Emotionally Expressive Interdependence in Latin America: Triangulating Through a Comparison of Three Cultural Zones

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Evidence suggests that Latin Americans display elevated levels of emotional expressivity and positivity. Here, we tested whether Latin Americans possess a unique form of interdependence called expressive interdependence, characterized by the open expression of positive emotions related to social engagement (e.g., feelings of closeness to others). In Study 1, we compared Latin Americans from Chile and Mexico with European Americans in the United States, a group known to be highly independent. Latin Americans expressed positive socially engaging emotions, particularly in response to negative events affecting others, whereas European Americans favored positive socially disengaging emotions, such as pride, especially in response to personally favorable circumstances. Study 2 replicated these findings with another group of Latin Americans from Colombia and European Americans in the United States. Study 2 also included Japanese in Japan, who expressed positive emotions less than Latin and European Americans. However, Japanese displayed a higher tendency to express negative socially engaging emotions, such as guilt and shame, compared to both groups . Our data demonstrate that emotional expression patterns align with overarching ethos of interdependence in Latin America and Japan and independence among European Americans. However, Latin Americans and Japanese exhibited different styles of interdependence. Latin Americans were expressive of positive socially engaging emotions, whereas Japanese were less expressive overall. Moreover, when Japanese expressed emotions, they emphasized negative socially engaging emotions. Implications for theories of culture and emotion are discussed.

Keywords: culture, emotional expression, independence and interdependence, Latin America

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Over the last three decades, research in cultural psychology has provided compelling evidence on how culture shapes individuals' cognition, emotion, and motivation (Kitayama & Salvador, 2017; Kitayama & Uskul, 2011; Markus & Kitayama, 1991). A substantial body of literature now exists exploring the influence of culture on emotions and emotional experiences (Mesquita, 2022; Tsai et al., 2006). However, this work focuses largely on comparisons between Westerners (mostly European Americans and Canadians) and

Easterners (mostly East Asians), while overlooking other cultural groups around the world. The "Rest" generally leans toward collectivism or interdependence rather than individualism or independence, although there is likely subtantial variation between these cultural groups (Hofstede, 1980; Kitayama et al., 2022; Kitayama & Salvador, 2023; Schulz et al., 2019).

In the current work, we specifically examined one such cultural zone, Latin America. Latin Americans are characterized as being expressive of emotions and convivial (Campos & Kim, 2017; Rychlowska et al., 2015; Senft et al., 2021, 2023). We aimed to test the prediction that emotional expression is particularly pronounced for positive emotions in Latin American cultural contexts. However, it is important to note that Latin Americans may not express all types of positive emotions to the same degree. Our analysis suggests that Latin Americans would exhibit a significantly higher level of expression for positive emotions that promote interdependence with others, known as socially engaging emotions. To ensure the generalizability of this pattern across Latin America, we conducted our research with three distinct groups of Latin Americans: Chileans, Colombians, and Mexicans. Moreover, to ascertain the uniqueness of Latin America, we compared these groups with the most extensively studied independent group, European Americans, and a prototypical interdependent group, Japanese.

Interdependent Orientation in Latin America

Our work builds upon various streams of inquiry in the fields of cultural and cross-cultural psychology. The first line of work involves multiple surveys that have examined cultural values, specifically focusing on a cultural dimension known as individualism and collectivism. This dimension is often assessed with scales contrasting self-expression values against survival values (Inglehart, 2006), or values that prioritize personal achievement over workplace values (Hofstede, 1980). These surveys have been complemented by an extensive cross-cultural investigation of a comprehensive set of values (Schwartz, 1992). This third line of work demonstrates that values exhibit variations in terms of autonomy (comprised of cognitive and emotional autonomy and freedom) and embeddedness (comprised of national security and duty and obligation). Significantly, these three separate bodies of research have converged to reveal that cultures vary in the dimension of individualism (defined by an amalgam of self-expression, personal achievement, and autonomy) and collectivism (defined by an amalgam of survival, communal concerns, and embeddedness). Based on the extensive data collected, Latin American countries display a strong inclination toward collectivism.

As collectivism prioritizes the welfare of the ingroup over personal interests (Triandis, 1995), it is reasonable to expect that Latin Americans have interdependent selves. The interdependent self emphasizes the fundamental connectedness of the self with others, recognizing that one's behavior is determined and organized by others in the relationship (Markus & Kitayama, 1991). Consequently, people who hold this interdependent view of the self are often referred to as collectivists, prioritizing the group over individuals. Previous theoretical frameworks support this notion, describing Latin Americans as "convivial" (Campos & Kim, 2017) and emphasizing the value of simpatía, which promotes positive social relationships (Triandis et al., 1984). Additionally, several survey-based studies have documented that Latin Americans have a strong commitment to their family members

(Corona et al., 2017; Fuligni et al., 1999; Sabogal et al., 1987). Also consistent with the interdependence assumed for Latin Americans is the finding that Mexicans display higher sociability compared to European Americans, particularly in public settings (Ramírez-Esparza et al., 2009). Moreover, compared to European Americans, Latinx are more likely to enact behaviors such as graciousness, respect, and friendliness in a novel social interaction (Holloway et al., 2009). Latin Americans' commitment to interdependence is also reflected in neuroimaging evidence showing that compared to European Americans, Latinx individuals exhibit greater activation in the brain's reward center when contributing their own earnings to assist close others (Telzer et al., 2010). This expanding body of research supports the conclusion that Latin Americans demonstrate a high degree of interdependence, immersing themselves in social relationships, experiencing a sense of obligation toward them, and defining their sense of the self through these connections.

Emotional Expression in Latin America

The hypothesis that Latin Americans are interdependent must be evaluated considering research on emotional expression.[1] The existing evidence highlights the emotional and expressive nature of Latin Americans. First, in terms of subjective valuation of emotions, Latin Americans are similar to European Americans, rather than East Asians, and place a stronger value on high-arousal emotions (Ruby et al., 2012). Second, Latin Americans, like European Americans and unlike East Asians, struggle with downregulating their physiological emotional arousal in response to emotional images. Instead, they are capable of increasing their physiological emotional arousal when requested to do so (Hampton et al., 2021). Third, people in Latin American countries exhibit high levels of emotional expressivity, as evidenced by assessments of the intensity of posed emotional expressions (Niedenthal et al., 2019; Rychlowska et al., 2015; Wood et al., 2016). Fourth, Matsumoto et al. (2008) found a positive association between individualism and the strength of the norms for emotional expressivity (called display rules). However, the association is moderate, characterized by many exceptions, including two Latin American countries (Brazil and Mexico) showing strong expressivity norms despite being collectivistic (Matsumoto et al., 2008). Lastly, research with Latinx indicates they prioritize positive emotional states more and negative emotions less than East Asians, while showing little or no difference from European Americans (Senft et al., 2021).

Taken together, this body of research underscores the possibility that Latin Americans are oriented strongly toward emotional expression, particularly the expression of positive emotions, despite being collectivistic and interdependent. Currently, the literature views emotional expression as an indicator of independence or

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[1] In traditional emotion research, emotions have typically been defined in terms of a limited set of basic emotions. However, it is now widely recognized that numerous other affective states exist beyond these basic categories (Cowen et al., 2021). While these states may not have direct one-to-one translations in English, they may have specific terms in other languages. In the current work, we adopt a broad definition of emotion as affective states that encompass valence and arousal components, which are influenced by cognitive appraisals and often give rise to characteristic actions (Lindquist & Barrett, 2012). By adopting this broader definition, we aim to capture the diverse range of emotional experiences beyond the confines of the traditional framework focusing on basic emotions.

individualism, representing the outward display of one's emotional state (Markus & Kitayama, 1991). However, the simultaneous existence of interdependence/collectivism and emotional expressivity in Latin America calls for an expanded framework that goes beyond the conventional understanding.

Socially Engaging and Disengaging Emotions

We propose that emotional expression is neither individualistic and independent nor collectivistic and interdependent. Emotional expression can be both, depending on specific cultural context. In Western cultures, emotional expression is construed to be fundamental to one's independence since it displays each person's individuality. In East Asia, emotional expression is considered undesirable because it impedes the ever-important interdependence by highlighting each person's individuality. Latin America may be different. In this cultural group, emotional expression may be construed to be a vital means to connect with others and attain emotional resonance by sharing feelings among ingroup members. This hypothesis may explain why, for example, Latin American societies endorse strong emotional expression despite being highly collectivistic.

