Tridimensional Acculturation and Adaptation Among Jamaican Adolescent-Mother Dyads in the United States

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A bidimensional acculturation framework cannot account for multiple destination cultures within contemporary settlement societies. A tridimensional model is proposed and tested among Jamaican adolescent-mother dyads in the United States compared to Jamaican Islander, European American, African American, and other Black and non-Black U.S. immigrant dyads (473 dyads, M adolescent age = 14 years). Jamaican immigrants evidence tridimensional acculturation, orienting toward Jamaican, African American, and European American cultures. Integration is favored (70%), particularly tricultural integration; moreover, Jamaican and other Black U.S. immigrants are more oriented toward African American than European American culture. Jamaican immigrant youth adapt at least as well as nonimmigrant peers in Jamaica and the United States. However, assimilated adolescents, particularly first generation immigrants, have worse sociocultural adaptation than integrated and separated adolescents.

Approximately 87% of the 38 million foreign-born individuals in the United States are non-European and nearly 3 million are of African descent (U.S. Census Bureau, 2010), yet surprisingly little psychological research exists on the acculturation or adaptation of Black immigrant youth and families in the United States. This dearth may partly reflect the fact that the prevailing bidimensional acculturation framework (Berry, 1980, 1997) is inadequate to fully describe acculturation processes in Black immigrants. By treating the explicitly multicultural

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U.S. society as an implicitly homogeneous culture, this framework by default holds the European American mainstream as the sole "destination" for immigrants, missing the possibility of multiple destination cultures within a settlement country. We propose an expansion of the bidimensional acculturation framework to a tridimensional paradigm for Black immigrants. That is, Black U.S. immigrants may orient toward at least three cultures during acculturation rather than two: their culture of origin, European American culture, and African American culture. We present empirical data testing this proposition in an understudied Black sample—Jamaicans. With Caribbean immigrants comprising over half of the U.S. foreign-born Black population (U.S. Census Bureau, 2010), this immigrant group calls for more research attention.

The Bidimensional Acculturation Framework: End of an Era?

Broadly defined, acculturation entails processes of change following intercultural contact (Lansford, Deater-Deckard, & Bornstein, 2007). The bidimen-

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sional acculturation framework (Berry, 1980, 1997) has provided the prevailing model for acculturation based on an immigrant's degree of maintenance of the culture of origin (Dimension 1) and participation in the destination culture (Dimension 2). Cross-tabulating these two cultural dimensions gives rise to four possible acculturation statuses (AIMS): Assimilation (low, high), Integration (high, high), Marginalization (low, low), Separation (high, low). Research has supported this acculturation framework in multiple immigrant groups (e.g., Kosic, 2002; Laroche, Kim, Hui, & Joy, 1996; Ryder, Alden, & Paulhus, 2000), including a 13-country study showing that of 4,334 immigrant adolescents, 36.4% had "integrated" profiles, followed by 22.5% "ethnic," 22.4% "diffuse," and 18.7% "national" (International Comparative Study of Ethnocultural Youth [ICSEY], Berry, Phinney, Sam, & Vedder, 2006).

Unfortunately, mainstream acculturation research based on this bidimensional model has remained mainstream-focused by conceptualizing and measuring immigrants' cultures of origin and destination as homogeneous entities rather than as the multicultural conglomerates that they often are. Consider the acculturation experiences of U.S. immigrants who were bicultural in their home country before emigrating, such as ethnically Jewish Russians (Birman, Persky, & Chan, 2010). A corresponding myopia, and the focus of this article, is the failure to recognize multiple destination cultures within multicultural societies like the United States. The conceptualization of a generic or unspecified "American" destination culture by default treats European American mainstream culture as the sole reference group for all U.S. immigrants (Abraído-Lanza, Armbrister, Flórez, & Aguirre, 2006). This "one size fits all" assumption is limiting, particularly for the vast majority of U.S. immigrants who are of non-European heritage (Bhatia & Ram, 2001; Schwartz, Unger, Zamboanga, & Szapocznik, 2010).

