 2013; Smit et al. 2016), or possessing social identities (e.g., membership in two or more cultural or racial groups) that have discrepant values, norms, or loyalties (Mok and Morris 2009; Roccas and Brewer 2002). When people cannot reconcile conflict within the self, they experience stress and poorer well-being (Robin et al. 2018; Roccas and Brewer 2002; Rothbard and Ramarajan 2009; Sanchez et al. 2009). Unlike self-inconsistency, conflict within the self (e.g., workfamily interference) is experienced as problematic in both Japan and the U.S., as well as in various other nations (Eby et al. 2005; Hill et al. 2004).

#### The current research

This study built on past research observing cultural and ethnic differences in inconsistency within the self, with a few key differences. First, we manipulated the experience of inconsistency within the self in Japan and the U.S., whereas past research on cultural and ethnic differences in inconsistency measured participants pre-existing degree of inconsistency (i.e., as an individual difference; Church et al. 2008, 2014; English and Chen 2007, 2011; Suh 2002).

Second, past research measured global outcomes like overall well-being, feelings of authenticity, and relationship quality, which was appropriate given the focus on individual differences in inconsistency. In contrast, because we induced a current experience of inconsistency, we correspondingly measured participants' momentary experience of distress. Specifically, we assessed feelings of moral self-regard and impurity, following Gino et al.'s (2015) finding that inauthenticity to one's core self creates feelings of impurity and low moral regard for the self. We also measured state anxiety (Gaudry et al. 1975). Anxiety is closely linked to the experience of threat, including threats within the self-concept (Bandura 1988; Epstein 1973), and therefore we predicted that confronting inconsistency within the self would evoke anxiety in Westerners.

Third, we introduced the variable of conflict within the self. Unlike inconsistency within the self, the presence of conflict means two parts of the self interfere with one another in a zero-sum manner. Conflict represents the presence of obstacles, and therefore it should evoke anxiety regardless of participants' cultural background. However, we expected feelings of morality to differ by culture: Inconsistency should be experienced as a moral violation only among Westerners because they value a context-independent "true self" (Chen 2018; Strohminger et al. 2017), whereas we ventured that East Asians would experience *conflict* within the self as a type of moral violation more than Westerners. To explain, East Asian cultures emphasize adapting one's self to achieve social harmony (Kanagawa et al. 2001; Morling et al. 2002), and violating community values is considered more immoral in Japan than in the U.S. (Matsuo et al. 2019). In the current research we defined conflict within the self as "conflicting roles or relationships," which means self-conflict is likely to be related to outward social experiences. The greater value placed on social harmony in East Asian cultures should therefore make conflict feel more "wrong" (i.e., immoral) in that culture.

Our pre-registered<sup>1</sup> hypotheses were:

**H1** When comparing the inconsistency and control conditions, inconsistency should produce a more negative reaction (less moral self-regard, more impurity, more anxiety) among Americans whereas Japanese should not be negatively affected by inconsistency.

**H2** Compared to the control condition, conflict should produce more anxiety among both Japanese and Americans, but it should only decrease moral self-regard and increase feelings of impurity among Japanese.

Our hypotheses concerned the effect of condition within each culture rather than comparing the two cultural samples within a single condition for several reasons. First, there is evidence that participants from these two cultures have different response patterns, with Americans selecting more extreme scores and Japanese using scale midpoints more (Hamamura et al. 2008; Johnson et al. 2005; Stening and Everett 1984; Zax and Takahashi 1967). These response styles would make a comparison of absolute scores between the two cultures misleading. We compared each of the experimental conditions (inconsistency, conflict) to a neutral control condition within each culture because these comparisons provide more valid conclusions than comparing the effect of culture within each condition.

We included three individual difference measures to explore them as potential mediators of cultural differences. As mentioned previously, self-construal is hypothesized to mediate cultural differences in other self-relevant phenomenon, although evidence for this is mixed (Brown et al. 2017; Levine et al. 2003; Matsumoto 1999; Suh et al. 2008). A second possible mediator is individual differences in endorsing

<sup>&</sup>lt;sup>1</sup> https://aspredicted.org/4w6fb.pdf.

the existence of an "authentic self" (Ito and Kodama 2005; Wood et al. 2008). Westerners may be more distressed by inconsistency because they endorse an authentic self more. Lastly, because we predicted that Japan's cultural emphasis on collective harmony and adjusting oneself for the sake of others (Kanagawa et al. 2001; Morling et al. 2002) would lead to experiencing role conflict as morally wrong, we measured endorsement of loyalty to ingroups as a moral foundation (Graham et al. 2008). We introduced these variables as potential mediators tentatively, given the recent evidence that cultural differences may not be reducible to simple individual differences (e.g., Kitayama and Uskul 2011; Na et al. 2010; Varnum et al. 2010).

