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Social Status and Anger Expression: The Cultural Moderation Hypothesis

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Abstract

Individuals with lower social status have been reported to express more anger, but this evidence comes mostly from Western cultures. Here, we used representative samples of American and Japanese adults and tested the hypothesis that the association between social status and anger expression depends on whether anger serves primarily to vent frustration, as in the United States, or to display authority, as in Japan. Consistent with the assumption that lower social standing is associated with greater frustration stemming from life adversities and blocked goals, Americans with *lower* social status expressed more anger, with the relationship mediated by the extent of frustration. In contrast, consistent with the assumption that higher social standing affords a privilege to display anger, Japanese with *higher* social status expressed more anger, with the relationship mediated by decision-making authority. As expected, anger expression was predicted by *subjective* social status among Americans and by *objective* social status among Japanese. Implications for the dynamic construction of anger and anger expression are discussed.

Keywords

anger expression; culture; social status; independence and interdependence

How is social status linked to anger expression? Is it people with lower or higher social standing who express more anger? In the present work, we suggest that the answer to this question varies by cultural context, depending on the relative significance of two functions of anger expression in a given culture. First, to the extent that anger expression is fueled by experiences of frustration (Berkowitz, 1989), a *negative* link between social status and anger expression is likely, given that lower social status involves greater exposure to frustration-inducing life adversities including blocked personal goals. Alternatively, to the extent that anger expression serves as a form of affective communication restricted largely to those in positions of power, a *positive* link between social status and anger expression is likely, given that higher social status entitles authority and power, including the privilege to express anger. The current work examines the hypothesis that although the two aspects of anger,

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serving to vent frustration and to display authority, are both involved in anger expression, which function will predominate depends crucially on culture, and relatedly determines the direction of the relationship between social status and anger expression. We tested this hypothesis in a cross-cultural comparison of representative samples of American and Japanese adults.

We define culture as a set of symbolic meanings collectively shared in public discourses, practices, and social institutions (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Markus & Kitayama, 2010; Morling & Lamoreaux, 2008). Because cultural differences in psychological tendencies are often related to the collectively shared meanings and practices, they are not always reducible to individual differences (Kitayama, Park, Sevincer, Karasawa, & Uskul, 2009; Na et al., 2010; Shweder, 1973). Here, we argue that because of divergent meanings and practices shared in Western versus Asian cultural contexts, the ways in which anger expression is associated with social status will vary across the two cultures.

Lower Social Status Fuels Anger Expression in the U.S

Much prior work has formulated frustration as an antecedent to experiences of anger as well as its expression (e.g., aggression) that accompanies such experiences (Berkowitz, 1989; Dollard, Miller, Doob, Mowrer, & Sears, 1939). Related literatures have shown that people with lower socioeconomic positions, who are likely to experience more frustration in life (Markus, Ryff, Curhan, & Palmersheim, 2004), show more aggressive and delinquent behaviors (Brownfield, 1986; Elliot & Ageton, 1980), and commit violent crimes such as homicide (Blau & Blau, 1982; Crutchfield, 1989; Parker, 1989). Although violence differs from anger in certain aspects and some forms of violence may not necessarily implicate anger (Averill, 1982), the evidence linking lower social status to aggression suggests that anger expression is more prevalent among those of lower social status (Henry, 2009).

At present, however, the association between social status and anger expression has been examined nearly exclusively in Western societies and cultures. Thus, it remains possible that the association between low social status and anger expression is more common in these cultures, where achieving personal goals is held to be highly self-defining and central to what personhood means (Kitayama & Uskul, 2011; Markus & Kitayama, 1991; Markus & Kitayama, 2010). Pursuit of personal goals is a key element of the culturally scripted task of independence. Our prediction for Americans thus draws attention to the life difficulties experienced by low status individuals, whose opportunities to pursue their personal goals may be fundamentally limited. When the pursuit of personal goals is blocked, it will likely fuel frustration, which may culminate in expressions of anger. Therefore, we predicted that in independent Western cultures, individuals of lower social status would express more anger.

Higher Social Status Enables Anger Expression in Japan

Unlike Western cultures where independence of the self is highly sanctioned, East Asian cultures place a greater premium on interdependence of the self with others (Kitayama & Uskul, 2011; Markus & Kitayama, 1991; Markus & Kitayama, 2010). Being part of an important group or relationship is highly self-defining and central to what it means to be a person in these cultures, as it is the key element of the culturally scripted task of interdependence (Kitayama et al., 2009). Such a strong cultural emphasis on belongingness and interdependence forms prohibitions against expressions of anger, because such expressions threaten ever-important relationships with others, and therefore are antithetical to the value of interdependence. Consistent with this formulation, expressed anger often has negative interpersonal consequences, such as derailing negotiations, especially in Asian cultures (Adam, Shirako & Maddux, 2010; Kopelman & Rosette, 2008). Moreover, as

compared to European Americans, Asians place a greater value on suppression and control of emotions (Matsumoto, Yoo, & Nakagawa, 2008), and hide their negative emotions better when they are asked to do so (Mauss & Butler, 2010; Murata, Moser, & Kitayama, 2013).