African American Culture: A Third Cultural Dimension for Black U.S. Immigrants

The idea that Black immigrants in the United States also acculturate to African American culture is not new. Nearly two decades ago, sociologists Portes and Zhou (1993) proposed segmented assimilation theory to describe how social and structural factors dictate the "sector of society" within which immigrants acculturate. Their research with Haitian and Jamaican immigrant youth in Florida demonstrated that Black immigrants become oriented toward African American culture because: (a) they share the African-derived phenotype (and move from being a member of the majority group in their home country to being a visible minority in the United States), (b) they tend to live near inner-city African American communities due to modest life circumstances (by U.S. standards) as newcomers, and (c) they tend to be treated like African Americans and become targets of racial discrimination. Waters' (1999) interviews with Black Caribbean immigrant young adults in New York underscore the saliency of African American culture during acculturation: 42% of her sample strongly identified as African American (more so second-generation immigrants), whereas 31% professed strong ethnic identification but a purposefully distant stance from African Americans. Research with Kenyan immigrants in the United States suggests that Black immigrants' consumer needs (e.g., hair care, religious services, cultural entertainment) are an additional orienting factor toward African American culture (Wamwara-Mbugua, Cornwell, & Boller, 2008).

Sociocultural Adaptation of Immigrant Youth

Immigrant youth adapt behaviorally and academically as well as, and in some cases better than, their nonimmigrant peers (Berry et al., 2006; Fuligni & Fuligni, 2007; García Coll & Marks, 2009); however, there have been mixed findings on whether and how adaptation varies based on acculturation status. Some studies have reported that integration is linked to optimal adaptation and marginalization to worse, with separation and assimilation falling in between (Berry & Sabatier, 2010; Berry et al., 2006). Other studies, including reinterpretations of earlier data, question the superiority of integration and suggest separation as equal or better in some contexts (see Rudmin, 2006; for review). For Black Caribbean immigrants, segmented assimilation theory suggests that assimilation into the low-income inner-city African American subculture may be associated with diminished sociocultural adaptation for immigrant youth who adopt a defensive stance toward the White mainstream culture in response to discrimination (Portes & Zhou, 1993).

Study Hypotheses

The current study investigates acculturation and sociocultural adaptation (behavioral and academic) among Jamaican adolescent–mother dyads living in the United States compared to Island Jamaican, European American, African American, and other Black and non-Black U.S. immigrant dyads. We expected to find evidence of tridimensional acculturation and for integration to be the favored acculturation status. Moreover, we expected Jamaican immigrants and other Black U.S. immigrants, but not non-Black U.S. immigrants, to demonstrate a stronger orientation toward African American than European American culture. Finally, we expected at least comparable adaptation of Jamaican immigrants relative to nonimmigrant peers, and poorer adaptation among assimilated youth.

Method

Participants and Procedure

Altogether, 473 adolescent-mother dyads from the United States (n = 179) and Jamaica (n = 294)participated, excluding dyads with more than 15% missing data for either partner. Adolescents ranged from 10 to 18 years (M = 14.07, SD = 2.17, 51%girls), and mothers from 27 to 62 years (M = 42.04, SD = 6.49). Most U.S. participants lived in Illinois or New York and were recruited from schools, cultural festivals, churches, and families of undergraduates. Most Jamaican Islanders lived in Kingston, St. Andrew, or St. Catherine and were recruited from schools, after-school programs, and churches. Parent or guardian consent and adolescent assent were provided by each dyad, and individual incentives (\leq U.S. \$10 value) or group drawings (\leq U.S. \$50 value) were used.

There were five subsamples, which we label "ethnocultural groups": (a) 38 Jamaican immigrant dyads (JI: U.S. residents, one or both parents Jamaican born, adolescent born in Jamaica [n = 14] or United States [n = 24], 94% Black, 6% Multiracial), (b) 294 Jamaican Islander dyads (J: adolescent and one or both parents Jamaican-born and/or resident for most of their lives, 88% Black, 10% Multiracial, 2% other), (c) 78 European American dyads (EA: U.S.-born residents, White except for 1 multiracial individual), (d) 36 African American dyads (AA: U.S.-born residents, Black or African American except for 3 dyads with a multiracial individual), and (e) 27 other U.S. immigrant dyads (OI: U.S. residents, adolescent or parent(s) or both born in a country other than Jamaica or the United States, 17% Black, 83% non-Black). On a scale ranging from 1 (seventh grade) through 7 (graduate professional degree), educational attainment of primary household earners (Hollingshead, 1975; 85% parents or step-parents) means were 5.43, 4.80, 6.01, 5.03, and 5.81 (SDs = 1.17, 1.55, .88, 1.16, and 1.08), respectively. Parent education differed across groups, *F*(1, 941) = 28.73, *p* < .05: EA = OI > JI* > AA = J, *p*s < .05 (except for *, *p* = .08).