# Method

## Participants

Participants were university students in Japan (n = 178) and the United States (n = 164). We desired a minimum sample size of 100 per country, based a common practice in the field of recruiting at least 30 participants per condition (e.g., Flath et al. 2019; Golubickis et al. 2019; Schrimpf et al. 2019). The data collection period and exclusion criteria were pre-registered. The study was available to potential participants for a fixed period of time, with the final sample size determined by the number of participants who chose to participate before the deadline. No analyses were performed nor were the data inspected in any way until data collection was complete in both countries.

Participants who reported that their native language was not Japanese (in Japan) or English (in the U.S.) or that they had lived five or more years in another country were excluded from analyses because their cultural upbringing may differ from the rest of the sample (Japan n = 1; U.S. n = 10). Two raters whose native language was the same as participants' independently read each essay to identify any that did not follow the essay instructions. The percent agreement between raters was 84% in Japan and 93% in the U.S., and a third rater resolved all disagreements. Participants whose essays did not follow the instructions were excluded from analyses (Japan n = 38; U.S. n = 14). One participant in the U.S. sample was excluded because the experimenter administered the wrong survey. One participant in the Japanese sample was excluded because this participant answered only one of the 19 items forming the dependent measures. We neglected to anticipate significant missing data as grounds for exclusion when submitting the pre-registration, so this final exclusion was not pre-registered but it is reasonably warranted. The final sample size was 139 in the U.S. and 138 in Japan. The ethnic composition of the final U.S. sample was as follows: 107 White/Caucasian, 9 Latino or Latina, 9 multiple ethnicities, 8 Black/African American, 2 Asian, 1 Indian, 1 Native American, 1 Pacific Islander, 1 AfroCarribean.<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> Given that cultural values can be different for White Americans than other Americans (English and Chen 2007), we repeated all analyses with non-White participants excluded from the American sample. The results were overwhelmingly unchanged. The only results that changed are reported in subsequent

Participants completed all measures in their native language. The authors, who are both proficient in English and Japanese, ensured the accuracy of all translations. The experiment instructions, including the essay manipulation, were composed in English first. The published English measures (e.g., moral self-regard, anxiety) were translated into Japanese, and the published Japanese measures (e.g., authenticity, self-construal) were translated into English. The authors discussed and modified the translations until both agreed that the meaning and nuance were identical between languages. An independent third party (a commercial translation service) performed a backtranslation. (See the Supplementary Materials for full translations and backtranslations.)

We intentionally used a mix of materials originally written in each language. Even if translation and backtranslation guarantee that all individual items have the same meaning in both languages, the original construction and validation of those measures still occurred only in the original language. Using measures that were developed exclusively in one population could create systematic differences in results obtained between the two samples.

All participants completed the study as an online survey. The Japanese sample completed it at a location of their choice (e.g., home) in return for extra credit in a class, whereas the U.S. sample completed it at a campus laboratory in return for research participation credit. However, because all hypotheses concern the effect of condition *within* each sample (e.g., conflict vs. control), the different experimental settings in the two countries does not create problems for interpreting results.

## Measures

## Authenticity

We used Ito and Kodama's (2005) authenticity scale, which was developed for Japanese respondents. Participants rated how true each item was of themselves on a 5-point scale. Sample items include, "I have a 'self' that is always steady," "I never lose sight of myself," and "I can always be myself." The scale was reliable in both samples (Japan  $\alpha = .75$ ; U.S.  $\alpha = .85$ ).

## Self-construal

Takata's (2000) 20-item self-construal scale, validated with Japanese respondents, was used to measure independent and interdependent self-construal with 10 items each. Participants rated how true each item was of themselves on a 7-point scale. Sample items include, "I stick to what I believe even if the people around me think differently," "I always state my own opinion clearly," and "I think it's important to maintain peace in relationships." The independent (Japan  $\alpha = .81$ ; U.S.  $\alpha = .82$ )

Footnote 2 (continued)

footnotes. That being said, given that our sample was majority White, it remains possible that different patterns might be observed in large samples of specific ethnic groups.

and interdependent (Japan  $\alpha = .73$ ; U.S.  $\alpha = .78$ ) subscales were reliable in both samples.