To address the possibility that emotional expression can address either independence or interdependence in varying contexts, our approach is to examine what emotions Latin Americans might express most strongly. While the function of various emotions can vary, depending on the situation or relationship, certain emotions are generally recognized as more aligned with the goals of independence or interdependence (Kitayama et al., 2006; Mesquita, 2022). These emotions have also been called socially disengaging versus socially engaging. Socially disengaging emotions encompass pride and feelings of confidence and self-esteem, which arise from successfully fulfilling personal goals and desires. They also include emotions like anger and frustration, which emerge when personal goals are not met, prompting individuals to restore their sense of independence.[2] In contrast, socially engaging emotions encompass friendly feelings, respect, and other positive emotions that arise from harmonious social relationships. They also include emotions such as guilt and shame, which stem from a failure to meet the expectations of others and prompt individuals to restore their sense of interdependence. By investigating the expression of these socially disengaging and socially engaging emotions, we can gain insights about whether Latin Americans are expressive primarily to achieve either independence or interdependence.

Past work has examined the correlational patterns of ratings of emotional experiences and the perceived similarities of various emotions using multidimensional scaling analysis (Kitayama et al., 2000, 2006; Uchida & Kitayama, 2009). These studies found four distinct clusters of emotions defined by valence (and sometimes arousal) and the social orientation of the emotion as socially engaging or socially disengaging. More recent work has further validated these dimensions in various contexts including close relationships and immigrants entering a new cultural context (Boiger et al., 2022; De Leersnyder et al., 2011). Building on this work, we employed a self-report measure to assess the extent to which individuals express socially engaging or disengaging emotions. This measure serves as an indicator of their inclination toward interdependence or independence. By utilizing this index, we can gain insights into individuals' propensity for interdependence or independence based on their self-reported expression of socially engaging or socially disengaging emotions.

Our hypothesis consists of three main propositions. First, Latin Americans are expected to exhibit both emotional expressiveness and interdependence. Second, European Americans are expected to display emotional expressiveness alongside independence. Third, East Asians are predicted to demonstrate low emotional expressiveness and interdependence. To differentiate these cultural groups, we will examine both the absolute level of emotional expressivity and the relative expressivity of socially engaging versus socially disengaging emotions.

Regarding the absolute level of emotional expressivity, it is anticipated that both Latin Americans and European Americans would exhibit similarly high levels of expressivity, particularly in positive domains, compared to East Asians. This expectation comes from past work showing that East Asians are less expressive overall and express a balance of positive and negative emotions (Hampton et al., 2021; Hsu et al., 2021; Miyamoto et al., 2017; Sims et al., 2015). How about the relative expressivity of engaging versus disengaging emotions? Here, we predict that Latin Americans should be more similar to Japanese than to European Americans. Both Latin Americans and Japanese will be more likely to express engaging emotions rather than disengaging emotions, given their shared emphasis on interdependence. In contrast, European Americans will be more inclined to express disengaging emotions rather than engaging emotions given their emphasis on independence.

Present Research

We conducted two studies to examine whether Latin Americans would exhibit a pronounced tendency to express positive socially engaging emotions. Notably, we manipulated the nature of emotion-inducing situations being either social or personal and either positive or negative. Latin Americans' tendency to express positive socially engaging emotions may be particularly pronounced in social rather than personal situations as the goal of these positive emotions is to promote interdependent ties with others. Moreover, it may also be visible primarily in situations eliciting positive emotions.

Notably, to establish the prevalence of this pattern across Latin America, we examined Latin Americans in three countries: Chileans and Mexicans in Study 1 and Colombians in Study 2. Despite their unique characteristics, we assumed that these societies share a common Latin American cultural heritage that emphasizes the expression of positive socially engaging emotions to foster and sustain valued social relationships. Additionally, we compared Latin American cultural groups with European Americans and Japanese, to gauge the specificity of the Latin American pattern of emotional expression. We anticipated that there would be discernible differences among all three groups.

We hypothesized that European Americans exhibit characteristics of independence and emotional expression. Emotional expression serves as a significant means for European Americans to convey

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[2] Emotions can be directed toward various groups, including both ingroups and outgroups (E. R. Smith & Mackie, 2021). The concepts of independence and interdependence, typically applied to interpersonal dynamics, can be extended to competition and cooperation at the intergroup level. For example, a sense of pride within an ingroup can contribute to establishing the group's distinctiveness and its independence from other groups, thus fostering a motivation for competition with other groups as well as ingroup cohesion. We will return to this and other related possibilities in the General Discussion section.

their sense of independence and self (Chentsova-Dutton & Tsai, 2010). Consequently, we predicted that European Americans would be as emotionally expressive as Latin Americans. However, unlike Latin Americans, we expected European Americans to display an inclination toward expressing socially disengaging emotions to showcase their independence (Kitayama et al., 2006). Notably, European Americans tend to exhibit a motivation to maintain a positive self-view, which is evident through their tendency to engage in self-enhancement and other positive illusions (Taylor & Brown, 1988). Hence, the propensity of European Americans to express disengaging emotions, especially positive emotions such as pride, might be more pronounced than their expression of negative socially disengaging emotions like anger. This effect is likely to be observed primarily in situations that allow for self-enhancement, such as instances where individuals experience personal success rather than failure (Kitayama et al., 1997; Salvador et al., 2022).

East Asians are known for their interdependent orientations but often perceive emotional expression as a potential obstacle to interdependence, which can lead them to express emotions less strongly (Kraus & Kitayama, 2019). To examine this possibility, we focused on a commonly studied East Asian group in the field of cultural psychology: Japanese. We anticipated that Japanese individuals would report lower levels of emotional expression compared to both Latin Americans and European Americans. However, we also expected that when they do express emotions, they would primarily display socially engaging emotions (Kitayama et al., 2006). Additionally, previous research has indicated that Japanese exhibit a high degree of self-criticism (Heine et al., 1999; Kitayama et al., 1997; Salvador et al., 2022). Thus, the increased expression of socially engaging (vs. socially disengaging) emotions among Japanese may be found primarily for negative emotions. Correspondingly, the emphasis on social engagement rather than disengagement among Japanese may not be as strong for positive emotions as it is among Latin Americans.

Study 1

Method

Participants

We aimed to recruit a total of 200 participants per cultural group. Kitayama et al. (2009) obtained Cohen's f across dependent measures varied between 0.24 and 0.43, with sample sizes ranging from 94 to 128 across countries (the United States, Japan, Germany, and the United Kingdom). To detect Cohen's $f = 0.24$ with 80% power at $\alpha = .05$, we determined that a minimum of 139 participants per country was necessary. To ensure an adequate sample size, we rounded this number up, doubling the typical sample size of prior cross-cultural studies employing similar tasks (Kitayama et al., 2009; San Martin et al., 2018). All participants were adults recruited from an online platform, Prolific Academic. A total of 615 participants initially took part in the study. However, 17 participants were excluded prior to analyses due to reasons such as failure to report demographics including cultural background (seven), incomplete response to measures of interest (three), and not meeting the specified ethnic or residence criteria (seven). As a result, the final sample consisted of 198 European Americans (73 men, 123 women, two other), 197 Mexicans (132 men, 62 women, three other), and 203 Chileans (159 men, 69 women, five other), totaling 598 participants. All participants were

adults, with European Americans having the highest average age ($M = 37.42$, $SD = 14.28$), followed by Mexicans ($M = 26.49$, $SD = 7.66$) and Chileans ($M = 24.48$, $SD = 5.00$). The study protocol was in accordance with the Declaration of Helsinki and was approved by the Institutional Review Board.

As part of the demographic questionnaire, participants were also asked about the urbanity of the region they reside in and their social status. To assess the level of urbanization, participants were asked to indicate the type of environment they grew up in on a scale ranging from 1 (*large city*) to 4 (*countryside*). Social status was measured using a ladder measure adopted from previous studies (Adler et al., 2000). Participants were instructed to choose the rung of the ladder that best represented their perceived standing in their community, according to their own definition, with 1 indicating the *lowest rung* and 10 indicating the *highest rung*.

We found significant differences among the samples regarding the reported environment participants grew up in, as shown by a significant main effect of Culture, $F(2, 595) = 87.05$, $p < .001$, $\eta_p^2 = .226$. Mexicans ($M = 1.43$, $SD = 0.615$) and Chileans ($M = 1.54$, $SD = 0.698$) reported growing up in a larger city than European Americans ($M = 2.35$, $SD = 0.932$), $ps < .001$. Both the former two groups did not differ from each other, $p = .146$. There were no cultural differences in subjective social status (SES), $F(2, 594) = .872$, $p = .419$, $\eta_p^2 = .003$. The pattern of the focal analyses on emotional expression remained similar with gender, age, region, and subjective status included as covariates (Table S1A and S1B in the online supplemental materials).

Procedure

Participants completed the study online using the Qualtrics platform. Prior to participation, participants were screened through Prolific to have a high approval rating for online studies (95% or greater) and be fluent in the language they were tested in (English for European Americans and Spanish for Mexicans and Chileans). All participants were screened to confirm that they were born in, citizens of, and currently residing in their respective countries. For the European American sample, participants were additionally screened to ensure they identified as White/Caucasians with non-Hispanic ancestry. We report how we determined our sample size, all data exclusions (if any), all manipulations, and measures.

