

Is There an In-Group Advantage in Emotion Recognition?

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H. A. Elfenbein and N. Ambady (2002) examined the evidence for an in-group advantage in emotion recognition, whereby recognition is generally more accurate for perceivers from the same cultural group as emotional expressors. D. Matsumoto's (2002) comment centered on 3 asserted methodological requirements. This response addresses the lack of consensus concerning these "requirements" and demonstrates that none alter the presence of the in-group advantage. His analyses had a serious flaw and, once corrected, replicated the original findings. Furthermore, he described results from his empirical work not meeting a literal interpretation of his own requirements. Overall, where Matsumoto considers subtle cross-cultural differences in emotional expression a methodological artifact in judgment studies, the present authors find a core phenomenon worthy of attention.

In the current issue of *Psychological Bulletin*, we presented a meta-analysis providing evidence for both the universality and cultural specificity of emotion recognition (Elfenbein & Ambady, 2002). Matsumoto (2002) commented on one particular finding in this meta-analysis—that there appears to be an in-group advantage in emotion whereby emotional communication is generally more accurate when the expressor and perceiver share membership in the same cultural group. The goal of the present article is to discuss the evidence for an in-group advantage in emotion recognition, and to address the arguments that Matsumoto raised in his critique. We review issues related to the methodological requirements that he asserts all studies should meet in order to test the in-group advantage and document a serious flaw in the analyses that accompany his commentary. We discuss limitations in interpreting the results from studies that Matsumoto presents. Finally, we discuss what this evidence implies for possible explanations of the in-group advantage in emotion recognition, along with sources of common ground with Matsumoto. Whereas he argues that subtle differences in emotional expression across cultures create a confound in studies of the in-group advantage in emotional communication, we believe that these differences are central to the phenomenon.

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Whose Requirements?

Matsumoto (2002) asserted three "methodological requirements that are necessary to test the in-group advantage correctly" (p. 236). The first is that studies should use balanced designs, in which members of each culture view stimuli equally from members of their own group and from each other group in the study. The second is that stimuli from different cultures should express emotion identically. The third is that a meta-analysis of such studies should include a measure of the level of stimulus clarity. These "requirements" present a unique perspective on the study of emotional communication across cultures—the opinion of one theorist rather than any consensus within the field. As we discussed in the original article (Elfenbein & Ambady, 2002), many different researchers have presented diverse opinions about the optimal methodology and requirements for validity in judgment studies of nonverbal behavior (e.g., Ekman, 1994; Izard, 1994; Nowicki & Duke, 2001; Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979; Russell, 1994). For some topics, particularly the cross-cultural universality of facial expressions, this very issue has been the subject of heated debate (e.g., Ekman, 1994; Izard, 1994; Russell, 1994). Given that the in-group advantage in emotion is a relatively new phenomenon, there is no list of requirements accepted as definitive for its study. Thus, we decided that in our review, it would be more productive to examine all available data rather than to state as an axiom our own opinion about what constitutes a valid study.

Our Own Requirements

Although we did not represent our own opinions about research methodology in the meta-analysis, we do have such opinions. Were we to declare our own three requirements for a valid test of the in-group advantage across cultures, the second and third would appear somewhat different from those Matsumoto (2002) lists.

1. The strongest evidence for the in-group advantage comes from studies using a balanced design.
2. Emotional stimuli from a particular culture should be representative and created inside that cultural context, using posers who

are members of and reside in that culture, preferably with experimenters who are members of that culture.

3. Emotion itself should be elicited from participants, rather than specific expressions determined or hand-picked by the experimenter. Expressions should be as natural as possible, and not imitations of preselected theoretical models.

We list these suggestions not to impose them on other researchers, but rather to illustrate the wide range of opinion in the field.

We take seriously the idea that the three requirements that Matsumoto (2002) listed could be viewed as potential limitations to our meta-analysis. For this reason, we review the nature, evidence, and implications for each below. None limits our original findings.

Balanced Designs: Better but Limited

We agree with Matsumoto (2002) that balanced designs provide the strongest evidence for the in-group advantage in emotion, and we make ample mention of this in the original article (Elfenbein & Ambady, 2002). Balanced designs allow the control of possible main effects in emotional expressive ability or emotion-recognition ability while examining the interaction effect representing the match between the expressor and perceiver. Because balanced designs are optimal, we emphasized such designs in our results.