#### Ingroup loyalty

Graham et al.'s (2008) Moral Foundations Questionnaire contains six items to measure individual differences in perceiving ingroup loyalty as a basis of morality (e.g., "It is more important to be a team player than to express oneself"), which are responded to on 6-point scales. We used the publicly available English and Japanese versions of the scale (Graham et al. 2008). The scale was adequately reliable in the U.S. sample ( $\alpha = .74$ ), but not in the Japanese sample ( $\alpha = .47$ ). Because the scale was unreliable in the Japanese sample, we decided not to analyze responses to this measure. As a note, this finding converges with growing evidence that Graham et al.'s five-factor structure of moral foundations is not present in Japanese samples (e.g., Gherghel et al. 2017; Honda et al. 2016; Murayama and Miura 2017).

#### Dependent measures

The dependent measures were current feelings of moral regard for the self, impurity, and anxiety. Moral self-regard was measured with 10 items from Gino et al. (2015; based on Walker and Hennig 2004): moral, generous, cooperative, helpful, loyal to others, dependable, trustworthy, reliable, caring, respectful (Japan  $\alpha = .84$ ; U.S.  $\alpha = .93$ ). Impurity was measured with three items from Gino et al. (2015): impure, dirty, tainted (Japan  $\alpha = .77$ ; U.S.  $\alpha = .82$ ). Anxiety was measured with Marteau and Becker's (1992) six-item version of Spielberger's State-Trait Anxiety Inventory: calm, tense, upset, relaxed, content, worried (Japan  $\alpha = .78$ ; U.S.  $\alpha = .88$ ).

Participants were given the following instructions when responding to these items: "How did you feel while writing the essay on the previous page? Please rate how much each of the following words describes how you felt." Participants made their answers using a scale with the anchors *not at all* to *very much* (there were no midpoint labels). We intended to use a 7-item scale for both samples, but due to a programming error the Japanese sample received an 8-item scale. To correct for this, within each sample we calculated the z score for participants' mean rating on each of the three dependent measures. All analyses were performed on these within-sample z scores.

#### Procedure

Participants completed all experimental tasks via a computer survey. First, they were instructed to think about different relationships and roles in their life, with some examples being parent-child relationships, friend relationships, sibling relationships, romantic relationships, roles at work, and roles at school. Participants were then randomly assigned to one of three conditions: control (Japan n = 42; U.S. n = 50), conflict (Japan n = 38; U.S. n = 41), or inconsistency (Japan n = 58; U.S. n = 48).

The next instructions varied by condition.

Conflict	Next, please think about times when two of these roles or relation-
	ships interfere with each other. That is, times when these two roles
	or relationships are in conflict. For example, maybe sometimes you
	break a promise to a friend because you need to finish an assign-
	ment for school.
Inconsistency	Next, please think about times when you behave differently in two
	of these roles or relationships. That is, times when your behavior is
	inconsistent between these two roles or relationships. For example,
	perhaps you are shy at school but confident at your part-time job.
Control	Please pick two roles and relationships that are important to you.
	On the next page, you will be asked to write about them in detail.
Collutor	

Participants were told to type the names of the two roles or relationships (e.g., "brother relationship and student role"), and then the instructions continued on the next page. To ensure that participants stayed focused on those two roles or relationships, the names they had just typed appeared in bold above the final instructions, and an essay box appeared below the instructions.

Conflict	Below, please describe times when these two conflict with each
	other. Please vividly imagine and describe in detail the situations
	where these roles or relationships conflict. What are your thoughts
	and feelings at those times?
Inconsistency	Below, please describe times when your behavior in these two dif-
	fers from each other. Please vividly imagine and describe in detail
	the situations where your behavior in those roles or relationships
	differs. What are your thoughts and feelings at those times?
Control	Below, please describe your traits, behavior, and habits in these two
	roles and relationships. What kind of person are you in these two
	roles or relationships?

