Multilingualism and the Following of Sociocultural Rules

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Emotional behaviors are socioculturally influenced. Theories of emotion expressivity, emotion regulation, and linguistic cognition suggest that multilingualism reinforces social rule-usage and this reinforcement may extend to social rule-abiding emotional behaviors (Stocco & Pratt, 2014). We hypothesized multilingualism can reinforce culturally normative emotional behaviors in individuals, because multilingual individuals have to flexibly combine rules within and between languages, which requires a degree of cognitive flexibility atypical of a monolingual individual. Culturally, individuals high on interdependence values suppress emotions to preserve social harmony, therefore we predicted that interdependent multilinguals would report more expressive suppression than interdependent monolinguals. Individuals high on independence values express their emotions in order to better communicate and influence others, therefore we predicted that independent monolinguals would report less expressive suppression than interdependent monolinguals. Multiple regression analyses of cross-sectional data on Asian American and European American ethnic samples suggested that greater interdependence predicted a greater reduction of emotion expressivity for multilinguals; a reduction of greater magnitude than that of monolinguals. Analyses also suggested that greater independence reduced emotion suppression for monolinguals, but was not significantly related to emotion suppression for multilinguals. Together, the findings suggested that multilingualism increases interdependent socio-emotional behavior (more suppression), but not independent socio-emotional behavior (either increased expressivity, or reduced suppression).

Developed nations such as the United States are becoming increasingly diverse (Forehand & Kotchick, 1996). For example, in the US alone, foreign-born immigrants and their US-born descendants will comprise 36% of the total population by 2065 (Pew Research Center, 2015). Consequently, multilingualism is on the rise (Linz & Stepan, 1996). As more people speak several languages and intermingle between cultures, questions about how multilingualism can affect one's psychology and emotional behaviors become particularly relevant for policy makers and clinical providers.

Different cultures exhibit different normative emotional behaviors. Psychologist Klaus Scherer (2005) defines emotion as a series of synchronized changes in appraisal, bodily symptoms, motivation, facial/vocal expression, and subjective feeling in response to an external or internal stimulus. For the purposes of this paper, we will focus on the facial and vocal expression subcomponent of the definition. Emotional behaviors can thus be defined as important social behaviors involving changes in facial and vocal expression that are influenced by culture and language.

These emotional behaviors are influenced by the self-construals of individuals. Individuals residing in Western cultural contexts normatively hold independent self-construals and construe the self as autonomous; therefore, Western individuals look to maintain their independence from peers by focusing on the self and by discerning and expressing their distinctive personal attributes (Markus & Kitayama, 1991). To Western individuals, behaviors and the self can be explained by distinctive internal attributes like personality traits and feelings. Meanwhile, individuals residing in Eastern cultures hold interdependent self-construals; meaning, such individuals tend to focus more on caring for others, fitting in, and maintaining harmony and interdependence with their peers. To many Eastern cultures, internal attributes like personality traits are viewed as unfixed and context-dependent. Instead, behavior and the self only really make sense in light of the broader social context and the behavior and internal attributes of others.

These self-construals can reveal themselves in emotional behaviors (Matsumoto, Yoo, Nakagawa, & Multinational Study of Cultural Display Rules, 2008). The social rules of independence emphasizes emotional expression, while interdependence emphasizes emotional suppression, perhaps because emotion expression threatens social harmony valued by those with interdependent self-construals (Markus & Kitayama, 1991). Expressive suppression, defined by individuals inhibiting their overt emotions during social interactions (Butler et al., 2003), helps interdependent individuals preserve social harmony, whereas emotion expression, or the behavioral changes to facial expression and posture that is accompanied by emotion helps individuals be assertive and influential.

The question is, can multilingualism interact with or affect these emotional behaviors? Stocco and Prat (2014) enlisted bilingual and monolingual participants to complete a Rapid Instructed Task Learning (RITL), in which the participants had to learn and apply novel rules for manipulating two numbers in a short period of time.

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Bilinguals were more flexible in choosing and merging rules and were significantly quicker in completing new instructed mathematical trials than monolinguals. They hypothesized that because multilinguals have had to learn the rules of multiple languages as well as learn to combine rules between and within them to avoid social missteps, they are faster at complex rule-based decision-making.