Measures

Adolescents and mothers completed parallel questionnaires containing all measures.

Acculturation. The 34-item Acculturation Rating Scale for Jamaican Americans (ARSJA) was adapted from Scale 1 of the Acculturation Rating Scale for Mexican Americans, a two-statement orthogonal acculturation measure (ARSMA–II; Cuéllar, Arnold, & Maldonado, 1995). The ARSMA–II and ARSJA acknowledge the multidimensional components of acculturation (Schwartz et al., 2010) by measuring both behavior (e.g., friends and associations, entertainment and food preferences) and identity (i.e., the degree of identification as a member of each cultural group).

The Jamaican Orientation Scale (JOS; Cronbach's α = .95) of the ARSJA adapts the content of the 17item ARSMA-II Mexican Orientation Scale to Jamaican culture but collapses two items regarding watching Jamaican TV and Jamaican movies into one. The European American Orientation Scale (EAOS; $\alpha = .88$) of the ARSJA comprises 9 of the original 13 items on the ARSMA-II Anglo Orientation Scale. Three items referencing English language (i.e., speaking, writing, thinking) and an "American" identity question are excluded because English is the primary language of both countries and we aimed to measure identification with multiple American groups rather than a single main-"Anglo" stream group. is replaced with "White/European American" to match U.S. Census 2000 terminology, and three EAOS items are reworded from "English language" music, TV, movies, and books to "White American" music, TV, movies, and books. A third ARSJA subscale, the 9-item African American Orientation Scale (AAOS; α = .85), is parallel to the EAOS except for the substitution of "Black/African American" for "White/European American." **Participants** endorsed items on a 5-point Likert scale, and JOS, EAOS, and AAOS scale means were calculated. For logistical reasons, 18% of the non-JI sample did not complete the ARSJA.

Adolescent behavior. The Resilience subscale of the Behavioral Assessment for Children of African Heritage (BACAH) measured adolescent behavioral strengths: 28-item child and adolescent version ($\alpha = .87$), 37-item parent version ($\alpha = .93$; Lambert et al., 2005). On a 3-point Likert scale participants rated the degree to which adolescents possessed a

Adolescent grades. Because GPA is not used in public secondary schools in Jamaica, participants were asked to report adolescents' grade average on most recent cumulative exams using a 6-point ordinal scale.

Social desirability. Participants completed the 11-item true-or-false Marlowe-Crowne Social Desirability Scale Short–Form A (Reynolds, 1982). After reverse scoring, a scale score was created by summing the number of items reported true.

Results

Preliminary Analyses

Fewer than 5% of the data were missing across the 473 dyads, Little's MCAR test, $\chi^2(28,004) = 31,242$, p < .001. Missing data points were imputed using the expectation-maximization algorithm (Dempster, Laird, & Rubin, 1977). Means and standard deviations of main study variables are displayed in Tables 1 and 3. A repeated measures analysis of covariance (ANCOVA) controlling for demographic variables and Social Desirability

Table 1

showed an ARSJA Scale × Ethnocultural Group interaction on ARSJA scores, *F*(8, 1556) = 637.88, *p* < .001. As expected, each respective ethnocultural group had the highest score for the ARSJA scale corresponding to its culture, Cohen's *d*s (*M*1 – *M*2 ÷ pooled *SD*) = 2.29–2.36. First and second-generation immigrant adolescents did not differ in acculturation or adaptation scores.