After filling out an informed consent form, participants were instructed to complete an emotion expression questionnaire. The questionnaire aimed to assess the strength of participants' emotional expression, including bodily gestures and facial expressions, for 12 emotions on a 6-point scale (1 = *not at all* to 6 = *very strongly*). Participants were specifically asked to read each situation carefully and think about how strongly they would express different emotions when they are discussing the situation with their friends or family members. They were presented with four social situations that varied in their valence (positive or negative) and the situation type (personal or social). These situations were as follows: "You succeeded in an exam or assignment," "You did poorly on an important test or assignment," "You learned about something good that happened to your friends or family," and "You learned about something bad that happened to your friends or family." The selection of the 12 emotions was based on previous research (Kitayama et al., 2000, 2009; San Martin et al., 2018). These emotions were chosen to represent a range of emotions from each of the four quadrants defined by emotion

valence and emotion type (see Table 1). Additionally, three general positive emotions (i.e., elated, happy, and calm) and one general negative emotion (unhappy) (Table S2 in the online supplemental materials) were included in the set of emotions.[3]

Previous work has demonstrated clear differentiation among the four emotion clusters, characterized by valence (positive vs. negative) and emotion type (socially engaging vs. socially disengaging), using multidimensional scaling analysis (Kitayama et al., 2000; Uchida & Kitayama, 2009). Additionally, the reliability of these clusters has been established (Na et al., 2020). In line with this prior work, we computed separate scores for positive and negative socially disengaging (e.g., pride and frustration) and socially engaging (e.g., friendly feelings and shame) emotions for each of the four situations. Table 1 shows the eight specific emotion terms of interest and their reliability scores. Reliability calculations were conducted across emotion terms following the approach by Kitayama et al. (2006). As observed in the previous studies by Kitayama et al. (2006), the reliabilities for the positive or negative, socially engaging or socially disengaging emotions were largely adequate in all the groups in each study.

Following the emotion expression questionnaire, participants engaged in a cognitive task that was unrelated to the focus of the present work (a holistic cognition task). Additionally, participants reported their responses to demographic questions, including how urban or rural the place they lived is and SES. Finally, participants were debriefed and compensated $1.20 for their time.

Materials

All materials were originally developed in English and translated into Spanish. A back-translation method was used to ensure the equivalence of meaning. These studies were not formally preregistered. Materials, data, and code are available at: https://osf.io/nk7wp/?view_only=fc7154d61fbc4f859dfae91b012a2d15.

Results

Table 2 shows mean expressiveness scores for the emotions that vary in emotion valence and emotion type in each of the four situations in three countries. A preliminary analysis performed on the means for the two Latin American countries showed very few significant country differences. The country main effect was negligible, $F(1, 398) = .30$, $p = .58$, $\eta_p^2 = .001$. Moreover, almost all interactions involving the country did not reach statistical significance.[4] Hence, we collapsed the two Latin American countries in our main analysis.

A 2 (Culture: Latin America or United States) × 2 (Emotion Valence: Positive vs. Negative) × 2 (Emotion Type: Socially Engaging vs. Disengaging) × 2 (Situation Type: Personal vs. Social) × 2 (Situation Valence: Positive vs. Negative) mixed analysis of variance (ANOVA) performed on the mean expressivity scores yielded numerous significant main effects and interactions, including the highest-order, five-way interaction, as shown in Table 3. We used two different ways to decompose the five-way interaction. Our first analysis examined cultural differences in emotion expressiveness across different conditions, whereas our second analysis tested the effect of emotion type across different conditions.

Cultural Differences in Expressivity

The last two rows of Table 2 show a contrast representing the degree to which the two Latin American countries combined show a stronger tendency to express engaging and disengaging emotions, respectively. As can be seen, the cultural difference was statistically significant in nine out of the total of 16 conditions. Among the nine conditions showing a statistically significant cultural difference, seven conditions showed a stronger propensity for Latin Americans to express emotions than European Americans. The remaining two conditions (i.e., the positive personal and positive social situations) showed the opposite effect, with European Americans exhibiting a greater tendency to express positive socially disengaging emotions than Latin Americans. Overall, then, this analysis suggests that Latin Americans have a somewhat stronger tendency to express emotions than European Americans, consistent with the statistically significant Culture main effect in Table 3. However, this general observation glosses over more complex patterns evident in the data. To clarify these patterns, we performed our second analysis focusing on the effect of emotion type.

Effect of Emotion Type: Interdependence Dominance

This analysis focused on the relative propensity of expressing engaging versus disengaging emotions in each of the conditions defined by emotion valence, situation valence, and situation type, separately for the two cultural groups. It relates directly to the prediction that interdependence dominance should be more pronounced for Latin Americans than for European Americans. We captured interdependence dominance by computing the difference between the expressivity scores for socially engaging and socially disengaging emotions (designated as D) in each of the conditions. Positive D scores indicate a relatively stronger tendency to express socially engaging compared to socially disengaging emotions, whereas negative D scores indicate a relatively stronger tendency to express socially disengaging rather than engaging emotions. We then compared the D scores in the two cultures by computing the following contrast:

$$\text{Contrast} = D_{\text{LatinAmerica}} - D_{\text{US}}. \qquad (1)$$

Figure 1A shows the D scores for positive emotions across the four situations. We found a significant cultural difference in two of the four situations. First, the D score was significantly negative, indicating a propensity to express disengaging emotions (e.g., pride) rather than their engaging counterparts (e.g., friendly feelings)

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[3] It is worth mentioning that certain versions of emotion theory, including the basic emotions theory (Ekman & Cordaro, 2011), may not explicitly recognize some terms such as "friendly feelings" or "self-esteem" as distinct emotions. However, as noted in Footnote 1, emotions can be conceptualized as cognitive elaborations or "constructions" based on both primary affective states defined by arousal and valence and social contexts, including social relations (Lindquist, 2013). With this broader, "constructionist" view of emotion, there is no rigid boundary separating so-called basic emotions, such as joy and pride, from other states such as "friendly feelings," even though the former may be considered more prototypical as emotions than the latter (Shaver et al., 1987).

[4] The only significant effect involving Country observed in this analysis was a statistically significant interaction between Country and Emotion Type, $F(1, 398) = 8.48$, $p = .004$, $\eta_p^2 = .021$. Both groups showed a significantly greater tendency to express engaging emotions than disengaging emotions. This effect of Emotion Type was larger for Chileans (3.16 vs. 2.91) than for Mexicans (3.12 vs. 3.01). Since the effect of Emotion Type was very similar in the two countries, this interaction carried no substantive significance.

Table 1

Emotion Terms and Reliabilities for the Emotional Expression Questionnaire Used in the Present Work

			Reliability (α)					
			Study 1			Study 2		
Valence	Emotion type	Emotion terms	Chile	Mexico	United States	Colombia	United States	Japan
Positive	Socially engaging	Friendly feelings; feelings of closeness to others	0.69	0.72	0.70	0.80	0.77	0.80
	Socially disengaging	Pride; self-esteem	0.57	0.71	0.75	0.64	0.69	0.72
Negative	Socially engaging	Guilt; shame	0.55	0.57	0.73	0.64	0.69	0.60
	Socially disengaging	Anger; frustration	0.71	0.70	0.71	0.73	0.80	0.63

in a positive personal situation involving a positive event happening to the self. Although this effect was present in both cultures, it was significantly weaker for Latin Americans than for European Americans (Contrast = .59), $F(1, 596) = 16.82$, $p < .001$, $\eta_p^2 = .027$. Second, the D score was significantly positive, indicating a propensity to express engaging emotions (e.g., friendly feelings) rather than their disengaging counterparts (e.g., pride) in a negative social situation involving a negative event happening to someone else. Of note, this effect was significantly more pronounced for Latin Americans than for European Americans (Contrast = .66), $F(1, 595) = 28.56$, $p < .001$, $\eta_p^2 = .046$. In the remaining two conditions involving the personal negative and social positive situations, the D score was positive, indicating a propensity to express engaging emotions (e.g., friendly feelings) rather than their disengaging counterparts (e.g., pride). These effects were marginally more pronounced for Latin Americans than for European Americans (Contrasts = .17 and .15, respectively), $F(1, 595) = 2.88$, $p = .090$, $\eta_p^2 = .005$ and $F(1, 596) = 3.41$, $p = .065$, $\eta_p^2 = .006$.

Figure 1B shows the interdependence dominance scores for negative emotions. The D scores were no different from zero in the personal positive and social positive situations for both Latin and European Americans. However, in the negative personal and social situations, the D score was significantly negative, indicating a propensity to express disengaging emotions (e.g., anger) rather than their engaging counterparts (e.g., guilt). Moreover, in the negative social situation, this effect was more pronounced for European Americans than for Latin Americans (Contrast = .24), $F(1, 595) = 4.30$, $p = .038$, $\eta_p^2 = .007$.