Participants were assured that whatever they wrote would be kept anonymous, and they were instructed to write for 5 min. The survey automatically proceeded to the next page after 5 min. All participants then completed the measures in this order: moral self-regard, impurity, anxiety, authenticity, self-construal, ingroup loyalty, and demographic items (e.g., age, gender, native language, experience living in other countries).

# Results

# **Overall model**

A 2 (Culture: Japan, U.S.) × 3 (Condition: Inconsistency, Conflict, Control) ANOVA on moral self-regard revealed a significant main effect of condition, F(2, 271) = 18.16, p < .001,  $\eta_p^2 = .12$ , with moral self-regard being greatest in the control

	Japan			U.S.			
	Control	Inconsistency	Conflict	Control	Inconsistency	Conflict	
Moral self-regard M (SD)	.24 <sup>a</sup> (.83)	.13 <sup>a</sup> (1.03)	$46^{b}$ (1.00)	.47 <sup>a</sup> (.98)	02 <sup>b</sup> (.81)	55 <sup>c</sup> (.95)	
Impurity <i>M</i> (SD)	.00 <sup>a</sup> (.95)	07 <sup>a</sup> (.93)	.11 <sup>a</sup> (1.16)	35 <sup>a</sup> (.69)	13 <sup>a</sup> (.86)	.58 <sup>b</sup> (1.22)	
Anxiety <i>M</i> (SD)	01 <sup>a</sup> (.88)	13 <sup>a</sup> (1.10)	.21 <sup>a</sup> (.96)	39 <sup>a</sup> (.80)	13 <sup>a</sup> (.82)	.63 <sup>b</sup> (1.13)	

Table 1 Descriptive statistics by condition and culture

These descriptives are standardized (z) scores, which were calculated separately within each sample (Japan and the U.S.). Conditions with different subscripts reflect significant (p < .05) pairwise comparisons, performed within each culture

condition (M = .37, SD = .92) and lowest in the conflict condition (M = -.51, SD = .97). The inconsistency condition fell in the middle (M = .06, SD = .94). The predicted interaction between culture and condition was not significant, F(2, 271) = 1.16, p = .315,  $\eta_p^2 = .01$ . Despite this, we carried out planned comparisons that directly test the hypotheses (see the next section).

For impurity, there was a main effect of condition, F(2, 271) = 6.99, p = .001,  $\eta_p^2 = .05$ , that was qualified by an interaction with culture, F(2, 271) = 3.92, p = .021,  $\eta_p^2 = .03$ . Lastly, for anxiety there was also both a main effect of condition, F(2, 271) = 10.42, p < .001,  $\eta_p^2 = .07$ , and an interaction with culture, F(2, 271) = 3.73, p = .025,  $\eta_p^2 = .03$ .

# **Planned comparisons**

**Hypothesis 1** When comparing the inconsistency and control conditions, inconsistency should produce a more negative reaction (less moral self-regard, more impurity, more anxiety) among Americans whereas Japanese should not be negatively affected by inconsistency.

See Table 1 for means and standard deviations. For moral self-regard, inconsistency produced lower moral self-regard than control in the U.S.,  $M_{\text{diff}} = -.49$ , SE = .19, p = .010 (95% CI -.87, -.12),<sup>3</sup> whereas in Japan moral self-regard was the same in inconsistency and control,  $M_{\text{diff}} = -.11$ , SE = .19, p = .578 (95% CI -.27, .48). For impurity, inconsistency and control did not differ in the U.S.,  $M_{\text{diff}} = .21$ , SE = .20, p = .277 (95% CI -.17, .60), nor did they differ in Japan,  $M_{\text{diff}} = -.07$ , SE = .20, p = .706 (95% CI -.46, .31). Likewise, for anxiety, inconsistency and control did not differ in the U.S.,  $M_{\text{diff}} = .26$ , SE = .19, p = .187 (95% CI -.13, .64), nor in Japan,  $M_{\text{diff}} = -.12$ , SE = .19, p = .523 (95% CI -.51, .26).

<sup>&</sup>lt;sup>3</sup> With non-White participants excluded from the American sample, this contrast becomes marginally significant, Mdiff = -.36, SE = .22, p = .106 (95% CI - .79, .08).

In other words, Americans only showed the hypothesized negative effect of inconsistency on the moral self-regard measure, despite this also being the only measure that did not reveal a significant interaction between culture and condition.