Although there is a general cultural prescription against displaying anger in Asian cultures, not everyone is expected to suppress anger. Some may still express anger if they feel that their expression of anger is culturally permitted and socially justified. We suggest that it is high social status among Asians that permits anger expression that might otherwise be suppressed. In other words, within the Asian cultural context, high social status might function as a cultural permit or authorization to express anger. This authorization may be called *anger privilege* (Taylor & Risman, 2006). Since anger privilege is likely conferred on a limited number of people who are in positions of power, anger expression may function as an effective form of communication to display authority and exert dominance over others. We predicted, therefore, that in cultures where anger is normally suppressed, anger expression would be greater among those of higher social status.

Social Status: Subjective versus Objective

By social status, we mean the socially recognized position a person maintains in a hierarchy that is considered desirable and, therefore, that confers privilege and entitlement (Hales, Hobson, & Resutek, 2012; Huberman, Loch, & Önçüler, 2004). Social status can engender power because it is linked to resources, either symbolic or tangible, and often both. Likewise, it may be associated with respect, insofar as higher status individuals are sometimes conferred moral prestige (e.g., Ridgeway & Walker, 1995). Social status can be measured either objectively, in terms of socioeconomic indicators such as educational attainment and occupational prestige (e.g., Ritsher, Warner, Johnson, & Dohrenwend, 2001), or subjectively, in terms of each person's judgment regarding his or her own standing relative to others (e.g., Adler, Epel, Castellazzo, & Ickovics, 2000; S. Cohen et al., 2008; Demakakos, Nazroo, Breeze, & Marmot, 2008). Importantly, while subjective social status and objective social status are related, the relationship between the two is weak (Adler et al., 2000).

Recent studies indicate that the relative significance of the two types of social status could vary across cultures. Specifically, in Western cultures, a strong emphasis is placed on personal attributes and, as a consequence, direct appraisals of the self tend to be more important than indirect (or reflected) appraisals of the self (D. Cohen, Hoshino-Browne, & Leung, 2007). Correspondingly, one's subjective appraisal of own social status (i.e., how high or low *I* think myself to be) should matter more than its objective counterpart (i.e., how high or low *the society* regards my social position to be). In contrast, in Asian cultures, a much more emphasis is given to reflected appraisals of the self (Cohen et al., 2007) and, as a consequence, socially consensual understanding about relative ranking counts far more than each person's subjective and potentially idiosyncratic assessments. As such, objective social status should matter much more than its subjective counterpart. Consistent with this analysis, Curhan and colleagues (2013) found that subjective social status predicts Americans' positive psychological functioning (e.g., life satisfaction, positive affect, and psychological well-being) more strongly, while objective social status predicts Japanese' positive psychological functioning more strongly.

On the basis of these considerations, we anticipated that the hypothesized negative association between social status and anger expression among Americans would be particularly pronounced when the status was assessed *subjectively* based on each person's appraisal of his or her own social position. Conversely, we anticipated that the positive association between social status and anger expression, predicted for Japanese, would be

particularly pronounced when the status was assessed *objectively* in terms of socioeconomic indicators.

Mediating Mechanisms

In addition to testing the primary predictions above, we examined possible mediators for both the relationship between subjective social status and anger expression among Americans and the relationship between objective social status and anger expression among Japanese. For Americans, we predicted a negative association between subjective social status and anger expression because low status individuals would be likely to experience more frustration, which in turn prompts them to express anger. We thus anticipated that the link between subjective social status and anger expression would be mediated by feelings of frustration. For Japanese, we predicted a positive association between objective social status and anger expression because high status individuals would likely have greater authority and power, which in turn entails a cultural privilege to express anger. We adopted perceived decision-making authority at work as a proxy of this privilege, anticipating that the link between objective social status and anger expression would be mediated by decision authority.

Method

Participants

Our analysis was based on large matched surveys of Americans and Japanese. American respondents were a subset from the Midlife in the United States (MIDUS) survey, which began in 1995. It is a national probability sample recruited through random digit dialing (RDD). The respondents completed both a telephone interview and a self-administered questionnaire. Using the same assessments, a follow-up survey was conducted in 2004 (MIDUS II) (response rate = 75%). The current analysis focuses on a subset of MIDUS II respondents (1,054 adults, aged 34–84), who participated in an additional overnight session for biological assessments (with a 43.1% retention rate). The response rate was somewhat low, but this sample was not substantially different from the MIDUS II sample on most sociodemographic and health characteristics (Love, Seeman, Weinstein, & Ryff, 2010). The parallel survey, the Midlife in Japan (MIDJA), was conducted in 2008 with respondents randomly selected from the Tokyo metropolitan area. These respondents completed a self-administered questionnaire that was developed from the MIDUS instruments. The final sample in MIDJA consisted of 1,027 adults (aged 30–79) (response rate = 56.2%).