Discussion

Our initial prediction was twofold. First, we anticipated that Latin Americans would be highly expressive, on par with European Americans. Second, we also expected that Latin Americans should express socially engaging (vs. disengaging) emotions, unlike European Americans, who would express disengaging (vs. engaging) emotions more. The data largely supported this prediction.

Table 2

Country-Wise Means for Positive and Negative Socially Engaging and Disengaging Across Four Situations in Study 1

		Positive personal situation		Positive social situation		Negative personal situation		Negative social situation	
Emotion type		Positive emotion	Negative emotion	Positive emotion	Negative emotion	Positive emotion	Negative emotion	Positive emotion	Negative emotion
Chile									
Socially engaging	M	3.79	2.09	4.84	1.29	2.61	4.05	4.46	2.13
	SD	1.25	1.23	0.97	0.65	1.23	1.28	1.18	1.02
Socially disengaging	M	4.38	1.99	3.85	1.32	2.06	4.19	1.97	3.49
	SD	1.15	1.34	1.12	0.70	0.99	1.16	0.92	1.25
Mexico									
Socially engaging	M	3.66	1.94	4.81	1.43	2.55	4.00	4.46	2.14
	SD	1.41	1.28	1.05	0.96	1.22	1.38	1.28	1.15
Socially disengaging	M	4.53	2.00	3.98	1.38	2.20	4.34	1.98	3.58
	SD	1.27	1.44	1.34	0.82	1.15	1.35	0.92	1.40
United States									
Socially engaging	M	3.61	1.32	4.88	1.22	2.09	3.86	3.57	2.07
	SD	1.20	0.79	1.00	0.67	1.13	1.44	1.22	1.21
Socially disengaging	M	4.93	1.36	4.14	1.24	1.80	4.12	1.74	3.71
	SD	1.05	0.90	1.14	0.64	1.04	1.29	0.92	1.30
Contrast socially engaging emotions: Latin America versus United States		0.11	0.71	−0.06	0.11	0.50	0.17	0.89	0.06
Significance		.33	<.001	.49	.075	<.001	.17	<.001	.54
Contrast socially disengaging emotions: Latin America versus United States		−0.48	0.64	−0.23	0.13	0.34	0.13	0.23	−0.18
Significance		<.001	<.001	.033	.05	<.001	.23	.004	.12

Table 3

Predictors of Variation in Emotional Expression in Study 1 Using a 2 (Culture: Latin America or United States) × 2 (Situation Type: Personal Or Social) × 2 (Situation Valence: Positive or Negative) × 2 (Emotion Valence: Positive or Negative) × 2 (Emotion Type: Socially Engaging or Disengaging) Mixed ANOVA

Variable	df	F	p	η_p^2
Culture	1	16.788	<.001	.027
Situation Type	1	39.977	<.001	.063
Situation Type × Culture	1	11.143	<.001	.018
Situation Valence	1	24.974	<.001	.040
Situation Valence × Culture	1	12.437	<.001	.020
Emotion Valence	1	791.258	<.001	.571
Emotion Valence × Culture	1	0.743	.389	.001
Emotion Type	1	10.964	<.001	.018
Emotion Type × Culture	1	35.893	<.001	.057
Situation Type × Situation Valence	1	17.508	<.001	.029
Situation Type × Situation Valence × Culture	1	9.802	.002	.016
Situation Type × Emotion Valence	1	722.574	<.001	.548
Situation Type × Emotion Valence × Culture	1	23.194	<.001	.038
Situation Valence × Emotion Valence	1	2,533.214	<.001	.810
Situation Valence × Emotion Valence × Culture	1	45.671	<.001	.071
Situation Type × Situation Valence × Emotion Valence	1	172.221	<.001	.224
Situation Type × Situation Valence × Emotion Valence × Culture	1	1.378	.241	.002
Situation Type × Emotion Type	1	250.840	<.001	.297
Situation Type × Emotion Type × Culture	1	0.454	.501	.001
Situation Valence × Emotion Type	1	58.255	<.001	.089
Situation Valence × Emotion Type × Culture	1	1.236	.267	.002
Situation Type × Situation Valence × Emotion Type	1	123.453	<.001	.172
Situation Type × Situation Valence × Emotion Type × Culture	1	26.754	<.001	.043
Emotion Valence × Emotion Type	1	663.283	<.001	.527
Emotion Valence × Emotion Type × Culture	1	15.342	<.001	.025
Situation Type × Emotion Valence × Emotion Type	1	913.974	<.001	.606
Situation Type × Emotion Valence × Emotion Type × Culture	1	0.015	.902	.000
Situation Valence × Emotion Valence × Emotion Type	1	867.118	<.001	.593
Situation Valence × Emotion Valence × Emotion Type × Culture	1	0.286	.593	.000
Situation Type × Situation Valence × Emotion Valence × Emotion Type	1	98.920	<.001	.143
Situation Type × Situation Valence × Emotion Valence × Emotion Type × Culture	1	7.261	.007	.012
Error	595			

Note. ANOVA = analysis of variance.

Regarding the first prediction, there was an overall cultural difference, with Latin Americans demonstrating a slightly higher level of expressiveness than European Americans. Concerning our second prediction, we also found general support. However, it is important to acknowledge that these two general predictions were not granular enough and called for a more nuanced understanding of the results.

For positive emotions, the *D* score, signifying interdependence dominance, was more positive (or less negative) for Latin Americans than for European Americans, particularly in two specific situations: (a) positive personal and (b) negative social situations. Interestingly, these situations elicited distinct psychological effects. In the positive personal situation, where individuals experience a positive event happening to themselves, both European and Latin American participants reported expressing positive socially disengaging emotions, such as pride and self-esteem. However, this display of independence was significantly more pronounced for European Americans than for Latin Americans. This observation aligns with a broader hypothesis that European Americans construct their sense of independence by identifying and validating positive internal attributes of the self, thereby demonstrating self-enhancement (Heine et al., 1999; Kitayama et al., 1997; Salvador et al., 2022). Notably, Latin Americans exhibited a significantly weaker self-enhancement effect. Another situation where the cultural difference was observed is in the negative social situation where individuals encounter something negative happening to someone else. In this situation, both European and Latin American participants reported expressing positive socially engaging emotions. However, this display of interdependence was notably larger for Latin Americans than for European Americans. This finding provides initial evidence supporting the notion that Latin Americans craft their sense of interdependence in part by expressing friendly feelings, feelings of connection, and other positive socially engaging emotions to someone facing adversity. These results highlight the cultural contingencies in how individuals from different backgrounds construct and express their emotions and realize their interdependent and independent orientations.

For negative emotions, we encountered an unexpected effect with the negative social situation, where individuals see something bad happening to someone close. Surprisingly, both Latin and European Americans reported expressing socially disengaging emotions, such as anger and frustration, although this effect was weaker for Latin Americans than European Americans. We first aimed to replicate the unexpected finding in Study 2 and will return to it in the General Discussion section.

Altogether, Study 1 suggests how independence and interdependence are crafted through emotional expression in two disparate cultural contexts. Specifically, within European American contexts,

Figure 1
The Mean D Scores Indicating Relative Dominance of Socially Engaging Versus Disengaging Emotions in Study 1
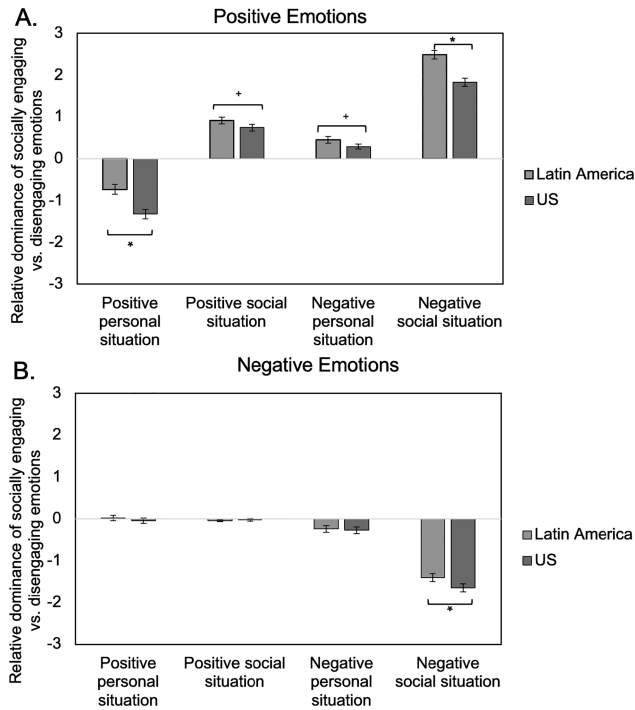
Note. Positive (A) and negative (B) emotions are presented separately. The asterisks indicate statistical significance and crosses indicate marginal significance.

individuals emphasize and affirm their independence by expressing emotions such as pride, self-esteem, and other socially disengaging emotions, particularly in positive personal situations that involve personal success. In stark contrast, within Latin American contexts, individuals emphasize and validate their interdependence by expressing feelings of connection and friendly feelings in negative social situations involving something bad occurring to someone else. This is consistent with work suggesting Latin Americans may exhibit a "convivial" nature, emphasizing social bonds and relationships (Acevedo et al., 2020; Campos & Kim, 2017).