**Hypothesis 2** Compared to the control condition, conflict should produce more anxiety among both Japanese and Americans, but it should only decrease moral self-regard and increase feelings of impurity among Japanese.

For anxiety, conflict and control did not differ in Japan,  $M_{\text{diff}} = .21$ , SE = .21, p = .322 (95% CI – .21, .63), but conflict did produce more anxiety than control in the U.S.,  $M_{\text{diff}} = 1.02$ , SE = .20, p < .001 (95% CI .62, 1.41). Conflict decreased moral self-regard relative to control in both Japan,  $M_{\text{diff}} = -.70$ , SE = .21, p = .001 (95% CI – 1.11, – .28), and the U.S.,  $M_{\text{diff}} = -1.03$ , SE = .20, p < .001 (95% CI – 1.42, – .64). However, conflict increased impurity relative to control in the U.S.,  $M_{\text{diff}} = .33$ , SE = .20, p < .001 (95% CI – .53, 1.33), but not in Japan,  $M_{\text{diff}} = .10$ , SE = .22, p = .636 (95% CI – .32, .53).

The anxiety measure contained an equal mix of positive (e.g., calm) and negative (e.g., upset) items, with the positive items reverse-scored. Past research has found that positive and negative emotions are more likely to be inversely related in Western cultures than East Asian cultures (e.g., Leu et al. 2010; Schimmack et al. 2002), so it may be more appropriate to separate positive and negative emotions when evaluating changes in overall signs of anxiety.<sup>4</sup> An exploratory 2 (Culture)  $\times$ 3 (Condition)  $\times$  2 (Valence) mixed ANOVA produced a significant three-way interaction, F(2, 271) = 4.45, p = .013,  $\eta_p^2 = .03$ . Pairwise comparisons within the U.S. sample revealed identical patterns of anxiety as reflected in both positive and negative emotions: the conflict condition increased anxiety relative to both control and inconsistency (ps < .011), but inconsistency and control did not differ (ps > .167). This also matches the results with the overall anxiety measure reported previously. However, for the Japanese sample, the pattern varied by emotion valence. Negative emotions of anxiety (upset, tense, worried) did not differ between any of the three conditions (ps > .38). However, for positive emotions of anxiety (i.e., low anxiety; calm, relaxed, content), there was a significant difference between conflict and inconsistency (p = .01) but not conflict and control (p = .151). Inconsistency and control did not differ (p = .284). In other words, this exploratory analysis provided some evidence that conflict reduced calmness in the Japanese sample, but only relative to the inconsistency condition.

## Possible mechanisms

Interdependent self-construal was significantly higher in Japan than the U.S., and independent self-construal and subjective authenticity were significantly higher in the U.S. than Japan (see Table 2).

<sup>&</sup>lt;sup>4</sup> We thank an anonymous reviewer for this suggestion.

<b>Table 2</b> Comparison ofpersonality variables by culture		Japan	U.S.	t	df	р
	Independence <i>M</i> (SD)	4.09 (.97)	4.82 (.89)	- 6.57	275	< .001
	Interdependence <i>M</i> (SD)	5.19 (.80)	4.92 (.88)	2.61	275	.010
	Authenticity <i>M</i> (SD)	3.09 (.76)	3.42 (.84)	- 3.47	275	< .001

We had planned to test these individual differences as mediators of an interaction between culture and condition. The predicted interaction pattern only occurred for the moral self-regard measure yet was non-significant, whereas the impurity and anxiety measures both produced significant interactions but not in the expected direction (i.e., conflict but not inconsistency evoked anxiety and impurity only among Americans, while Japanese were not affected by condition). Therefore, we did not continue with the planned moderated mediation model.

## **Exploratory analyses**

We administered the individual difference measures at the end of the study so the questions would not influence reactions to the manipulation, but it remains possible that the manipulation could, in turn, influence responses that are intended to capture stable individual differences.