As with any review of previous research, we were limited to the studies available for inclusion. We disagree with Matsumoto (2002) only about whether it is worthwhile to examine unbalanced studies—constituting the vast majority of available research—for any possible insight they may provide. We thought it would be unfortunate to eliminate from consideration most of the classic work conducted by Ekman, Izard, and other pioneers in the field (e.g., Ekman, 1972; Ekman, Sorensen, & Friesen, 1969; Izard, 1971). Because their focus was on demonstrating the universality of facial expressions rather than the differences across cultural groups, these researchers formulated their studies around that goal and therefore rarely if ever used balanced designs. Even so, we felt it would be unrepresentative for us to ignore these classics in our own review. Instead, we used these unbalanced studies primarily to explore moderators of the effect rather than as evidence for the effect itself. Furthermore, we took precautions described in detail in the original article to ensure that these unbalanced designs replicated the results we found with their balanced counterparts. These precautions included a statistical test confirming no significant difference between the size of the in-group advantage in balanced versus unbalanced designs. Thus, we conclude that the use of unbalanced studies does not account for our finding of an in-group advantage in emotion recognition.

Stimulus Equivalence as a Cultural Eraser

Matsumoto's (2002) second requirement is *stimulus equivalence*, that emotional expressions in cross-cultural stimuli must be physically equivalent across cultures. "The characteristics of the stimuli specific to the emotion message must be exactly equivalent between the two expressor cultures"—he asserted—"the same muscles must be innervated, with no extraneous muscle movements, and they must be at the same intensity levels" (p. 237). For

this statement to represent more than a paradox—that studies of a cross-cultural phenomenon must pass through a filter designed to erase cross-cultural differences—it would require support from a great deal of additional research. This "requirement" denies the possibility that natural emotional expression may not be exactly equivalent across cultures in terms of muscle innervation, intensity levels, and other attributes. Emotional expression may be universal in many aspects, but culturally specific in others. This is an empirical question, and it should be examined empirically rather than through assertion. The forcible erasing of cultural differences as a methodological requirement prevents the possibility of learning about these differences.

In-Group Advantage as a Relationship Between Decoding and Encoding

Matsumoto (2002) argued that if facial movements and other physical-signal properties can vary across cultures, then judgment differences between cultural groups may map onto these differences in the stimuli. For this reason, cross-cultural differences in decoding may result from differences in the emotional signals across cultures. Thus, Matsumoto provided a step-by-step description of the same cultural learning and dialect theory of emotion to which we hinted at the end of the meta-analysis. Just as emotional expression may be a universal language, there may be stylistic differences across cultures that create subtle dialectic adjustments. Emotion recognition appears to be more accurate when the judge is familiar with these subtle differences in emotional expressive style. That is, the in-group advantage links expression with perception; stimulus nonequivalence may cause differences in judgment accuracy. Put simply, people may be able to perceive more accurately those emotions expressed in a more familiar style.

It appears, then, that we have some agreement with Matsumoto about the nature and possible mechanism of this phenomenon. However, in regard to the study of emotion recognition across cultures, Matsumoto (2002) argued that this phenomenon is a methodological artifact: "If the emotion signal properties are not equivalent among the expressor cultures, the comparison of judge cultures is inextricably confounded by stimulus differences" (p. 237). To the contrary, we do not believe that such differences create a confound but rather are themselves central to the phenomenon and for this reason worthy of scholarly research in this context. At this stage, any dialect theory of emotion is speculative and emerging—on the basis of its fit with the data on in-group advantage—and awaits direct testing.

Signal Clarity and the Role of Moderators

The third requirement Matsumoto (2002) argued that one must consider, the level of signal clarity, does not alter our core finding of an in-group advantage in emotion. It is potentially valuable in furthering our understanding of the phenomenon, given that stimulus clarity is a likely moderator, one of many important factors influencing the process of emotion recognition.

Matsumoto argued that if an in-group advantage exists, various factors may moderate such an advantage. We agree entirely, and for this reason we examined many potential moderators in our review (Elfenbein & Ambady, 2002). Moderators of an effect

represent boundary conditions and are not rival hypotheses (Baron & Kenny, 1986; Rosenthal, 1991). Moderator effects provide insight into the conditions under which one expects an effect to be large or small, rather than provide evidence that the effect is a mere artifact. We certainly do not argue that there is an in-group advantage in all possible contexts and all possible experimental conditions. About 20% of the studies we examined did not show an in-group advantage. Because the meta-analysis aimed to review the state of the field and to suggest directions for future work, we are certain that we are only beginning to understand the effect and have not found every potential moderator. However, the lack of such completeness contributes to measurement error and does not suggest a rival hypothesis nullifying the in-group advantage.