In short, Latin Americans show the interdependence dominance more strongly than European Americans for positive emotions. We use this finding and propose the concept of "expressive interdependence," a form of interdependence characterized by the expression of socially engaging emotions, particularly those that are positive and proactively foster social connections. However, it is crucial to acknowledge that emotion expression is contingent on the specific situational context, and expressive interdependence is particularly evident in social situations that call for compassion and sympathy, specifically those involving negative events impacting another person in one's ingroup.

Study 2

One notable discovery emerging from Study 1 was the close association between the crafting of independence for European Americans and interdependence for Latin Americans with specific types of

situations. The finding highlights the need for a more comprehensive analysis of how social situations and psychological processes intersect to shape various psychological tendencies (Kitayama et al., 1997; Leung & Cohen, 2011). Given the intricate nature of this pattern, involving the interplay of five variables, that is, culture, situation valence, situation type, emotion valence, and emotion type, replicating the critical five-way interaction is imperative. We therefore conducted Study 2, with the aim of replicating the key findings from Study 1 focusing on another Latin American country, Colombia.

One important limitation of Study 1 was the absence of an East Asian group. The second aim of Study 2 was to address this gap. Our guiding hypothesis had three aspects. First, East Asians are generally less expressive of emotions. In fact, they are more inclined toward emotion suppression, rather than expression (Kraus & Kitayama, 2019; Soto et al., 2005; Tsai et al., 2006). Thus, our first prediction was that East Asians would be less expressive of emotions than either European Americans or Latin Americans across various situations. Second, prior work suggests that East Asians would be interdependent (Markus & Kitayama, 1991; Triandis, 1995), similar to Latin Americans. Thus, we anticipated that East Asians would express socially engaging emotions more strongly than socially disengaging emotions. Third, it is important to note the growing evidence that East Asians are prone to self-criticism (Heine et al., 1999; Kitayama et al., 1997; Salvador et al., 2022) and display greater sensitivity to negative emotional states, as they utilize negative engaging emotions, such as guilt and shame, to navigate their social interactions (Kitayama et al., 2018). We therefore, anticipated that interdependence dominance might be evident primarily for negative emotions. We expected Japanese to demonstrate a distinct pattern from the Latin American pattern which is characterized by strong interdependence dominance primarily for positive emotions. To test these possibilities, we included one of the most frequently tested East Asian groups, Japanese, in our study.

Method

Participants

Similar to Study 1, our target sample size was set at 200 or as many participants as could be recruited until the end of the semester in all three locations. The final sample consisted of 204 European Americans (98 male, 106 female), 175 Colombians (69 male, 106 female), and 178 Japanese (69 male, 109 female) college undergraduates. Participants were recruited at the University of Michigan (United States), Universidad de La Sabana (Colombia), and Nagoya University (Japan). On average, the European American sample had the youngest age ($M = 18.69$, $SD = 0.99$), followed by the Japanese ($M = 20.04$, $SD = 1.24$) and Colombian samples ($M = 20.60$, $SD = 2.92$). An analysis of the type of environment participants reported growing up in revealed a significant main effect of Culture, $F(2, 540) = 60.67$, $p < .001$, $\eta_p^2 = .183$. Colombians ($M = 1.48$, $SD = 0.807$) reported growing up in larger cities than both Japanese ($M = 2.23$, $SD = 0.856$) and European Americans ($M = 2.39$, $SD = 0.812$), $ps < .001$. The latter two groups did not differ from each other. There were no cultural differences observed in SES, $F(2, 540) = .893$, $p = .410$, $\eta_p^2 = .003$. To ensure the robustness of our findings, we repeated the focal analyses with age, gender, region, and SES as covariates. These covariates did not change the results (Table S3A and B in the online supplemental materials).

The study was approved by all sites and overseen by the Institutional Review Board of the University of Michigan.

Procedure

We employed the same emotion expression questionnaire and analytic procedure as described in Study 1. Like Study 1, the reliabilities for the four relevant clusters of emotions were adequate in all three groups (see Table 1). The means for the general positive (elated, happy, and calm) and negative (unhappy) emotion terms for Study 2 can be found in Table S4 in the online supplemental materials. All participants were tested in small groups of 2–7 in a lab setting. Participants first completed the emotion expression questionnaire on a computer terminal, after which they filled out demographic questions. Participants were then debriefed and compensated for their time in a culturally appropriate fashion as allowed by each institution. Participants were given a restaurant gift card for 20,000 Colombian pesos (roughly US $5) in Colombia, course credit in the United States, and 1,500 yen in Japan. Study 2 was a part of a larger study. Thus, the emotional expression questionnaire was embedded in a series of 12 additional tasks. These tasks, all unrelated to emotional expression, were intended either for different purposes or as pretests for the development of materials for future studies. No data from this study package have been previously reported.

Results

Mean expressivity ratings can be found in Table 4. We conducted a mixed ANOVA with a 3 (Country: Colombia, Japan, or United States; Between-Participant) × 2 (Situation Type: Self or Other; Within-Participant) × 2 (Situation Valence: Positive or Negative; Within-Participant) × 2 (Emotion Valence: Positive or Negative; Within-Participant) × 2 (Emotion Type: Socially Engaging and Socially Disengaging; Within-Participant) design. As in Study 1, we found many significant main effects and interactions (see Table 5). Notably, replicating Study 1, we found a significant five-way interaction. Consistent with the approach in Study 1, we first examined country differences in expressivity, followed by interdependence dominance.

Cultural Differences in Expressivity

The last six rows of Table 4 report cross-cultural differences. The first four of these six rows show a contrast representing the degree to which Colombians exhibit a stronger tendency to express engaging and disengaging emotions compared to European Americans and Japanese, respectively. The last two rows show comparable comparisons between European Americans and Japanese. As can be seen, Colombians were more expressive than European Americans in seven out of the 16 comparisons, whereas European Americans were more expressive than Colombians in only one out of the 16 comparisons. This replicates the Study 1 finding that, overall, Latin Americans are somewhat more expressive than European Americans. Further, Colombians and European Americans were more expressive than Japanese in 10 and six out of the 16 comparisons, respectively. Japanese were more expressive than Colombians and European Americans in two and four of the 16 comparisons, respectively. It is apparent that Japanese were the least expressive of the three groups overall. Overall, Colombians were the most expressive, closely followed by European Americans, with Japanese the least expressive among the three groups, as revealed by the highly significant main

effect of Culture in Table 5. Nevertheless, these overall cultural differences existed side by side with more nuanced patterns. To decipher these complex patterns, we examined interdependence dominance.

Effects of Emotion Type: Interdependence Dominance

We computed interdependence dominance by subtracting the average expressivity ratings for socially disengaging emotions from socially engaging emotions in each condition for each country (designated as D) (Figure 2). We then computed three contrasts:

$$
\begin{aligned}
\text{Contrast}_1 &= D_{\text{Colombia}} - D_{\text{US}} \\
\text{Contrast}_3 &= D_{\text{Colombia}} - D_{\text{Japan}} \\
\text{Contrast}_3 &= D_{\text{US}} - D_{\text{Japan}}
\end{aligned}
\tag{2}
$$

Contrast$_1$ will help us determine whether our Study 1 findings comparing Latin Americans and European Americans will replicate. The next two contrasts will help us determine how Japanese are different from both Colombians (Contrast$_2$) and European Americans (Contrast$_3$).

Contrast$_1$: Comparing Colombians and European Americans. We first focused on Contrast$_1$ and tested whether we would replicate the patterns reported in Study 1 of interdependence dominance observed between Latin Americans (Colombians in this case) and European Americans. Figure 2A summarizes the average D scores indicating interdependence dominance for positive emotions. Comparing the first two bars in each situation, one can see we replicated the two key findings from Study 1. First, both European Americans and Colombians reported expressing socially disengaging emotions (e.g., pride) more strongly than socially engaging emotions (e.g., friendly feelings) in the positive personal situation involving a positive event happening to the self. However, the D score was significantly less negative for Colombians than for European Americans in (Contrast$_1$ = .68), $F(1, 371) = 15.98$, $p < .001$, $\eta_p^2 = .041$. Second, both groups reported a higher inclination to express socially engaging emotions rather than disengaging emotions in the negative social situation involving a negative event happening to someone close. But this effect was significantly stronger for Colombians than for European Americans (Contrast$_1$ = .61), $F(1, 369) = 17.21$, $p < .001$, $\eta_p^2 = .045$. A similar cultural difference existed in the positive social and negative personal situations. Like Study 1, these effects were relatively weak (Contrasts$_1$ = .29 and .18, respectively), $F(1, 369) = 5.50$, $p = .02$, $\eta_p^2 = .015$ and $F(1, 369) = 2.94$, $p = .09$, $\eta_p^2 = .008$. However, the observed patterns replicated those in Study 1. In these situations, both groups displayed a greater tendency to express socially engaging rather than disengaging emotions. Notably, the effect tended to be more pronounced among Colombians than among European Americans.