Main Analyses

To examine acculturation statuses, cross-tabulation was performed based on mid-point splits for each ARSJA subscale (i.e., 3 on a 5-point scale) forming a 2 (JOS: high, low) \times 2 (EAOS: high, low) \times 2 (AAOS: high, low) factorial matrix of eight acculturation groups, which were sorted into four superordinate acculturation statuses. The integrated acculturation status contained acculturation groups with high JOS and high EAOS or AAOS or both, the assimilated status contained groups with low JOS but high EAOS or AAOS or both, the separated status had a group high on JOS only, and the marginalized status had a group low on all three (see Table 2). ARSJA scale scores of only 6 participants fell directly on the scale mid-point and were

Variable	Jamaican immigrant		Jamaican Islander		European American		African American		Other U.S. immigrant	
	М	SD	М	SD	М	SD	М	SD	М	SD
JOS	3.71	.77	3.82	.42	1.22	.22	1.83	.59	1.51	.70
EAOS	3.09	.80	2.43	.68	4.41	.49	3.00	.80	3.43	1.07
AAOS	3.80	.79	2.98	.80	2.38	.74	4.40	.59	3.08	.96

Note. JOS, EAOS, AAOS = Jamaican, European American, and African American Orientation Scales, respectively.

Table 2	
Acculturation Groups and Statuses	

Status	Group	Adolescents (%)	Mothers (%)	Total (%)
Integrated	High JOS, EAOS & AAOS	15 (39)	15 (39.5)	30 (40)
0	High JOS & AAOS only	10 (26)	10 (26.5)	20 (26)
	High JOS & EAOS only	1 (3)	2 (5)	3 (4)
	Subtotal	26 (68)	27 (71)	53 (70)
Assimilated	High EAOS & AAOS only	4 (10.5)	0 (0)	4 (5)
	Hi AAOS only	4 (10.5)	1 (3)	5 (7)
	Hi EAOS only	0 (0)	0 (0)	0 (0)
	Subtotal	8 (21)	1 (3)	9 (12)
Separated	Hi JOS only	3 (8)	8 (21)	11 (14)
Marginalized	Low JOS, EAOS & AAOS	1 (3)	2 (5)	3 (4)

Note. JOS, EAOS, AAOS = 5-point Jamaican, European American, and African American Orientation Scales, respectively.

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Table 3
Outcome Variables by Ethnocultural Group and Adolescent Age

		Jamaican immigrant		Jamaican Islander		European American		African American		Other U.S. immigrant	
Variable	Age	М	SD	М	SD	М	SD	М	SD	М	SD
ВАСАН	Younger	2.56	.28	2.57	.24	2.70	.21	2.60	.33	2.56	.28
	Older	2.71	.20	2.41	.36	2.61	.30	2.69	.21	2.55	.26
Grades	Younger	5.36	.58	5.25	.85	5.61	.63	5.14	.97	5.75	.45
	Older	4.97	1.08	3.74	1.10	5.51	.65	5.30	.71	5.53	.52

Note. BACAH = 3-point resilience subscale measuring adolescent positive behavior; Grades = 6-point cumulative grade.

categorized as "low." There were significant differences in the distribution of participants across the eight acculturation groups, $\chi^2(6, n = 76) = 60.32$, p < .001, $\Phi = .89$, and across the four acculturation statuses, $\chi^2(3, n = 76) = 82.95$, p < .001, $\Phi = 1.04$. More adolescents than mothers had an assimilated status, $\chi^2(1, n = 9) = 5.44$, p < .025, $\Phi = .78$.

Paired sample *t* tests were computed to assess relative cultural orientation (i.e., AAOS vs. EAOS) of immigrants. As expected, Jamaican immigrants' AAOS scores were higher than their EAOS scores, t(75) = 8.10, p < .001, d = .92. Other Black immigrants' AAOS scores (M = 3.92, SD = 1.89) also exceeded EAOS scores (M = 3.24, SD = 1.96), t(7) = 1.81, p = .11, d = .35, although the small effect was statistically nonsignificant due to low power (.11). Conversely, non-Black U.S. immigrants' AAOS scores (M = 2.17, SD = 0.77) were *lower* than EAOS scores (M = 3.52, SD = 1.05), t(28) = -6.62, $p \le .001$, d = -1.47.