There are two reasons we did not further expand our search for moderators in the meta-analysis. The first reason is practical. We coded every variable we could find that the authors of the individual studies reported consistently. Again, we were limited in the review by the studies available for inclusion. The second reason we did not expand the search further was that heterogeneity analyses suggested that, once the level of cross-cultural exposure was controlled, there was little systematic variance left for a moderator to explain. Such heterogeneity analyses are standard in meta-analyses for the goal of determining whether a single effect size can reasonably describe a collection of different studies (Hedges & Olkin, 1985; Rosenthal, 1991). Although we believe that it could be worthwhile to search for further moderators, this statistical test suggested that our analyses already included the primary moderator of in-group advantage: cross-cultural exposure.

In spite of this finding, we still had hoped to include stimulus clarity as a moderator in the meta-analysis. As Matsumoto (2002) pointed out in his commentary, authors of the included studies varied greatly in their treatment of stimulus clarity, and few provided sufficient information. Given that past researchers generally did not measure it, we used a proxy instead. The closest reported measure was whether individual authors used a consensus sample to ensure a minimum level of stimulus clarity. This variable did not make a difference in the size of the in-group advantage.

Matsumoto (2002) argued that there may be an inverted U-shaped relationship between stimulus clarity and the in-group advantage. Exceptionally ambiguous stimuli may show no cultural differences because all groups recognize them poorly; likewise, exceptionally obvious stimuli may show no cultural differences because all groups recognize them well. We are sympathetic to the argument that the in-group advantage—like all experimental effects—exists only above a certain “floor” and below a certain “ceiling.” At medium levels, there is wider latitude for individual differences to emerge, and perhaps cultural differences as well. If the in-group advantage should appear exclusively at middle levels of stimulus clarity, then this may explain away some null results and thus strengthen the core finding of an in-group advantage. Again, moderation does not imply a rival hypothesis; the idea that the in-group advantage requires a medium level of stimulus clarity does not imply that the in-group advantage does not exist. In studies using balanced designs, any differences in stimuli such as signal clarity are *main effects* controlled before calculating the in-group advantage as an interaction effect. Thus, they do not

impact our finding of an in-group advantage using balanced studies of emotion recognition.

Other Possible Moderators

In addition to signal clarity, Matsumoto (2002) identified other possible attributes of emotional stimuli that could moderate the in-group advantage. We share his enthusiasm for identifying moderators, but again, because moderators represent boundary conditions rather than rival hypotheses, these variables do not cast doubt on the effect. He pointed out that studies using the vocal channel of communication demonstrate particularly reliable in-group advantage effects. This is consistent with our reported result that, at least for comparisons within national borders, dynamic channels such as vocal tone had a marginally higher level of in-group advantage. Although we would have preferred more studies varying along these dimensions, as he recommended, we had already included every existing study available to us.

The JACFEE: American Posers and American Expressions

Matsumoto (2002) argued that the in-group advantage does not exist based on null results in several of his own studies. These studies use the Japanese and Caucasian Facial Expressions of Emotion (JACFEE), a set of color photographs of facial expressions created in collaboration with Ekman (Matsumoto & Ekman, 1988). We question whether these results represent an adequate test of the in-group advantage and how to interpret such findings for two reasons.

Unbalanced Designs

First, we question whether these studies using the JACFEE used a balanced design. Thus, we believe they do not meet the first of Matsumoto's (2002) own requirements that he asserted as necessary to test the in-group advantage. Although we used unbalanced designs to explore potential moderators, the primary evidence for the existence of the in-group advantage comes from studies using balanced designs. In the JACFEE photo set, 17 of the 28 “Japanese” posers were actually Americans from families of Japanese ancestry (D. Matsumoto, personal communication, March 1, 1999), and the remainder were Japanese residents of the United States (Matsumoto & Ekman, 1988). For one emotion, happiness, all posers were American and none were Japanese. This reliance on American rather than Japanese posers creates a literal imbalance in the JACFEE that limits its ability to test the in-group advantage.