Figure 2B summarizes the D scores for negative emotions. As can be seen, the cultural difference between Colombians and European Americans was no different from zero except in the negative social situation. In this situation, Contrast$_1$ was significantly positive (Contrast$_1$ = .51), $F(1, 369) = 13.48$, $p < .001$, $\eta_p^2 = .035$. Both Colombians and European Americans reported a greater inclination to express socially disengaging (e.g., anger) rather than engaging (e.g., guilt) emotions. Similar to Study 1, the effect was significantly weaker for Colombians than for European Americans.

Contrast$_2$ and Contrast$_3$: Finding out the Japanese Profile. Next, we explored how emotional expression differed for Japanese participants in comparison to both Colombians and European

Table 4

Country-Wise Means for Positive and Negative Emotions That Differ in Social Orientation (i.e., Engaging vs. Disengaging) Across Four Situations

Emotion type		Positive personal situation		Positive social situation		Negative personal situation		Negative social situation	
		Positive emotion	Negative emotion	Positive emotion	Negative emotion	Positive emotion	Negative emotion	Positive emotion	Negative emotion
Colombia									
Socially engaging	M	3.78	1.40	4.85	1.16	2.19	3.94	4.10	1.82
	SD	1.56	0.80	1.12	0.51	1.21	1.47	1.53	1.00
Socially disengaging	M	4.87	1.36	3.99	1.23	1.82	4.40	2.15	2.87
	SD	1.20	0.88	1.37	0.68	0.92	1.39	1.56	1.40
United States									
Socially engaging	M	3.04	1.20	4.35	1.12	1.65	3.90	2.65	2.05
	SD	1.41	0.51	1.26	0.41	0.88	1.41	1.14	1.21
Socially disengaging	M	4.81	1.18	3.78	1.12	1.46	4.30	1.31	3.61
	SD	1.20	0.56	1.13	0.40	0.73	1.35	0.58	1.43
Japan									
Socially engaging	M	2.74	1.87	3.90	1.34	1.61	3.78	1.91	2.02
	SD	1.25	0.93	1.27	0.58	0.84	1.25	1.13	1.00
Socially disengaging	M	4.05	1.40	2.96	1.29	1.49	3.19	1.25	2.32
	SD	1.31	0.80	1.16	0.52	0.77	1.32	0.49	1.10
Contrast$_1$ socially engaging emotions: Colombia versus United States		0.74	0.20	0.51	0.045	0.54	0.037	1.45	−0.23
Significance		<.001	.039	<.001	1.00	<.001	1.00	<.001	.12
Contrast$_1$ socially disengaging emotions: Colombia versus United States		0.06	0.18	0.22	0.11	0.36	0.10	0.84	−0.74
Significance		1.00	.064	.27	.15	<.001	1.00	<.001	<.001
Contrast$_2$ socially engaging emotions: Colombia versus Japan		1.05	−0.47	0.95	−0.17	0.58	0.16	2.19	−0.20
Significance		<.001	<.001	<.001	.004	<.001	.87	<.001	.27
Contrast$_2$ socially disengaging emotions: Colombia versus Japan		0.82	−0.047	1.04	−0.063	0.33	1.21	0.91	0.55
Significance		<.001	1.00	<.001	.83	<.001	<.001	<.001	<.001
Contrast$_3$ socially engaging emotions: United States versus Japan		0.30	−0.67	0.44	−0.22	0.04	0.12	0.74	0.035
Significance		.11	<.001	<.001	<.001	1.00	1.00	<.001	1.00
Contrast$_3$ socially disengaging emotions: United States versus Japan		0.76	−0.23	0.82	−0.17	−0.028	1.11	0.061	1.29
Significance		<.001	.009	<.001	.005	1.00	<.001	1.00	<.001

Americans. To start with positive emotions (Figure 2A), Japanese were similar to Colombians in positive situations. In the positive personal situation, like Colombians, Japanese exhibited a relatively weak tendency to express positive disengaging emotions, especially in comparison to European Americans, who showed this tendency quite strongly. In the positive social situation, both Colombians and Japanese exhibited the tendency to express positive engaging emotions relatively more, in comparison with European Americans. In the negative situations, however, the tendency to express positive engaging emotions was less pronounced for Japanese than for Colombians. This cultural difference was particularly pronounced in the negative social situation (involving negative events happening to someone close). In this situation, Colombians displayed a quite strong tendency to show positive engaging emotions (e.g., friendly feelings). The same tendency was significantly weaker but still pronounced for European Americans. Although this tendency was visible for Japanese, it was much weaker for Japanese than for Colombians and European Americans.

As for negative emotions (Figure 2B), Japanese tended to show a strong tendency to express engaging (rather than disengaging) emotions.

First, in the positive personal situation (involving a positive event happening to the self), Japanese exhibited a distinct tendency to express engaging negative emotions (e.g., guilt). In contrast, neither Colombians nor European Americans showed this tendency. A similar pattern was less pronounced, but still statistically reliable in the positive social situation. This same trend was far more pronounced in the negative situations. In the negative personal situation, involving a negative event happening to the self, Japanese exhibited a distinct tendency to express negative engaging emotions (e.g., guilt) quite strongly. This effect is in stark contrast to the opposite effect displayed by both Colombians and European Americans, who reported expressing negative disengaging emotions (e.g., anger). Lastly, in the negative social situation (involving a negative event happening to another person), both Colombians and European Americans reported expressing disengaging negative emotions (e.g., anger). This effect was negligible for Japanese.

Altogether, the Japanese pattern is notable in three respects. First, Japanese individuals expressed emotions relatively less, compared to Latin Americans and European Americans, although this general statement glosses over important complexities in the data. Second, Japanese showed positive engaging emotions relatively more, on

Table 5
Predictors of Variation in Emotional Expression in Study 2

Variable	df	F	p	η_p^2
Country	2	49.590	<.001	.150
Situation Type	1	204.219	<.001	.272
Situation Type × Country	2	12.770	<.001	.045
Situation Valence	1	3.251	.072	.006
Situation Valence × Country	2	21.648	<.001	.073
Emotion Valence	1	503.611	<.001	.480
Emotion Valence × Country	2	64.564	<.001	.191
Emotion Type	1	0.137	.712	.000
Emotion Type × Country	2	28.130	<.001	.093
Situation Type × Situation Valence	1	170.316	<.001	.238
Situation Type × Situation Valence × Country	2	2.996	.051	.011
Situation Type × Emotion Valence	1	731.288	<.001	.573
Situation Type × Emotion Valence × Country	2	30.653	<.001	.101
Situation Valence × Emotion Valence	1	3,295.353	<.001	.858
Situation Valence × Emotion Valence × Country	2	35.291	<.001	.114
Situation Type × Situation Valence × Emotion Valence	1	388.515	<.001	.416
Situation Type × Situation Valence × Emotion Valence × Country	2	31.320	<.001	.103
Situation Type × Emotion Type	1	272.836	<.001	.333
Situation Type × Emotion Type × Country	2	8.196	<.001	.029
Situation Valence × Emotion Type	1	48.009	<.001	.081
Situation Valence × Emotion Type × Country	2	0.480	.619	.002
Situation Type × Situation Valence × Emotion Type	1	205.813	<.001	.274
Situation Type × Situation Valence × Emotion Type × Country	2	13.855	<.001	.048
Emotion Valence × Emotion Type	1	132.021	<.001	.195
Emotion Valence × Emotion Type × Country	2	52.113	<.001	.160
Situation Type × Emotion Valence × Emotion Type	1	866.694	<.001	.614
Situation Type × Emotion Valence × Emotion Type × Country	2	1.437	.238	.005
Situation Valence × Emotion Valence × Emotion Type	1	575.559	<.001	.513
Situation Valence × Emotion Valence × Emotion Type × Country	2	53.132	<.001	.163
Situation Type × Situation Valence × Emotion Valence × Emotion Type	1	10.704	.001	.019
Situation Type × Situation Valence × Emotion Valence × Emotion Type × Country	2	12.581	<.001	.044
Error	546			

par with Latin Americans, except in the negative social situation. Third, Japanese exhibited a strong tendency to express negative engaging emotions, such as guilt and shame. One important consequence of this was that Japanese did not show any tendency to express negative disengaging emotions (e.g., anger) when something negative happened to another person. We will return to these observations in General Discussion section.