In a separate study, Yang, Yang, and Lust (2011) compared four groups of four-year-old children: one made up of US-residing Korean and English bilinguals, one made up of US-residing Korean monolinguals, one made up of US-residing English monolinguals, and one made up of South Korea-residing Korean monolinguals. Each group completed a cognitive executive functioning task, which assessed a range of cognitive proficiencies such as inhibition of behavior, switching attention, and working memory. Their findings suggested that overall, the US-residing Korean and English bilingual children performed the best on these metrics suggesting that bilingualism contributed early and efficient attentional functioning over and above cultural effects. Korean monolinguals from Korea out-performed US-residing English monolinguals in terms of accuracy but at the cost of longer response times.

The Present Study

In this paper, we extend the limited research on the effects of multilingualism on emotional behaviors by investigating the potential effect of multilingualism versus monolingualism on emotional behavior that would conform to general sociocultural rules informed by independence or interdependence. The speed by which multilinguals enact complex rule-based decision making and cognitive flexibility suggest that the impact of multilingualism is domain-general, potentially affecting the salience of sociocultural rules and perhaps emotions. We hypothesized that multilinguals would be more likely to express emotions that are in accordance with their self-construals. We predicted that multilinguals holding interdependent self-construals would report more expressive suppression than their monolingual peers, while multilinguals holding independent self-construals would report more emotional expression than their monolingual peers.

Method

Participants and Procedure

Undergraduate students (n = 316 students, 177 female and 167 male) were sent an online questionnaire created using SurveyMonkey and distributed via email to complete for class credit. Informed consent was obtained electronically. Seven participants did not respond to one or more measures and 21 participants who were over the age of 26 were removed from analysis due to the outlying age difference among our intended college-aged sample. The age range was from 18 to 25 years. A final sample of 316 participants were analyzed. In total, 171 were monolingual and 145 were multilingual. The questionnaire asked if participants spoke anything other than English at home. If they did, they were coded as multilingual. If not, they were coded as monolingual. Furthermore, there were 117 Caucasian students, 78 Asian Americans, 95 foreign-born Asians, and 26 students of other or mixed race.

Measures

The Self-Construal Scale (SCS; Singelis, 1994) measures the strength of an individual's interdependent and independent self-construals. The scale has been found to have satisfactory reliability and validity (Singelis, 1994). The scale contains 12 items reflecting independent self-construal, and 12 items reflecting interdependent self-construal. Cronbach's alphas for the independent and interdependent items were .65 and .56, respectively. Admittedly, these are lower alphas because we had to exclude a number of participants from the analysis, as discussed in the participants section. For more details on the SCS, see Appendix A.

The Berkeley Expressivity Questionnaire (BEQ-16; Gross & John, 1997) measures an individual's emotion expressivity and has three separate subscales: positive expressivity, negative expressivity, and impulse strength. These can be summed to generate a general expressivity scale, which we used in lieu of the subscales given that we were concerned with expressivity in general and not any particular aspect of expressivity. Cronbach's alpha for the BEQ general expressivity scale was .79 for European Americans and .86 for Chinese Americans. For more details on the BEQ, see Appendix B.

The Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) measures an individual's propensity to utilize one of two emotion regulatory strategies: cognitive reappraisal and expressive suppression. We chose to focus on expressive suppression given the cultural significance of this regulatory strategy. Cronbach's alpha for the suppression subscale was .78. For more details on the ERQ, see Appendix C.

Design

Our independent variables included a dummy-code for language group (0 for monolingual, 1 for multilingual), SCS independence scores, and SCS interdependence scores. Our dependent variables were BEQ and ERQ scores. Using a multiple regression framework, we regressed our dependent variables onto the three and two-way interactions of Language × Independence × Interdependence, Language × Independence, Language × Interdependence, and Independence × Interdependence, the main effects of Language, Independence, and Interdependence, all while controlling for sex and age. We also conducted subgroup analyses by sorting our participants into four race categories: Asian Americans, foreign-born Asians, Caucasians, and other races.