American Imitations

Second, the JACFEE used imitation of facial musculature patterns to dampen cross-cultural differences between emotional expressions by posers of Japanese and Caucasian backgrounds. As Matsumoto (2002) described in his commentary, posers moved their muscles in a manner consistent with prototypical models for the basic emotions. The intent of the JACFEE was to represent facial expressions of highly prototypical universal emotions, not

Table 1
Summary of Balanced Studies Across National Borders for Which Percentage Accuracy Effect Sizes Could Be Calculated

Study	Cultural groups	<i>N</i>	In-group advantage (%)	Channel
Boucher & Carlson (1980)	Malaysia, U.S.	83	4.5	Facial photographs
Kilbride & Yarczower (1983)	U.S., Zambia	206	3.4	Facial photographs
Kretsch (1968)	Israel, Japan, U.S.	190	8.7	Voice
McCluskey & Albas (1981)	Canada, Mexico	210	0.4	Voice
McCluskey et al. (1975)	Canada, Mexico	140	-0.8	Voice
Shimoda et al. (1978)	England, Italy, Japan	164	9.1	Voice and video

necessarily to represent natural, authentic Japanese expressions.¹ Because American experimenters hand-picked the expressions for these models (Ekman, Friesen, & Tomkins, 1971), posers of Japanese ethnicity were essentially asked to pose American faces—expressions that met American norms regarding emotional expression. Although research has demonstrated the recognition of these expressions across cultures, it is an unexamined empirical question whether these seven emotions follow identical expressive norms in Japan. Therefore, we question how to interpret the results of studies using stimuli that include Japanese posers but not necessarily Japanese facial expressions. We elaborated on this issue in the original article (Elfenbein & Ambady, 2002), and so we will not repeat it here.

Given these issues with the JACFEE, it is no surprise that Matsumoto's studies (e.g., Matsumoto & Ekman, 1988) did not show a significant interaction effect between the background of the expressor and perceiver. Because these studies used American faces and imitations of expressions empirically derived from American faces, one would expect the overall advantage for American participants that Matsumoto (2002) reported. Thus, these results obtained using the JACFEE support the in-group advantage.

Matsumoto's (2002) Faulty Analyses

Suggesting that the in-group advantage effect is small in magnitude, Matsumoto (2002) conducted several faulty analyses of our data. Below, we review each analysis and present the data clearly for the reader. Each of Matsumoto's analyses fails because he examined the in-group advantage without controlling for the largest moderator of the effect, cross-cultural exposure. Because moderator variables indicate the conditions under which to expect an effect with larger or smaller magnitude (Baron & Kenny, 1986; Rosenthal, 1991), it is important to include well-established moderators in an analysis before accepting the null hypothesis upon failure to replicate. By contrast, a null hypothesis can be rejected without including potentially important moderators, if an effect is strong enough to be significant without controlling for other factors that contribute to statistical error (Rosenthal & Rosnow, 1991).

Given Matsumoto's (2002) inclusion of only balanced studies, the concern does not arise coincidentally. Because balanced studies require repeated experimenter contact with multiple cultural groups first as emotional expressors and later as perceivers, such designs are much more common among groups with greater cross-

cultural exposure. Balanced designs are particularly common for use among multiple cultural groups residing together within a single nation, who presumably enjoy a relatively high level of exposure on a daily basis. Furthermore, such comparisons within a nation often involve minority and majority status differences, which—as we described in the meta-analysis—may involve asymmetry in their levels of exposure, motivation, or both. Members of minority groups consistently recognized emotions expressed by the majority group more accurately than members of the majority group, in turn, recognized emotions expressed by the minority group. In fact, as we discussed in the original article, minority group members often demonstrated an out-group advantage in the context of this asymmetry. Thus, in these studies within a single nation, we do not necessarily predict a substantial in-group advantage. In light of these important differences, the meta-analysis examined moderators separately for studies conducted within a nation versus across national borders. When we do the same with the balanced studies Matsumoto examined in his comment, the results are very different from those he presented and replicate the same patterns as our original article.

First, Matsumoto (2002) examined the balanced studies listed in Table 1 of Elfenbein and Ambady (2002), while ignoring cross-cultural exposure as a moderator. To illustrate the importance of considering this moderator before attributing failure to replicate as proof of the null hypothesis, Table 1 in the present article lists the six of these studies conducted across national borders. In these few studies, the in-group advantage effect is quite reliable: The effect size (r) associated with the single-sample t test (Rosenthal & Rosnow, 1991) is .74, and $r^2 = .55$. The effect even reaches statistical significance with $n = 6$, $t(5) = 2.5$, $p < .03$, one-tailed, 95% confidence interval (CI) $r = .23$ to .89, which indicates an effect size unusually large for the social sciences (Rosenthal & Rosnow, 1991). As expected, results examining studies conducted within national borders—which combined asymmetrical comparisons across minority and majority groups—show a smaller effect. Table 2 in the present article lists these 12 studies, for which the in-group advantage effect size is .39 ($r^2 = .15$), $t(11) = 1.4$, $p < .10$, one-tailed, 95% CI $r = -.17$ to .71. This effect, medium-to-large for the social sciences (Rosenthal & Rosnow, 1991), reaches marginal significance with only $n = 12$.