Authenticity was the only variable that showed evidence of this type of influence. A Culture × Condition ANOVA replicated the main effect of culture, F(1, 271) = 12.38, p = .001,  $\eta_p^2 = .04$ , and revealed a trending interaction, F(2, 271) = 2.06, p = .129,  $\eta_p^2 = .02$ . The simple effect of condition was significant in the U.S., F(2, 271) = 3.13, p = .045, but not in Japan, F(2, 271) = 0.19, p = .826. Specifically, among Americans, inconsistency significantly lowered feelings of authenticity relative to both the control,  $M_{\text{diff}} = -.34$ , SE = .16, p = .033 (95% CI -.66, -.03), and conflict conditions,  $M_{\text{diff}} = -.37$ , SE = .17, p = .031 (95% CI -.70, -.03). Control and conflict did not differ from each other,  $M_{\text{diff}} = -.02$ , SE = .17, p = .890 (95% CI -.35, .31)

# Discussion

The complexity of the mind and social life offers the potential for all individuals to develop a multifaceted and variable sense of self, but cultural values seem to shape both the degree of this multiplicity (e.g., Brown et al. 2017) and its personal consequences (Suh 2002). Past research has established that Westerners, particularly White Americans, show a negative relationship between inconsistency within the self and well-being, whereas self-inconsistency is either weakly related or unrelated to well-being among East Asians (Church et al. 2014; English and Chen 2011; Suh 2002). The current research extends the literature by comparing Japanese and

American participants' affective reactions after momentarily experiencing inconsistency within the self. We additionally examined how this differs from experiencing conflict within the self.

#### Culture and inconsistency within the self

As expected, thinking and writing about past experiences of inconsistency between two identities, relative to simply describing two identities, reduced American participants' feelings of moral regard for the self. However, inconsistency did not produce the hypothesized increase in anxiety and feelings of impurity. Also as expected, the inconsistency manipulation did not produce negative reactions among Japanese participants. To summarize, we predicted Americans would have a globally negative reaction to thinking about inconsistency within the self, but the negative reaction was limited to one measure.

That measure, moral self-regard, assesses the degree to which participants believe they possess socially-valued positive traits (e.g., moral, generous, cooperative, trustworthy). Put another way, inconsistency within the self led American participants to see themselves as possessing fewer desirable traits, but it did not lead them to see the self as polluted (impurity) nor did it cause an overall state of tension (anxiety). One possible implication of these findings is that the trait-level negative relationships between inconsistency and well-being in Westerners and White Americans observed in past research is driven by inconsistency repeatedly reducing positive emotions, rather than inconsistency increasing negative emotions.

Given this finding, a direction for future research is to isolate the specific emotions that inconsistency evokes in Westerners. For example, it may be fruitful to apply Higgins' (1987) Self-Discrepancy Theory, which states that the type of emotion aroused by violating a personal standard depends on the type of self-standard. Violating the "ideal" self elicits dejection, whereas violating how the self "ought" to be evokes anxiety (Higgins 1987). When thinking about the current research, it may be that the value Western culture places on self-consistency resembles an ideal-self standard. This would explain why only moral self-regard—which consists of positive, somewhat idealistic feelings—changed.

## Culture and conflict within the self

A novel aspect of this research was examining reactions to conflict within the self. Inconsistency refers to simple variation in traits and behavior between two identities, whereas conflict occurs when two identities actively interfere with or impede one another. We predicted that conflict—relative to the control condition—would produce more anxiety among both Japanese and Americans, but it would only be experienced as immoral among Japanese. Surprisingly, conflict was aversive to Americans on all three dependent measures, but Japanese only showed a negative effect of conflict on moral self-regard.

In fact, taken altogether, the hypothesized cross-cultural pattern for *both* inconsistency and conflict occurred only with the moral self-regard measure. It is possible that this measure is simply more sensitive, but it may also be that the specific emotional reaction—e.g., reduced positive emotions but not decreased negative emotions—is critical.

The one instance in which we observed a globally negative reaction was among Americans who were randomly assigned to experience conflict within the self. This condition decreased moral self-regard and increased both impurity and anxiety. We expected conflict within the self to be anxiety-evoking for both samples but to only feel morally wrong in the Japanese sample. To the contrary, Americans reported more distress after thinking about self-conflict.

It may be that our brief measures of anxiety and impurity were not sensitive enough to capture emotional variability in the Japanese sample, or perhaps our manipulation of conflict was too weak for this sample. Some evidence for this can be found in our exploratory analysis separating positive and negative emotions of anxiety: The Japanese sample exhibited reduced calmness, contentment, and relaxation after experiencing self-conflict relative to self-inconsistency. This could potentially be taken as evidence in favor of our initial prediction that conflict within the self unlike inconsistency within the self—evokes mild anxiety in Japan. However, this can only be stated tentatively because the conflict and control conditions did not differ. Even so, it suggests that additional research using more sensitive measures of anxiety (e.g., physiological changes) should be conducted before concluding that self-conflict is not associated with anxiety in Japan.