Measures

Objective social status—Two objective markers of social status (educational attainment and occupation) were assessed. Educational attainment was assessed on a 7-point scale (1 = *8th grade, junior high school*, 7 = *attended or graduate from graduate school*). Current occupational status was assessed on a 3-point scale (1 = manual, blue-collar, or service, 2 = *non-manual, white-collar, or clerical*, 3 = *managerial or professional*). The two indices were standardized and averaged within culture to yield a single indicator of objective social status.

Subjective social status—Following prior research (e.g., Adler et al., 2000), respondents were presented with a picture of a ladder, which had 10 rungs (1 = *lowest*, 10 = *highest*; Goodman et al., 2001), and asked to choose a rung corresponding to their standing in their "own community." What community meant was left open so that respondents could choose whatever made sense to them. The respondents were thus allowed to choose culturally relevant criteria in judging their relative status (see also Leu et al., 2008). This

procedure is important because social status is likely to have greater impact when it is defined with respect to a community that is most meaningful to each individual (Conley, 2008).

Anger expression—Anger expression was assessed with the 8-item anger-out subscale of the Anger Expression Inventory (Spielberger, 1996). Respondents rated how often (1 = *almost never*, 4 = *almost always*) they expressed angry feelings through verbally or physically aggressive behaviors when they felt furious and angry (e.g., I slam doors, I say nasty things; αs = .75 and .80 for Americans and Japanese, respectively).

A confirmatory factor analysis was used to establish measurement equivalence of anger expression between the two cultural groups. Two hierarchically nested models were compared: an unconstrained model (Model A), in which no constraints were placed on factor loadings across the two cultural groups, and a constrained one (Model B), in which the factor loadings were constrained to be equal across the two groups. First, the unconstrained model (Model A) provided a good fit (CFI = .96, RMSEA = .06, 90% confidence interval = .050, .066). Second, when the factor loadings were constrained to be equal in the two cultural groups, the fit was no worse (Model B; CFI = .95, RMSEA = .06, 90% confidence interval = .051, .064), with the CFI score barely different from the one for the unconstrained model. These findings establish factor equivalence across the two cultural groups (Cheung & Rensvold, 2002).

Control variables—In testing our predictions, we controlled for several personality traits that could potentially confound the relationship between social status and anger expression. This included BIG FIVE personality traits, except for neuroticism (i.e., agreeableness, conscientiousness, extraversion, and openness to experience). Neuroticism was excluded as a control variable because of a substantive overlap it has with hostility in general (McCrae, 1991) and anger proneness in particular (Martin, Watson, & Wan, 2000). In fact, trait hostility and anger are typically considered as two important facets of neuroticism (Costa, McCrae, & Dembroski, 1989; Smith, Glazer, Ruiz, & Gallo, 2004). Each of the remaining four personality traits was assessed by self-ratings of four pertinent personality adjectives: agreeableness (e.g., helpful, warm), conscientiousness (e.g., organized, responsible), extraversion (e.g., outgoing, lively), and openness to experience (e.g., creative, imaginative). Respondents rated how much each of the adjectives described them (1 = *not at all*, 4 = *a lot*) (Rossi, 2001; agreeableness, αs = .87 and .82 for Americans and Japanese, respectively, conscientiousness, αs = .57 and .61, extraversion, αs = .83 and .78, and openness to experience, αs = .84 and .77).[1] In addition, prior work shows that younger (vs. older) adults and males (vs. females) tend to express more anger (Spielberger, Gerard, & Rosario, 1983; Spielberger, Reheiser, & Sydeman, 1995). We therefore controlled for age and gender as well.

Mediating variables—To test whether anger expression would be fostered by frustration (for Americans) or power and authority (for Japanese), we used two mediating variables. To assess the experience of frustration, we used a 1-item rating of frustration participants reported to have felt during the past 30 days (1 = *none of the time*, 5 = *all of the time*). To measure the experience of authority and power, we used a self-reported rating of authority in decision-making. Respondents rated how often (1 = *none of the time*, 5 = *all of the time*) they felt that they had decision authority at work by completing an 8-item scale (Bosma & Marmot, 1997; e.g., How often do you have a say in decisions about your work? How often

[1]Caution is due in interpreting any effects of conscientiousness because the quantification of this construct has low reliability.

do you have a choice in deciding what tasks you do at work?; αs = .87 and .88 for Americans and Japanese, respectively).

Results

Descriptive Analysis

Descriptive statistics for the key variables and intercorrelations among those variables for each cultural group are presented in Tables 1 and 2, respectively. Respondents in the two cultural groups were matched on age (Americans: $M = 55.26$, $SD = 11.78$ vs. Japanese: $M = 54.36$, $SD = 14.15$), gender (female: 54.7% vs. 50.8%), and marital status (married: 72.2% vs. 69.3%). The mean level of subjective social status was significantly higher for Americans than for Japanese. Cultural difference in objective social status was not tested because the two indicators of objective social status were standardized within culture. As in prior work (e.g., Adler et al., 2000), the two types of social status were positively correlated, but only weakly, suggesting that they are distinct from one another ($r = .20$ for Americans and $r = .23$ for Japanese, ps < .001). Americans reported that they express more anger than Japanese did, consistent with the notion that anger tends to be suppressed more in Japan than in the U.S. Further, consistent with the notion that personal goals are more salient and important for Americans than for Japanese, Americans experienced more frustration (which supposedly results from blocked personal goals) relative to Japanese. Finally, decision authority at work was also higher for Americans than for Japanese.