To examine adolescent adaptation as rated by both adolescents and mothers, multilevel modeling was performed using linear mixed models (LMM) with heterogeneous compound symmetry covariance structures (Kenny, Kashy, & Cook, 2006). Ethnocultural group was modeled as a predictor of adolescent behavior and grades with family partner as the repeated measure. Because male and older Jamaican adolescents have been found to be less well adjusted than female and younger adolescents (Ferguson, Hafen, Christopher, & Laursen, 2010), adolescent gender (male = 1, female = -1) and age (older = 1, younger = -1, based on median split) were included as predictors. Mother age, parent education, and social desirability were treated as covariates. Small or unequal group sizes were not a statistical concern because they have been shown to have little effect on parameter estimates in multilevel modeling and data were balanced within dyads (Hox & Maas, 2001). Nonetheless, an α level of .025 was used in LMM analyses as a precaution against an inflated Type I error rate. All factors were specified as fixed effects and separate analyses were computed for each dependent variable with Bonferroni corrections for follow-up comparisons. Effect sizes are reported using pseudo R^2 (1 – Σ full model variance and covariance estimates $\div \Sigma$ unrestricted model variance and covariance estimates) (Kenny et al., 2006).

There was a main effect of ethnocultural group on BACAH scores, F(4, 452) = 6.03, p < .001, and an interaction between ethnocultural group and adolescent age, F(1, 453) = 4.90, p < .001, pseudo $R^2 = .15$ (see Table 3). Among older adolescent dyads only, Jamaican immigrants' BACAH scores did not differ from other U.S. groups but were higher than Jamaican Islanders', F(4, 215) = 7.32, p < .01, pseudo $R^2 = .19$ for adolescents and .16 for mothers. For grades, main effects of ethnocultural group, F(4, 456) = 22.30, p < .001, and adolescent age also emerged, F(1, 455) = 12.92, p < .001, and an interaction between the two, F(4, 457) = 24.17, p < .001, pseudo $R^2 = .44$. Among older adolescent dyads only, the grades of Jamaican immigrants did not differ from other U.S. groups but were higher than those of Jamaican Islanders, F(4, 218) = 39.74, p < .001, pseudo $R^2 = .47$. There were also main effects of gender on BACAH scores, F(1, 451) =7.64, p < .01, d = .14, and grades, F(1, 455) = 11.14, p < .001, d = .28, in the sample overall: Girls had higher scores than boys.

Linear mixed models analyses modeled the association between immigrant acculturation and adolescent adaptation; results for acculturation groups paralleled those for acculturation statuses. Although adolescent immigrant generation (i.e., first or second) was unrelated to study variables, it was included in these models to account for a potential interaction. Immigrant generation moderated the effect of acculturation status on adolescent grades, F(2, 44) = 4.20, p < .025, pseudo $R^2 = .60$. Among first-generation youth only, assimilated

adolescents and mothers (M = 3.00, SD = 1.73)reported much lower grades than separated peers (M = 5.40, SD = .89, p < .025, d = -1.74) and integrated peers (M = 5.17, SD = .88, p < .025, d =-1.58), F(2, 12) = 5.99, p < .025, pseudo $R^2 = .75$. There were no other significant LMM findings, but a post hoc power analysis assuming equal-sized groups (there is no test for unequal groups) with f = .25 and $\alpha = .05$ indicated a power of .26 for LMM analyses to detect medium between-subjects effects (Faul, Erdfelder, Lang, & Buchner, 2007). Therefore, planned comparisons were computed to further test hypotheses, revealing that assimilated adolescents and mothers (M = 2.49, SD = .70)reported lower BACAH scores than did integrated peers (M = 2.67, SD = .21), t(60) = 2.23, p = .029,d = -.35.

Discussion

The changing face of immigrants in the United States (i.e., $\sim 87\%$ non-European; U.S. Census Bureau, 2010) necessitates an expanded acculturation model that incorporates newcomers' orientation toward multiple destination cultures to faithfully describe their acculturation experiences. This is especially true for Black immigrants who encounter the culture of a Black U.S. population in addition to the White mainstream. This is the first study to propose and examine a *tridimensional* acculturation framework among Black Caribbean immigrants or to examine their adaptation in the new society compared to nonimmigrant peers in their countries of origin and destination.