# Mechanisms and trait variables

We measured four personality traits with the intention of exploring them as possible person-level mediators of culture-level differences: subjective authenticity, independent self-construal, interdependent self-construal, and ingroup loyalty. We observed the expected cultural differences in average level of authenticity and selfconstrual, but the ingroup loyalty measure was unreliable in the Japanese sample so we did not analyze this measure further. We also did not pursue moderated-mediation analyses because the predicted interaction between culture and condition was not significant on moral self-regard, despite the significant hypothesized pairwise comparisons.

The personality measures were administered at the end of the study to prevent them from influencing participants' experience of the manipulation, but the reverse outcome is also possible: Inducing feelings of conflict or inconsistency within the self could momentarily change participants' self-construal or feelings of authenticity. Exploratory analyses suggested that this may have occurred among Americans, whose sense of possessing an authentic self significantly decreased in the inconsistency condition relative to the control and conflict conditions, which did not differ from each other.

This finding is quite curious, given that conflict produced a globally negative reaction among Americans whereas inconsistency only reduced feelings of moral self-regard. A possible conclusion from this is that conflict and inconsistency are unpleasant to Americans for different reasons. Inconsistency may weaken an idealized "authentic self," which reduces positive emotions but does not necessarily increase negative emotions. Conflict, on the other hand, may be distressing because it reflects active obstacles or interfering goals that are problematic both within and outside of the self. Future research could test these interpretations by measuring a wider range of emotions and identifying if conflict within the self is accompanied by social conflict.

## Limitations

One possible concern is that the instructions for the inconsistency and conflict conditions did not elicit sufficiently different mental states. To put it another way, could participants have written about an experience that contained elements of both inconsistency and conflict? We believe this is unlikely for two reasons. First, we obtained different patterns of results for each condition compared against the control condition, which should not occur if the two conditions produced the same mental state. Second, the raters who evaluated the essays were attentive to the presence of inconsistency or conflict, and they only marked an essay as following instructions if it exclusively contained the appropriate type of content. A more realistic concern is that the control condition could have elicited feelings of inconsistency if the two roles the participant described also happened to be very different from one another. However, replicating past research on individual differences in self-inconsistency, the inconsistency condition produced a different reaction among Americans than the control condition, which speaks against the possibility that these conditions were too similar.

A second concern is that participants could have been influenced by the example provided in the essay instructions (e.g., in the conflict condition, we gave the example of breaking a promise to a friend in order to do schoolwork). We included one example in each condition because students who reviewed the first draft of the instructions said they were vague and requested to see an example. The possibility that the example influenced participants is a real concern, so we inspected the essays to see if participants reported the exact example. This occurred infrequently (e.g., fewer than five participants in each culture reported breaking a promise to a friend because they prioritized schoolwork), and even participants who used the same example provided enough details to indicate that they were describing a true experience. The significant differences between conditions also supports the conclusion that participants were thinking about personally meaningful experiences.

A few important limitations to the research are that we only collected data from university students, and we used a writing task to manipulate conflict and inconsistency within the self. In-the-moment experiences that trigger awareness of one's own conflicts or inconsistencies may produce different results, and working adults may not have the same reactions to these feelings as university students. Our self-report measures also come with limitations, such as response biases (which vary by culture, e.g., Hamamura et al. 2008). Lastly, given that the anxiety scale produced a different pattern of result for the Japanese sample when we separated positive and negative items, it may be better to use more sensitive measures of emotion (perhaps even implicit or physiological measures) in future research.

# Conclusion

On a measure of moral self-regard, which captures the extent to which individuals feel they possess valued prosocial traits, conflict within the self was unpleasant for both Japanese and Americans whereas inconsistency within the self was only unpleasant for Americans. The cross-cultural difference we observed for inconsistency replicates a pattern observed at the trait level in past research (e.g., Church et al. 2014). Our use of a state-level experimental manipulation allows us to conclude that the relationship between inconsistency in the self and emotional reactions can be causal in nature. The current study also found evidence that conflict within the self reduces moral self-regard in both Japan and the U.S., although only Americans also reported feeling impure and anxious after thinking about conflicting identities.

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