Association between Subjective versus Objective Social Status and Anger Expression

We had two primary predictions. First, Americans would show a negative association between subjective (rather than objective) social status and anger expression. Second, Japanese would show a positive association between objective (rather than subjective) social status and anger expression. In combination, these predictions would result in two significant interactions: Culture x Subjective social status and Culture x Objective social status.

The key interactions were tested in a hierarchical multiple regression analysis. In Step 1, culture (represented with a binary variable indicating Americans = 0 and Japanese = 1), subjective social status, and objective social status were entered (Model 1). In Step 2, we examined the interaction between culture and subjective social status and the interaction between culture and objective social status, respectively (Models 2-A and 2-B). In Step 3, to determine whether each interaction would remain significant after controlling for relevant covariates, we entered demographic variables (age and gender) and the personality variables (agreeableness, conscientiousness, extraversion, and openness to experience) (Models 3-A and 3-B).

The results from the hierarchical regression analysis are summarized in Table 3. Consistent with the descriptive analysis above, the main effect of culture was significant, indicating that Americans reported that they expressed more anger than Japanese did, $b = -.71$, $t(2003) = -4.80$, $p < .001$. The main effects of both subjective social status and objective social status were also significant, indicating that overall, anger expression decreased with subjective social status, $b = -.13$, $t(2003) = -3.27$, $p = .001$, but increased with objective social status, $b = .35$, $t(2003) = 4.11$, $p < .001$.

Crucially, the interaction between culture and subjective social status proved significant (Model 2-A), $b = .16$, $t(2002) = 2.08$, $p < .05$. As shown in Fig. 1-A, Americans with lower subjective social standing reported that they expressed more anger, $b = -.22$, $t(2002) = -3.71$, $p < .001$. For Japanese, however, the association between subjective social status and

anger expression was negligible, $b = -.06$, $t(2002) = -1.23$, *ns*. Moreover, this interaction effect remained significant when the potentially confounding variables were controlled (Model 3-A), $b = .17$, $t(1996) = 2.31$, $p < .05$.

Equally importantly, the interaction between culture and objective social status also proved significant (Model 2-B), $b = .53$, $t(2002) = 3.20$, $p = .001$. A subsequent simple slope analysis showed that the Japanese slope was significantly positive, $b = .64$, $t(2002) = 5.15$, $p < .001$, indicating that Japanese of higher objective social standing reportedly expressed more anger (see Fig. 1-B). For Americans, however, the association between objective social status and anger expression was absent, $b = .11$, $t(2002) < 1$, *ns*. Importantly, the Culture x Objective social status interaction remained significant when the potentially confounding variables were controlled (Model 3-B), $b = .37$, $t(1996) = 2.34$, $p < .05$.[2]

Finally, as noted in the descriptive analysis, Japanese means were lower than their American counterparts on most of the measures. To examine whether the results were influenced by the cultural difference in potential reporting bias, we standardized all scale values within each culture and performed the same set of analyses, with no marked differences in the results. The two interactions (Culture x Subjective social status and Culture x Objective social status) remained significant, $b = .09$, $t(1996) = 2.12$, $p < .05$, and $b = .10$, $t(1996) = 2.32$, $p < .05$, respectively.

Mediation Analysis

To determine whether the association between subjective social status and anger expression, observed for Americans, would be mediated by frustration, a mediation analysis was performed. Results were very similar regardless of whether the personality and demographic variables were controlled. In assessing mediation effects, we used a bias-corrected bootstrapping test with 2000 replications. This analysis shows a confidence interval for an indirect effect that is tested. When the confidence interval does not include zero, the mediation is considered significant (MacKinnon, Fairchild, & Fritz, 2007; Shrout & Bolger, 2002).

Subjective social status was negatively related to both frustration and anger expression, $b = -.14$, $t(1033) = -9.48$, $p < .001$, and $b = -.18$, $t(1033) = -3.26$, $p < .01$, respectively. When both subjective social status and frustration were entered as joint predictors of anger expression, the path from subjective social status to anger expression was no longer significant, $b = -.06$, $t(1032) = -1.01$, *ns*. Importantly, the relationship between frustration and anger expression remained significant, $b = .92$, $t(1032) = 7.80$, $p < .001$. A bootstrapping test indicated that the mediated path from subjective social status to anger expression through frustration was statistically significant (95% bias-corrected bootstrapping confidence interval = [−.17, −.08]; see Panel A of Fig. 2). The comparable mediation with decision authority as a mediator was not significant for Americans: Whereas decision authority increased with subjective social status, $b = .75$, $t(737) = 7.68$, $p < .001$, it did not increase anger expression, $b = -.04$, $t(736) = -1.50$, *ns* (95% bias-corrected CI = [−.08, .01]).