Results

Examining BEQ General Expressivity scores as the dependent variable, we found no significant Language × Independence × Interdependence interaction. No two-way interactions of Language × Independence, and Language × Interdependence were found to be significant either. Finally, when all interaction terms were removed, no main effects were found to be significant.

Using the ERQ suppression score as the dependent variable, no significant Language × Independence × Interdependence interaction was found. We did find a significant Language x SCS Independence interaction (β = 1.448, *SE* = .729, $p < .05$). Follow-up subgroup analyses were conducted for each level of Language. We found a main effect such that increased SCS interdependence scores predicted increases in ERQ expressive suppression scores for monolinguals (β = 1.362, *SE* = .501, $p < .05$) and multilinguals (β = 1.621, *SE* = .582, $p < .05$). However, we only found a main effect of increased SCS independence scores predicting increased ERQ expressive suppression for monolinguals (β = -1.701, *SE* = .461, $p < .05$), and not for multilinguals. Overall, the mean ERQ expressive suppression score for monolinguals was *M* = 14.175 (*SD* = 4.615), while the mean ERQ expressive suppression score for multilinguals was *M* = 15.269 (*SD* = 4.954).

When we conducted subgroup analyses by race/ethnicity, we found main effects such that monolingual independent White/Caucasians had significantly lower ERQ scores (β = -1.999, *SE* = 0.563, $p < .05$) than monolingual other races, monolingual Asian Americans, or monolingual foreign born Asians. Furthermore, monolingual interdependent other races had significantly higher ERQ expressive suppression scores than monolingual Asian Americans, monolingual foreign born Asians, and monolingual interdependent White/Caucasians (β = *6.615, SE = 1.957, p <.05*). As a whole, the mean ERQ expressive suppression score for monolingual Caucasians was *M* = 13.67 (*SD* = 4.675), for monolingual "other races" *M* = 12.700 (*SD* = 4.624), for monolingual Asian Americans *M* = 15.842 (*SD* = 4.322), and for monolingual foreign born Asians *M* = 15.462 (*SD* = 3.688). These means do not account for interdependent or dependent status, which is captured by the regression statistics.

Discussion

We hypothesized that multilingualism reinforces culturally-normative emotional behaviors. Based on this hypothesis, we predicted that multilingual individuals holding interdependent self-construals would report more expressive suppression than interdependent monolinguals, while independent multilinguals would report more emotional expression than interdependent monolinguals. Our results showed that interdependent multilinguals reported more expressive suppression than interdependent monolinguals, but independent multilinguals did not report significantly more emotional expression, therefore partially supporting our hypothesis. One possible explanation is that emotional suppression might be a more effective multipurpose strategy across both independent and interdependent cultures. Emotional expression, in contrast, is only salient in independent cultures and is not valued in interdependent cultures (Markus & Kitayama, 1991).

Our results may be potentially confounded by extraneous factors. For example, when the data was split and analyzed by race/ethnicity, individuals identifying as Asian did not exhibit significantly higher levels of emotional expressive suppression on the ERQ than Caucasians or other races, regardless of whether they were monolingual or bilingual. This differs from the existing literature, which indicates that Eastern cultures often have interdependent self-construals which should have more emotional suppression. Our experiment also only covers an undergraduate age range, 18-25. This reduces generalizability of the results, as it could be that age interacts with the self-construal or emotional expressivity variables. In addition, the method of measuring monolinguals and multilinguals was very coarse, and didn't account for language proficiency, which could have a potential interaction with the dependent variables.

This study provides some support for the idea that interdependent multilinguals suppress their emotions more so than monolinguals, as mentioned in Stocco and Prat (2014). However, we did not find that independent multilinguals reported being more emotionally expressive than independent monolinguals. In the future, experimental research should be done to see if these results can be replicated. While we did not find independent multilinguals and independent monolinguals to have a statistically significant difference in their emotional expressivity, there was a nonsignificant difference that suggested independent monolinguals expressed more emotion, so it could simply be the case our study did not have the statistical power to find a difference. There is an alternate potential model that future researchers could explore, one that involves varying the social context. For example, say an interdependent multilingual or monolingual resides in a predominantly independent social context. Then, even if their self-construal is interdependence, the interdependent multilingual, having greater rule-based decision-making skills than the interdependent monolingual, would express more emotion than the interdependent monolingual. Thus, the social context could be another variable that interacts with emotional expressivity, number of languages, and cultural self-construal. This could be an avenue that is explored pseudo-experimentally, with the social context controlled.