Tridimensional Acculturation

Claiming 70% of immigrants, integration is by far the most common acculturation status among Jamaicans. This percentage is substantially higher than the 36.4% average in the ICSEY study, but virtually identical to the 69.3% for Mexican immigrants in the United States (Phinney, Berry, Vedder, & Liebkind, 2006). Integrated Jamaican immigrants are more likely to be *tricultural* (i.e., strongly oriented toward all three target cultures) than bicultural. Separation and assimilation are less common and about equal in frequency, whereas marginalization is practically nonexistent. Consistent with Waters' (1999) findings, assimilation never occurs with European American culture as the sole destination culture; however, contrary to her findings, second-generation immigrant adolescents in this study were no more likely to be assimilated than first. Jamaican and other Black U.S. immigrants, but not non-Black immigrants, are more oriented toward African American than European American culture, which may be explained by their shared African derived phenotype, school and neighborhood proximity, consumer needs, and racial and societal challenges (Portes & Zhou, 1993; Wamwara-Mbugua et al., 2008). Taken together, the tridimensional acculturation paradigm is more explanatory of acculturation statuses for Black Jamaican immigrants than is the bidimensional model.

Positive Sociocultural Adaptation

Jamaican immigrant youth in the United States generally fare as well as nonimmigrant peers in terms of behavior and grades. Although this finding contradicts anecdotal evidence in the popular press (Jamaica Gleaner, 2009), it supports overwhelming research evidence of positive adaptation among immigrant youth worldwide (Berry et al., 2006; Fuligni & Fuligni, 2007; García Coll & Marks, 2009) and accords with findings that Caribbean Black U.S. immigrant adults are no more likely to report poor health or to have unhealthy births compared to European and African Americans (Acevedo-Garcia, Soobader, & Berkman, 2005; Nazroo, Jackson, Karlsen, & Torres, 2007). The superior adaptation scores of older immigrant adolescents compared to islanders may reflect support for the "healthy migrant hypothesis" (Sam, 2006; Wingate, Swaminathan, & Alexander, 2009), indicate particularly poor adjustment in the cohort of older islanders in the sample, or reveal divergent developmental pathways across adolescence in the two countries (i.e., contrary to Jamaican immigrants, age was negatively correlated with behavior and grades among islanders, r = -.25 and -.61, ps < .05). Prior research in Jamaican secondary schools has also found adolescent age to correlate negatively with grades and self-esteem (Ferguson et al., 2010). These findings may be due to the developing country context, in particular, the cumulative effects of lacking special education services and rising antisocial behaviors in Jamaican schools (Grant, Gibson, & Edward, 2010; Jamaica Gleaner, 2011).

Assimilation as a Developmental Risk

Assimilated Jamaican immigrant youth have less positive behavioral adaptation than integrated

vouth, and for first-generation immigrants, much worse grades than integrated and separated youth (D- average vs. B). These findings support the predictions of segmented assimilation theory regarding poorer outcomes for some, but not all, Black Caribbean youth. Perhaps assimilated youth have adopted the antimainstream attitudes or behaviors of some low-income marginalized nonimmigrant Blacks at the expense of their ethnic identification or education strivings or both (Portes & Zhou, 1993; Waters, 1999). Whereas rapid assimilation of first-generation youth is a risk factor for academic maladjustment, separation and integration may serve as protective factors by preserving strong family obligations, which predict academic motivation and performance among Caribbean American college students (Tseng, 2004).

Limitations and Recommendations for Future Research

Notwithstanding the modest sample size of immigrants and conservative alphas used, the current study yielded a wealth of findings ranging from small to large effects. Nonetheless, some null findings may be due to insufficient power; therefore, replication with a larger sample of Jamaicans or other Black U.S. immigrants is needed. Findings may differ for Black Caribbean U.K. immigrants (Nazroo et al., 2007). Moreover, the application of person-centered empirical clustering strategies may help to capture naturally occurring acculturation patterns or associations with adaptation that do not conform to the dimensional framework (e.g., Schwartz & Zamboanga, 2008). Work on tridimensional acculturation should not be limited to Black immigrants; indeed, more than three dimensions may be relevant for some groups. The tri- or multidimensional model may be most appropriate when there is a multicultural home or settlement country, a sociopolitical history between the peoples, or probable stigmatization in the settlement country (Birman et al., 2010).

Conclusion

This study on Black Jamaican immigrants presents a novel tridimensional framework needed to bring acculturation theory in better accord with the reality of multicultural sending and receiving societies. Like the paradigm shift to the bidimensional model from overly simplistic unidimensional models (Berry, 1997), our rapidly globalizing world now requires multidimensional models.

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