We also performed a comparable analysis to determine whether the association between objective social status and anger expression, observed for Japanese, would be mediated by

[2]One might argue that one's propensity to express (or suppress) emotions can influence the relationships between social status and anger expression. To address this issue, we controlled for individual difference in emotion control, which was assessed with a 6-item scale developed by Gross & John (2003) (e.g., When I am feeling negative emotions, such as sadness or anger, I make sure not to express them). The critical Culture x Social status interactions remained significant [Culture x Subjective social status: $b = .15$, $t(1991) = 2.18$, $p < .05$; Culture x Objective social status: $b = .45$, $t(1991) = 2.96$, $p < .01$].

decision authority. As expected, objective social status was positively related to both decision authority, $b = 2.26$, $t(726) = 9.11$, $p < .001$, and anger expression, $b = .33$, $t(726) = 2.02$, $p < .05$. Moreover, when both objective social status and decision authority were entered as joint predictors of anger expression, the path from objective social status to anger expression was no longer significant, $b = .16$, $t(725) < 1$, *ns*. Importantly, the relationship between decision authority and anger expression remained significant, $b = .07$, $t(725) = 3.07$, $p < .01$. The mediated path from objective social status to anger expression through decision authority was statistically significant (95% bias-corrected CI = [.05, .31]; see Panel B of Fig. 2). An additional analysis with frustration as a mediator was not significant for Japanese: Whereas frustration significantly increased anger expression, $b = 1.00$, $t(1004) = 8.27$, $p < .001$, it did not vary as a function of objective social status, $b = .03$, $t(1005) = 1.09$, *ns* (95% bias-corrected CI = [−.03, .10]).

Discussion

Dynamic Construction of Anger Expression Across Cultures

Previous work suggests that individuals with lower social standing are more prone to aggression and violence (e.g., Blau & Blau, 1982; Brownfield, 1986; Crutchfield, 1989; Elliot & Ageton, 1980; Parker, 1989). Consistent with this literature, the present work shows that social status and anger expression are negatively associated. Importantly, however, the association was observed only for Americans. For Japanese, the association was reversed, with higher status individuals expressing more anger. The cultural moderation demonstrated here on the relationship between social status and anger expression calls for thoughtful interpretation of how culture, defined as collectively shared meanings and practices, modulates the ways in which the emotion of anger is expressed.

We followed earlier analyses by Markus, Kitayama, and colleagues (Kitayama & Uskul, 2011; Markus & Kitayama, 1991; Markus & Kitayama, 2010), arguing that in Western cultures, independence of the self from others is highly sanctioned, with pursuit of personal goals deemed central in defining the self. In these cultural contexts, anger is likely fueled by blockage of personal goals and desires. This emotion may in fact be motivated by a desire to restore the sense of independence (Kitayama, Mesquita, & Karasawa, 2006). While the blockage of personal goals, by itself, is aversive and thus to be avoided, the motivation to restore independence can be highly self-affirming. Within these cultural contexts, then, individuals with low social standing may be expected to express more anger, not only because personal goals are more likely to be blocked due to limited resources, but also because anger helps them to vindicate the self as an independent and, thus, culturally validated or respectable agent.

In support of this formulation, American adults with lower social status reported that they express more anger, relative to their higher social status counterparts. Moreover, this relationship was mediated by the experience of frustration. Importantly, this association was clearly observed for subjective social status, but not for objective social status. This finding is consistent with the notion that subjective appraisals of the self are relatively more important within independent cultural contexts (D. Cohen et al., 2007; Kitayama, Snibbe, Markus, & Suzuki, 2004; Na & Kitayama, 2012). In fact, we found no relationship between objective social status and anger expression in our American sample. Note, however, that the present findings should probably not be taken to imply that Americans never respond to their own objective social status. They in fact do oftentimes (e.g., Kraus, Côté, & Keltner, 2010; Piff, Stancato, Martinez, Kraus, & Keltner, 2012). It may well be the case that in this cultural context objective social status may matter only insofar as it is reflected in one's subjective appraisal of his or her own status (Kraus et al., 2012).

In contrast, in Asian cultures, interdependence of the self with others is strongly sanctioned, with social positions and roles seen as central in the definition of the self. The emphasis on belongingness and social harmony creates a strong norm against expressions of anger because anger disrupts social harmony. However, those in positions of power are granted a privilege to freely express anger. In this cultural context, anger serves to display power and authority. Accordingly, even though anger is negative in valence and, thus, experienced as aversive, expressing it may affirm one's status and reputation for those higher in social ranking. Thus, individuals with high status standing would be expected to express more anger, not only because they are freer from cultural restrictions on anger expression, but also because so doing is status-affirming.