Discussion

Study 2 provided further evidence for the presence of expressive interdependence among Latin Americans, this time using Colombians to represent this cultural group. Three findings were consistent with the evidence from Study 1 involving Chileans and Mexicans. First, Colombians exhibited the highest level of expressiveness for positive socially engaging emotions, especially in negative social situations. Second, compared to European Americans, Colombians displayed lower expressivity for positive socially disengaging, rather than engaging emotions in the positive personal situation. Third, regarding negative emotions in negative situations, Colombians and European Americans displayed a higher level of expressiveness for socially disengaging rather than engaging emotions (e.g., anger rather than guilt). Similar to Chileans and Mexicans in Study 1, this emotion-type effect was weaker for Colombians than for European Americans.

The pattern observed for Colombians aligns well with prior theorizing that highlights the interdependent nature of Latin American

cultures. This interdependence is reflected in the overall greater expressivity of socially engaging emotions for Latin Americans than European Americans. Although the greater expression of socially engaging versus disengaging emotions among Latin Americans was apparent for both positive and negative emotions, it was particularly pronounced for positive emotions in negative social situations. The current findings contribute to the existing body of literature by showing that the emphasis on positivity documented among Latin Americans (Campos & Kim, 2017; Senft et al., 2021, 2023) is particularly pronounced for socially engaging emotions expressed toward someone facing adversity.

The Japanese pattern observed in this study was also notable. While Colombians and Japanese shared a broad inclination toward interdependence, characterized by a greater tendency to express socially engaging rather than disengaging emotions, they showed notable differences when we considered both the valence of emotions and the valence of situations. Compared to Colombians, Japanese did not differ in their interdependence dominance for positive emotions. However, in negative situations, Japanese exhibited less interdependence dominance compared to Colombians. Most notably, the propensity to express positive engaging emotions when someone close is facing adversity, was quite pronounced for Latin Americans and even evident for European Americans. Such an effect was quite weak for Japanese. Regarding negative emotions, Japanese emphasized social engagement quite strongly. Across the four situation types, Japanese displayed a greater degree of interdependence

Figure 2

Relative Dominance of Socially Engaging Versus Disengaging Emotions in Study 2
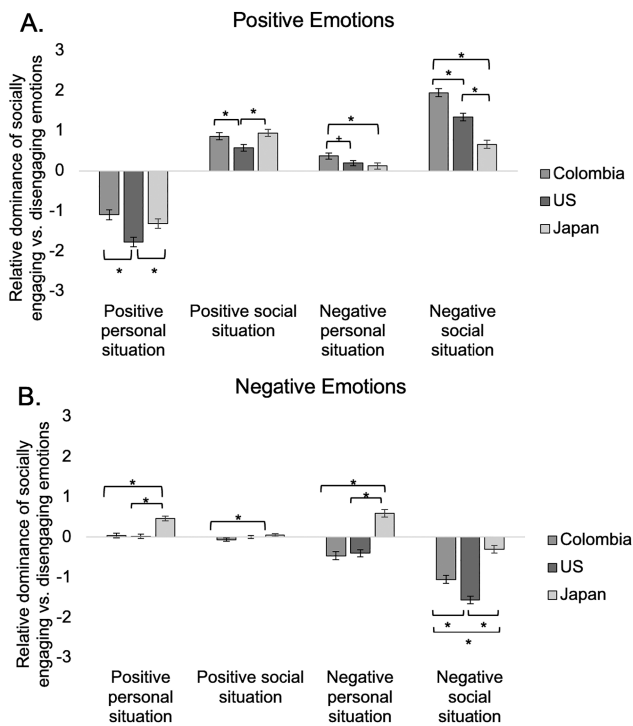
Note. Positive (A) and negative (B) emotions are displayed on the top and bottom panels, respectively. The asterisks indicate statistical significance and crosses indicate marginal significance.

dominance compared to Colombians. The Japanese pattern suggests that interdependence in East Asia may be rooted in negative emotions, such as guilt and shame, which motivate individuals to repair damages, whether perceived or real, to social relationships.

General Discussion

The two studies reported here illuminated how three disparate cultural groups approach the tasks of interdependence and independence, utilizing emotional expression as a viable tool. Both studies found evidence that whereas European Americans employ emotional expression to affirm their independent identity, Latin Americans do so to foster a sense of interdependence with others. Notably, these cultural characteristics are most notable in social situations affording the respective psychological tendencies, namely, situations involving personal success for European Americans and those involving someone close facing adversity for Latin Americans. Study 2 indicated that Japanese also employ emotional expression to promote their interdependent selves. However, two notable distinctions emerged: first, Japanese express emotions less overall. Second, whereas Latin Americans emphasize positive engaging emotions, Japanese emphasize negative engaging emotions.

It bears an emphasis that the three cultural groups are distinguished by their unique long-term ecologies, histories, traditions, and geographic conditions. The combination of these factors defines an extended space on the globe meshed with a unique set cultural

practices and meanings, which we call a *cultural zone*. The three cultural groups tested in our studies (Latin Americans, European Americans, and Japanese) are representative of the Latin American, Western, and East Asian cultural zones. To fully comprehend the theoretical significance of the current findings, it is crucial to contextualize them within a broader understanding about these cultural zones (Henrich, 2015; Kitayama et al., 2022; Kitayama & Salvador, 2023; Muthukrishna et al., 2021).

Emotional Expression in Three Cultural Zones

Latin America

Latin American cultures, known for their emphasis on interdependence with ingroup members, such as family and community (Campos et al., 2014; Fuligni et al., 1999; Telzer et al., 2010), exhibit high levels of collectivism (Hofstede, 1980) and traditional worldviews (Inglehart, 2006). They also value hierarchy, honor, social order, and security (Schwartz, 1992). In line with this extensive body of cross-cultural evidence, our findings indicate that Latin Americans tend to express socially engaging emotions more strongly than socially disengaging emotions. Particularly noteworthy is the heightened expression of positive socially engaging emotions in negative social situations when something bad happened to someone close. This pattern extends beyond the general notion that Latin Americans prioritize collectivism or interdependence. It reveals *how* Latin Americans are culturally socialized or "trained" to foster and maintain interdependent social relationships. This cultural emphasis of expressing friendliness, connection, or compassion to another person may be a defining characteristic of the interdependent ethos prevalent across Latin American societies. Notably, the expression of friendly feelings and other socially engaging positive emotions was significantly more pronounced among Latin Americans compared to European Americans across all situations. It was also stronger compared to the pattern exhibited by Japanese especially in negative situations involving bad events happening to the self or, especially, to someone close.

The expression of feelings of connection and friendliness, observed in Latin America, aligns with previous research highlighting their "convivial" nature in social interactions (Campos & Kim, 2017; Holloway et al., 2009; Triandis et al., 1984) as well as a strong value placed on positive emotions (Senft et al., 2021, 2023). It also resonates with earlier observations that Latin American cultures possess a rich repertoire of scripts for socially engaging behaviors, such as simpatía, which reflects a strong inclination toward interpersonal resonance (Acevedo et al., 2020; Ondish et al., 2019; Triandis et al., 1984). These findings further reinforce the notion that Latin American societies prioritize and value expressions of connection, friendliness, and interpersonal harmony in their interactions.

It is noteworthy that Latin Americans have sometimes been portrayed as independent rather than interdependent based on an observation that they are similar to European Americans in their propensity toward expressing their emotions (Krys et al., 2022). However, upon closer examination of the specific emotions they express more strongly, we revealed that the superficial resemblance to European Americans conceals deeper cultural meanings related to interdependence within the Latin American context. We posit that the primary function of emotional expression in Latin America is not to broadcast the individual's subjective emotional experience. Rather, it serves as a

mechanism to promote and sustain social relationships, reflecting the region's cultural commitment to interdependence with others.

East Asia

The form of interdependence exhibited by Latin Americans, discussed above, called expressive interdependence, is different from what we observed in Japan. East Asian societies, including China, Korea, and Japan, are commonly characterized by collectivism and interdependence (Markus & Kitayama, 1991). The converging lines of cross-cultural research noted above by Hofstede, Inglehart, and Schwartz support this supposition. Crucially, East Asians typically moderate and downregulate emotions rather than express them overtly (Kraus & Kitayama, 2019). Moreover, our new evidence shows that when they express emotions, it tends to be negative socially engaging emotions, such as guilt and shame. Hence, East Asians may exhibit similar levels of interdependence as Latin Americans, but their approaches to establishing and maintaining interdependence differ. Latin Americans express interdependence through the display of socially engaging positive emotions. However, in East Asian cultural logic, such emotions are believed to excessively highlight the self's proactive approach to social relationships and can be detrimental to social harmony. Instead of strongly expressing positive emotions, East Asians display a balance of positive and negative emotions. Overall, they still want to feel positive (Tsai et al., 2006) but when the situation calls for it, they tend to express negative emotions, such as guilt and shame, to communicate their intent to restore and repair damages, either perceived or real, in their interdependent social relationships (Kitayama et al., 2006). This emerging pattern is in line with the previous evidence of self-effacement (Heine et al., 1999; Kitayama et al., 1997; Salvador et al., 2022) and a more balanced expression of positive and negative emotions in East Asian contexts (Miyamoto et al., 2017). Our work highlights the broader applicability of this phenomenon to emotional expression in general.