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Appendix A

Self-Construal Scale (SCS): The subjects were measured with the instruction: “This is a questionnaire that measures a variety of feelings and behaviors in various situations. Listed below are a number of statements. Read each one as if it referred to you. Beside each statement write the number that best matches your agreement or disagreement. Please respond to every statement.” Following this were 30 statements; “I enjoy being unique and different from others in many respects”, “I can talk openly with a person who I meet for the first time, even when this person is much older than I am”, “Even when I strongly disagree with group members, I avoid an argument”, “I have respect for the authority figures with whom I interact”, “I do my own thing, regardless of what others think”, “I respect people who are modest about themselves”, “I feel it is important for me to act as an independent person”, “I will sacrifice my self-interest for the benefit of the group I am in”, “I'd rather say "No" directly, than risk being misunderstood”, “Having a lively imagination is important to me”, “I should take into consideration my parents' advice when making education/career plans”, “I feel my fate is intertwined with the fate of those around me”, “I prefer to be direct and forthright when dealing with people I've just met”, “I feel good when I cooperate with others”, “I am comfortable with being singled out for praise or rewards”, “If my brother or sister fails, I feel responsible”, “I often have the feeling that my relationships with others are more important than my own accomplishments”, “Speaking up during a class (or a meeting) is not a problem for me”, “I would offer my seat in a bus to my professor (or my boss)”, “I act the same way no matter who I am with”, “My happiness depends on the happiness of those around me”, “I value being in good health above everything”, “I will stay in a group if they need me, even when I am not happy with the group”, “I try to do what is best for me, regardless of how that might affect others”, “Being able to take care of myself is a primary concern for me”, “It is important to me to respect decisions made by the group”, “My personal identity, independent of others, is very important to me”, “It is important for me to maintain harmony within my group”, “I act the same way at home that I do at school (or work)”, and “I usually go along with what others want to do, even when I would rather do something different” (From 1, *strongly disagree*, 4, *neutral*, to 7, *strongly agree*).

Appendix B

Berkeley Expressivity Questionnaire (BEQ): The subjects were measured with the instruction: "For each statement below, please indicate your agreement or disagreement. Do so by choosing the appropriate number from the following rating scale." Following this, were 16 statements; "Whenever I feel positive emotions, people can easily see exactly what I am feeling", "I sometimes cry during sad movies", "People often do not know what I am feeling", "I laugh out loud when someone tells me a joke that I think is funny", "It is difficult for me to hide my fear", "When I'm happy, my feelings show", "My body reacts very strongly to emotional situations", "I've learned it is better to suppress my anger than to show it", "No matter how nervous or upset I am, I tend to keep a calm exterior", "I am an emotionally expressive person", "I have strong emotions", "I am sometimes unable to hide my feelings, even though I would like to", "Whenever I feel negative emotions, people can easily see exactly what I am feeling", "There have been times when I have not been able to stop crying even though I tried to stop", "I experience my emotions very strongly", and "What I'm feeling is written all over my face" (From 1, *strongly disagree*, 4, *neutral*, to 7, *strongly agree*).

Appendix C

Emotion Regulation Questionnaire (ERQ): The subjects were measured with the instruction: "We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale." Following this instruction were 10 statements; "When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about", "I keep my emotions to myself", "When I want to feel less negative emotion (such a sadness or anger), I change what I'm thinking about", "When I am feeling positive emotions, I am careful not to express them", "When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm", "I control my emotions by not expressing them", "When I want to feel more positive emotion, I change the way I'm thinking about the situation", "I control my emotions by changing the way I think about the situation I'm in", "When I am feeling negative emotions, I make sure not to express them", and "When I want to feel less negative emotion, I change the way I'm thinking about the situation" (From 1, *strongly disagree*, 4, *neutral*, to 7, *strongly agree*).