In support of this formulation, Japanese adults with higher social status reported that they expressed more anger, as compared to their lower social status counterparts. Moreover, this relationship was mediated by their perceived decision authority. Importantly, this association was clearly observed for objective social status, but not for subjective social status. This finding is consistent with the notion that within interdependent cultural contexts, it is socially shared understanding of each other's social positions that matters the most. That is, one's appraisal of his or her own social status standing may count little *unless* grounded in socially shared, consensual criteria of social standing, such as educational attainment and occupational prestige.

Frustration and Dominance as Universal Facets of Anger

We started out this paper with an assumption that anger has two important facets, namely, venting frustration and displaying dominance. Thus, even though our finding suggests that Americans express anger so as to vent frustration, these results need not imply that Americans fail to recognize dominance as an important facet of anger. For example, Tiedens (2001) and colleagues (Tiedens, Ellsworth, & Mesquita, 2000; see also Hareli, Shomrat, & Hess, 2009) show that Americans infer high status and dominance in target persons who express anger (vs. sadness) – a finding that is consistent with cognitive appraisal patterns suggested for anger (Smith & Ellsworth, 1985). Moreover, when faced with certain controlled situations, where status differences in symbolic or tangible resources are irrelevant in making the interaction episodes more frustrating for lower status individuals, higher status Americans appear to express more anger relative to their lower status counterparts (Keltner, Gruenfeld, & Anderson, 2003).

Thus, dominance display can be a reliable motivator for anger expression even among Americans when frustration is irrelevant as an elicitor of anger. A similar duality is evident among Japanese. That is, even though our Japanese finding suggests that Japanese express anger when they have enough power and status to display, they also recognize that frustration is part and parcel of the experience of anger. In fact, in our study the correlation between anger and frustration was as high for Japanese ($r = .57$, $p < .001$) as for Americans ($r = .66$, $p < .001$).

We therefore suggest that frustration and dominance are two facets of anger that are universally recognized. Yet, cultures place a different emphasis on one or the other such that the functional relationship between the two facets varies across cultures. Specifically, people in independent cultures may be more likely to express anger when they are frustrated (rather than when they have power to display) because their personal goals are highly salient. Thus, the primary determinant of anger expression is experience of frustration. Yet, by expressing anger, these individuals might restore the sense of dominance and personal control (Depret & Fiske, 1993; Frieze & Boneva, 2001). This secondary function of anger is made possible by the association anger has with the sense of dominance and control. Contrariwise, people in interdependent cultures may be more likely to express anger when their higher status

entitles them to do so. Thus, the primary determinant of anger expression is dominance to display (rather than frustration to vent). Yet, when experiencing and displaying anger, Japanese may also take note of frustrations that are linked to the experience of anger – frustrations that could be attributed to their subordinates, who might be perceived to be failing to fully conform to their high expectations. This secondary function of anger may enable high status Japanese to experience their anger, not merely as a public display that is unaccompanied by true feelings, but rather as a reflection of heartfelt frustrations over the subordinates.

Limitations and Future Directions

Several shortcomings of the current work should be noted. First, we did not specify the targets of anger expression. Although anger can be expressed without an explicit target (Felson, 2002; Graham et al., 2006), it is often explicitly directed to particular individuals or groups. Future work is necessary to examine whether Americans and Japanese express anger to individuals of different social status (high vs. low), depending on the motive to vent frustration or to display authority. A second limitation stems from our mediation analysis. The degree of decision authority, which mediated the relationship between social status and anger expression among Japanese, was assessed in the work domain, while their anger expression was assessed regardless of domains. Future research should refine assessments of general versus specific domains of power and authority as mediators of the findings among Japanese. Third, the current work only tested a self-report measure of anger expression. Although evidence exists that self-reported expression of anger is highly associated with behavioral indices of aggression, such as lifetime arrests for violence (Oberleitner, Mandel, & Easton, 2013) and domestic and intimate-partner violence (Barbour, Eckhardt, Davison, & Kassinove, 1998; Norlander & Eckhardt, 2005), future work should directly test whether the current findings generalize to behavioral indices of anger expression. Fourth, the presumed causal roles ascribed to frustration and perceived authority and power in accounting for the relationships between social status and anger expression among Americans and Japanese, respectively, need to be tested with experimental methods in the future.

These limitations notwithstanding, the current work tested novel cross-cultural predictions with large-scale representative samples of American and Japanese adults and found that culture moderates the relationship between social status and anger expression. This conclusion is important in light of recent findings suggesting that culture shapes even biological processes of emotion and emotion regulation (Mauss & Butler, 2010; Murata et al., 2012). How biological and neural underpinnings of anger (e.g., Harmon-Jones, Peterson, & Harmon-Jones, 2010) are shaped and modified by specific aspects of social and cultural processes (Kitayama & Uskul, 2011) constitute critical challenges for future research. This effort will contribute to a recently emerging field of cultural neuroscience (Chiao & Ambady, 2007; Han & Northoff, 2008; Kitayama & Park, 2010). At a broad conceptual level, the current inquiry illustrates worthwhile initial steps in this direction.