Curiously, the Japanese participants in our study displayed low interdependence dominance for positive emotions in the negative social situation. In other words, they exhibited a lower inclination to extend their friendly feelings and other positive socially engaging emotions to their friends and family members experiencing setbacks. This pattern is in stark contrast with the responses of Latin Americans and, to a lesser extent, European Americans, who did report expressing positive socially engaging emotions. This observation suggests a cultural difference in the readiness to express emotions of care and compassion toward those facing adversity.

Previous research indicates the presence of a strong ethos of self-criticism and self-improvement in Japan (Heine et al., 1999). When someone encounters setbacks and adversity, there is a strong expectation that the individual will confront and overcome the challenges on their own. Within this cultural context of self-improvement, others may perceive that the best course of action is to give the victim space and refrain from actively expressing feelings of care or compassion. This act of "doing nothing" or what is known in Japanese as "mimamori" (literally meaning "protective watching") may be seen as communicating an understanding that the victim possesses the capability to overcome the setback. Paradoxically, while extending feelings of care might initially appear warm and compassionate, it could potentially make the victim feel even more miserable. This is because such expressions could inadvertently reinforce the impression that coping with the setback is indeed very challenging and perhaps beyond the victim's capabilities. From this cultural perspective, the act of "doing nothing"

can be interpreted as a form of support for the victim, while an overt act of support is not. Consistent with this conjecture, Kim et al. (2008) amassed evidence that East Asians are not as willing to seek support compared to European Americans (Kim et al., 2008). Our finding has added to this evidence by showing that those surrounding the victim are also unwilling to extend emotional support. This possibility warrants further investigation to gain a better understanding of the intricate dynamics of cultural perspectives and emotional responses.

West

Regardless of the differences in how emotional expression is employed to maintain interdependence between the two cultural zones (Latin America and Japan), both stand in stark contrast against cultural groups rooted in the tradition of the modern West, such as European Americans in the present study. Previous cross-cultural research has consistently demonstrated that European Americans exhibit high levels of individualism and independent orientation (Markus & Kitayama, 1991). They prioritize personal success and happiness more than East Asians (Uchida & Kitayama, 2009). They experience dissonance when making private choices, as opposed to public ones (Kitayama et al., 2004). Furthermore, they strive for personal uniqueness (Kim & Markus, 1999). Consistent with this body of evidence, our work reveals that European Americans are expressive of positive socially disengaging rather than engaging emotions (e.g., pride rather than friendly feelings). Our work suggests that this orientation toward the valued state of independence is realized in specific situations involving personal success. Thus, European Americans were strongly expressive of socially disengaging positive emotions, such as pride and self-esteem, in the positive personal situation, thereby adding further evidence for the robustness of self-enhancement in this cultural group (Heine et al., 1999). Although Latin Americans and Japanese participants also exhibited this effect, the magnitude of the effect was much stronger among European Americans.

Notably, we found that European Americans and Latin Americans exhibited greater expressivity of negative socially disengaging emotions in social negative situations, in which a setback happens to someone else. This observation would seem puzzling if the negative emotions were directed to the victim in these situations. However, we propose that these emotions are not necessarily directed toward the person who has experienced a setback or failure. Instead, they may be directed toward external factors responsible for the negative outcomes. They may be directed toward a third party blocking the person's goals and desires, a malicious God, or even bad luck. In this sense, these negative disengaging emotions may have a function of symbolically amplifying the strength of social relations. Thus, they may symbolically solidify such relations. Hence, these emotions may indirectly support the interdependence in the relationship. Nevertheless, in such circumstances, interdependence may also be conveyed more clearly through the expression of socially engaging emotions to the victim, which may explain why Latin Americans reportedly expressed anger and frustration less strongly than European Americans. This idea may also explain why Japanese showed virtually no such effect in these circumstances.

Implications for Emotion Theories

Our work has the potential to contribute to theories of emotion. It is widely acknowledged that emotions can be expressed through

facial expressions or gestures (experience → expression), as suggested by most contemporary theories of emotion. However, it is also recognized that facial expressions can influence emotional experience, as proposed by feedback theories of emotion dating back to William James (1885). While both causal mechanisms are acknowledged, current theories of emotion tend to focus more on the construction of emotional experience. For example, most cognitive theories of emotion, including cognitive appraisal theories (C. A. Smith & Ellsworth, 1985) and more recent constructionist theories (Barrett, 2017) focus exclusively on the mechanisms involved in the construction of emotional experience. These theories often neglect the impact of emotional expression on that experience.

Our theorizing on emotional processes suggests that Latin Americans employ emotional expression to establish and nurture interdependent social relationships. This perspective suggests a greater role played by social processes in the construction of emotional experience. For example, our data suggest that Latin Americans often display friendly feelings (and other similarly engaging emotions) toward someone facing adversity. From this finding, we may extrapolate that this display is likely to occur simultaneously across multiple actors facing this victim, resulting in a perceived sharing of the emotion. This perceived sharing of the emotion might bolster the experience of the emotion itself. While suggested by an earlier analysis (Rimé, 1995), this social mechanism underlying emotional experience (display of an emotion by multiple actors in a social situation → perceived sharedness of the emotion → an increase of the reality of the emotion) has not been fully appreciated in the literature. If nothing else, our initial evidence raises questions about the generalizability of theories focusing on internal mechanisms of developing emotional experience, as they neglect the social processes involved in emotion construction, consistent with the thesis put forward by Mesquita (2022). By highlighting the role of emotional expression in shaping emotional experience within the Latin American cultural zone, our work offers insights that can enrich and expand theories of emotion. It also promotes a more comprehensive understanding of emotions, emphasizing the social and interpersonal processes involved in their constructions.

Limitations and Conclusions

Some limitations of our work are in order. First, our work shows that expressive interdependence (a combination of emotional expressivity and interdependence) is quite prominent in Latin American culture. However, it remains to be seen whether this pattern could be found outside this region. As we globalize behavioral sciences and expand our current work, more effort will be needed to develop tasks that are better calibrated to reflect the cultural ethos of each of the different regions. Second, our work is based entirely on self-report. We may therefore raise questions about how generalizable our findings might be to emotion expression behaviors. Prior work using unobtrusive behavioral measures of sociability demonstrated that Mexicans are more sociable than European Americans, especially when interacting in public settings (Ramírez-Esparza et al., 2009). Our emotional expression measure showed a consistent pattern with this behavioral work. Thus, there is some initial evidence of the promise of our approach, however, it is important to follow up this work to test whether our self-report measure shows a larger or smaller effect than behavioral, physiological, or more explicit self-report measures. Third, we drew on prior work that emotions overall vary in their socially engaging or socially disengaging nature (Boiger et al., 2022; Kitayama et al., 2000, 2006). Nonetheless, it is also possible that depending on the nature of the social interaction or situation, emotions that are typically socially engaging or socially disengaging could take the opposite meaning. Anger and other disengaging emotions can be expressed in the negative social situation, for example protesting an injustice toward a victim. Although typically disengaging, anger expressed this way would highlight the interdependence and thus solidarity with the victim. Future work must examine nuances in the social meaning and functions of socially engaging versus disengaging emotions.

We also wish to acknowledge that we only had two indices for each emotion type, which hindered our ability to establish measurement equivalence of the four emotion types across different cultural groups using confirmatory factor analysis (CFA). Additional research is needed to develop more extensive measures of each category of emotions and to then establish the measurement equivalence of the four categories of emotions across the three cultural contexts studied. Moreover, more conceptual work may be needed to examine when CFA is and is not appropriate. Researchers must explore alternative approaches and methodologies that consider the challenges inherent in cross-cultural and cross-linguistic research. By doing so, they can strive to find robust solutions to the measurement challenges and advance our understanding of emotion types across cultures.

Despite these limitations, our work significantly extended the research in cultural psychology by elaborating on a Latin American form of interdependence. In the current literature, scholars have focused on East Asians and argued that emotional moderation is a defining characteristic of interdependence. Given this scholarly background, it may seem paradoxical that Latin Americans are highly interdependent and yet at the same time expressive of emotions. To resolve this paradox, we put forth the proposal that there is a distinct cultural profile in Latin America, *expressive interdependence*. Further, we offered the first evidence that this profile is distinct from both (a) the emotion-suppressing and self-effacing interdependence found among East Asians and (b) independence based in part on emotional expression among European Americans. This work has begun to reveal the varieties of interdependence across the globe (Kitayama et al., 2022) and challenges a view that interdependence (or independence) is monolithic and invariant across cultures and traditions in the non-Western world.

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