Matsumoto wrote that these results are “substantially different” (p. 240) than what we reported in the original study. To the

¹ We thank Nancy Eisenberg for raising this point.

Table 2
Summary of Balanced Studies Within National Borders for Which Percentage Accuracy Effect Sizes Could Be Calculated

Study	Cultural groups	<i>N</i>	In-group advantage (%)	Channel
Albas et al. (1976)	Anglo Canadian, Canadian Cree	80	28.3	Voice
Buchman (1973)	African American, Caucasian American, Puerto Rican	90	-1.7	Voice and video
Gitter et al. (1972a)	African American, Caucasian American	48	-3.6	Facial photographs
Gitter et al. (1972b)	African American, Caucasian American	160	0.6	Facial photographs
Gitter et al. (1971)	African American, Caucasian American	80	-4.0	Facial photographs
Mehta et al. (1992)	Caucasian New Zealander, New Zealand Maori	54	4.1	Facial photographs
Nowicki et al. (1998)	African American, Caucasian American	129	6.9	Facial photographs
	African American, Caucasian American	105	4.7	Facial photographs
Ricci Bitti et al. (1989)	Northern Italian, Southern Italian	80	15.8	Facial photographs
Ricci Bitti et al. (1979)	Northern Italian, Southern Italian	36	-4.1	Video
Ricci Bitti et al. (1980)	Northern Italian, Southern Italian	36	-2.0	Video
Wolfgang (1980), Study 2	Anglo Canadian, West Indian Canadian	—	1.2	Facial photographs

Note. A dash indicates that data were not listed.

contrary, Table 14 of the meta-analysis (Elfenbein & Ambady, 2002) highlighted the majority of studies he included, in the context of analyzing the relationship between majority and minority group status and in-group advantage. Table 2 in the present article closely resembles the earlier Table 14, as it contains precisely these studies along with one additional study not applicable in terms of minority versus majority group status. The meta-analysis found a large asymmetry between the ability of minority and majority groups to recognize each other's emotions. Thus, a proper test of the findings of in-group advantage should not mix these very different results and then declare victory for the null hypothesis.

The same flaw compromises Matsumoto's (2002) second analysis, in which he examined those balanced designs for which we could calculate an interaction effect. He suggested that four of the effects are unusually large and that for that reason we should disregard them. The particular four studies he identified have large in-group advantage effects, as they include half of the effects calculated for comparisons across national boundaries. The remaining studies that Matsumoto maintained in his analysis overwhelmingly represent comparisons within nations, again combining together asymmetric effects of minority and majority group members. This is why they demonstrate a relatively low level of in-group advantage. Again, this is not "dramatically different" (p. 240), as Matsumoto stated, but rather replicates the findings of the original article.

Explaining the In-Group Advantage

In his conclusion, Matsumoto (2002) expressed concern that our findings and interpretations are "problematic because they at-

tempted to shut the door on other rival, alternative explanations of cultural differences in judgments" (p. 241). We do not attempt to evaluate evidence concerning all types of cultural differences in judgment, but rather we evaluate various cross-cultural phenomena in emotion recognition in terms of their potential to explain the in-group advantage in particular. In the spirit of exploration, we examine these phenomena as possible contributors of in-group advantage even if no theorist has proposed them for this particular purpose.

Because the in-group advantage is an interaction effect of the match between the expressor and perceiver of an emotional message, we argue that any viable explanation must address this match. By contrast, any phenomenon that addresses absolute differences across cultures in expressive clarity or ability or absolute differences across cultures in decoding ability, cannot logically explain the presence of in-group advantage. Those differences explain the main effects but not the interaction effect that characterizes the in-group advantage. We do not deny that these other phenomena may exist or could be important, but rather that they do not explain the in-group advantage, reflecting the match or mismatch between the culture of the expressor and that of the perceiver. As we discuss above, we believe the likely explanation for the in-group advantage concerns subtle differences in expressive cues across cultures, such that individuals can more accurately recognize emotion expressed in a style with which they are familiar. Matsumoto (2002) also described the likely existence of this phenomenon in his commentary, and argued that it can cause in-group advantage effects as we have found. He considered this to be a confound, rather than a core effect, but nonetheless he agreed

that such differences in emotional expression may exist and be related to the in-group advantage.