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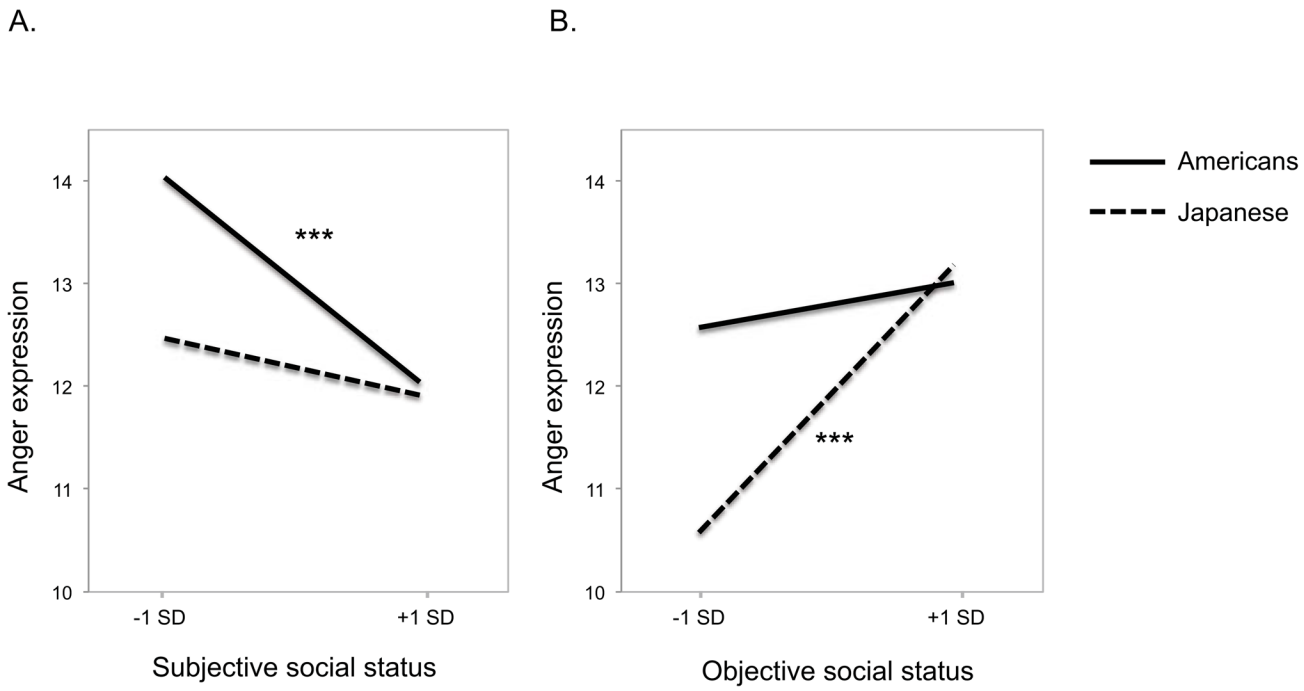

Figure 1.

The relationships between anger expression and social status (A: subjective, B: objective) for Americans (solid line) and Japanese (dashed line). Americans with *lower* subjective social status expressed more anger than Americans with higher subjective social status, $b = -.22$, $t(2002) = -3.71$, $p < .001$. In contrast, Japanese with *higher* objective social status expressed more anger than Japanese with lower objective social status, $b = .64$, $t(2002) = 5.15$, $p < .001$. Statistical significance is indicated by asterisks (***$p < .001$).

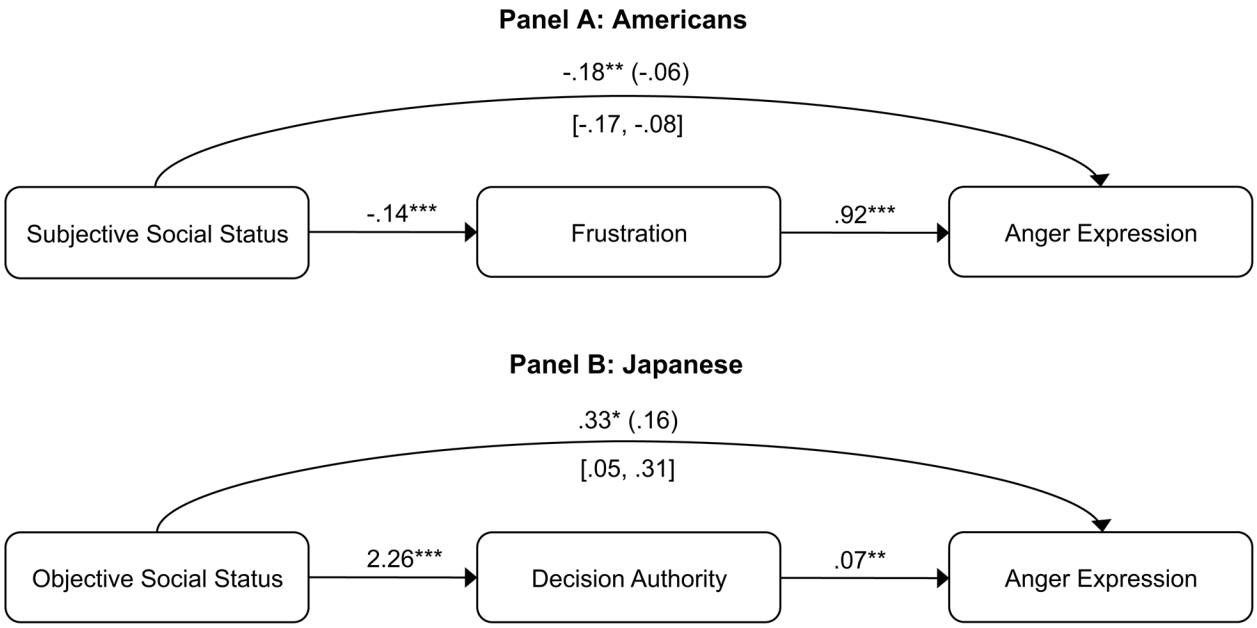

Figure 2.

Results of mediation analyses examining the role of frustration (Panel A) and decision authority (Panel B) in mediating the relationship between social status and anger expression for Americans (N = 1035) and Japanese (N = 728), respectively. Unstandardized coefficients are shown. The values in parentheses show the relationship between subjective (or objective) social status and anger expression after controlling for frustration (or decision authority). The values in square brackets are 95% bias-corrected confidence intervals from a bootstrap test with 2000 replications; the mediation is significant if the confidence interval does not include zero.

Note. *p < .05, **p < .01, ***p < .001.

Table 1

Descriptive statistics of the key variables and cultural differences in those variables

	Americans			Japanese			Cultural Difference	
Variable	***N***	***M***	***SD***	***N***	***M***	***SD***	***F* or X^2 statistics**	***p*-value**
Age	1054	55.26	11.78	1027	54.36	14.15	$F = 2.47$	.12
Gender (% famale)	1054	54.7%		1027	50.8%		$X^2 = 3.20$	.07
Marital status (% married)	1052	72.2%		1025	69.3%		$X^2 = 2.22$	.14
Education level	1050	4.97	1.61	1015	4.24	1.69	$F = 101.11$	<.001
Occupation	747	2.16	.90	709	2.05	.77	$F = 6.25$	.01
Objective social status	1053	−.04	.91	1021	−.05	.87		
Subjective social status	1042	6.59	1.72	989	6.03	2.11	$F = 42.50$	<.001
Anger expression	1053	12.79	3.13	1019	12.17	3.43	$F = 18.24$	<.001
Frustration	1048	2.08	.84	1018	1.87	.86	F = 34.13	<.001
Decision authority	746	22.72	4.71	731	19.83	5.42	$F = 119.61$	<.001

Note. The test of cultural difference in objective social status is not reported because two indicators of objective social status (educational attainment and occupation) were standardized within culture.

Table 2

Intercorrelations among the key variables for Americans (top) and Japanese (down)

Americans	***N***	**1**	**2**	**3**	**4**	**5**
1. Objective social status	1053	-	.20***	.02	−.01	.22***
2. Subjective social status	1042		-	−.10***	−.29 ***	.27***
3. Anger expression	1053			-	.25***	−.07 †
4. Frustration	1048				-	−.06
5. Decision authority	746					-
Japanese	*N*	1	2	3	4	5
1. Objective social status	1021	-	.23***	.15***	.04	.32***
2. Subjective social status	989		-	−.02	−.13***	.31***
3. Anger expression	1019			-	.26***	.13***
4. Frustration	1018				-	−.02
5. Decision authority	731					-

Note.

† $p < .10$,

*** $p < .001$.

Table 3

Unstandardized regression coefficients in predicting anger expression as a function of culture, social status, and the interaction between culture and social status

Predictors	Model 1		Model 2-A		Model 2-B		Model 3-A		Model 3-B	
	b	t-test	*b*	t-test	*b*	t-test	*b*	t-test	*b*	t-test
Culture	−.71	−4.80***	−.72	−4.86***	−.71	−4.85***	−1.14	−5.88***	−1.15	−5.89***
Subjective social status	−.13	−3.27**	−.22	−3.71***	−.13	−3.42**	−.17	−2.81**	−.07	−1.67†
Objective social status	.35	4.11***	.35	4.14***	.11	.95	.17	1.97*	.00	−.02
Culture x Subjective social status			.16	2.08*			.17	2.31*		
Culture x Objective social status					.53	3.20**			.37	2.34*

Note. N = 2007. Control variables included age, gender, agreeableness, conscientiousness, extraversion, and openness to experience in Models 3-A and 3-B.

† $p < .10$,

* $p < .05$,

** $p < .01$,

*** $p < .001$.