We also consider rival explanations, and accept some as possible alternatives or contributors to in-group advantage. We review prior theories about cultural differences in emotional judgments, not in terms of their existence but rather their applicability in explaining this effect. For example, decoding rules doubtless exist in some contexts and are fascinating, but they simply address a phenomenon of main effects such that members of some cultural groups achieve greater accuracy than others. To our knowledge, decoding rule theorists have not posited that decoding rules should vary according to the cultural background of the emotional poser. Thus, they do not meet our test of addressing the match between expressor and perceiver, which is necessary to explain the in-group advantage.

Differences posited across languages may play a complex role. Given Matsumoto's (2002) argument that we contradicted ourselves by "discard[ing] the possible influence of language differences" and later discussing their potential importance (p. 242), this is worth clarifying. Language translation difficulties can certainly contribute to the in-group advantage. Because translation does not present difficulty for the group in which the stimuli and categories originated, this explanation addresses the match between expressor and perceiver. For studies examining the vocal channel, language may contribute to the in-group advantage if there are certain physical properties of a language that are unrelated to emotional expression but which serve as "red herrings" to confuse groups unfamiliar with the language. This explanation also addresses the match between expressor and perceiver. However, other theory concerning language—not necessarily intended to explain the in-group advantage, but addressing cross-cultural differences in emotion recognition more generally—does not address this match. For example, Matsumoto and Assar (1992) argued that some languages are superior to others in expressing emotional concepts. They suggested that the "English language may be more precise in labeling one's own and other's emotions" than Hindi, Chinese, and other languages (p. 95). This explanation, regardless of whether it is true, could only account for main effects across cultures. Because such theory could not address the match between expressor and perceiver, it could not explain the in-group advantage.

A Research Agenda and Implications

Research on the in-group advantage in the communication of emotion is still young, and we agree with Matsumoto (2002) in our hope that these current articles do not close the door on the topic—or on rival explanations. A dialect theory of emotion is speculative and is emerging primarily on the basis of its fit with the data. The field needs additional research to test each link predicted by the theory. As Matsumoto mentioned, an essential step is to test for cultural differences in actual behaviors in spontaneous emotion-eliciting situations and then to vary expressions systematically in further judgment studies. Another essential test of cultural learning is to disentangle the confound between cultural knowledge and cultural group membership. That is, group members presumably share knowledge of cultural norms, but these norms may also be learned by sojourners from other groups with sufficient cross-cultural exposure. It could be valuable to study

perceivers who share cultural knowledge, some of whom are members of the expressor's cultural group and some of whom are not members. By attempting to create and suppress the in-group advantage in a range of situations, we can gain further insight into the phenomenon.

Matsumoto (2002) argued that accepting the existence of an in-group advantage "can easily lead to theories that advocate 'fundamental' intergroup differences, which, in turn, can easily polarize cultures against each other" (p. 242). To the contrary, we believe that it is theories addressing absolute differences in emotional skill across cultures that carry such risk. One could interpret the argument that some languages are superior to others in expressing emotion (Matsumoto & Assar, 1992) as favoring certain cultures over others. Likewise, Matsumoto (1989) appealed to fundamental cultural differences in an attempt to explain cultural variation in the ability to recognize American facial photographs. In that review, Caucasian groups outperformed their non-Caucasian counterparts when viewing Caucasian stimuli (Matsumoto, 1989; Schimmack, 1996). Matsumoto's (1989) explanation centered on the possibility that non-Western cultures use decoding rules that suppress their skill in understanding emotion. One could interpret this argument as favoring Western over non-Western cultures.

By contrast, a dialect theory emphasizing cultural learning is fundamentally egalitarian. Rather than positing the superiority of some cultural groups, it suggests that each culture has a working system of emotional communication requiring understanding from those who participate. Our findings on the moderation of the in-group advantage by cross-cultural exposure suggest that such contact can help to erase these differences and can lead to greater understanding. We believe that further research in this field has the potential to help bridge intergroup differences rather than to polarize cultures against each other. Learning about potential barriers can inform the design of appropriate training and intervention programs to improve cross-cultural communication.

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