Implicit Biculturalism Theories: How Bicultural Individuals Perceive Others and Organize Their Own Cultures

Angela-MinhTu Nguyen & Nicholas O. Rule

Published online: 04 Oct 2020.

Submit your article to this journal

View related articles

View Crossmark data

Routledge
Taylor & Francis Group

Check for updates

Implicit Biculturalism Theories: How Bicultural Individuals Perceive Others and Organize Their Own Cultures

Angela-MinhTu Nguyen [ID][a] and Nicholas O. Rule [ID][b]

[a]Department of Psychology, California State University, Fullerton, California, USA; [b]Department of Psychology, University of Toronto, Toronto, Canada

ABSTRACT

Bicultural individuals who blend their two cultures and identities (i.e., subscribe to a mixed culture) may assume that other bicultural individuals blend their cultures and identities too. Here, we introduce the concept and assessment of *implicit biculturalism theories*: beliefs about how two cultures reside within one individual. We hypothesized that bicultural individuals would perceive and think about others' biculturalism based on how they organize and structure their own two cultures and identities (i.e., cultural blendedness). Taking a person-specific (rather than variable-centered) approach, we examined the associations among variables *within* each of 54 Asian Americans who completed the Role Construct Repertory Test and subjected the data to multiple-group confirmatory components analysis, conducted for each participant. We found that bicultural identity and person perception are linked: Participants with higher levels of cultural blendedness expressed the implicit biculturalism theory that cultures are also blended for other people. This suggests that bicultural individuals engage in egocentric processes to perceive others and interpret their biculturalism. These findings may have implications for social interactions, such that implicit biculturalism theories may affect how perceivers act toward targets, the targets' reciprocal perceptions of the perceivers, and their subsequent relationship.

Cultural blending or mixing is the preferred strategy for many bicultural individuals (Van der Werf et al., 2020) – those who have internalized and are living with two cultures (Hong et al., 2000; Nguyen & Benet-Martínez, 2007). For example, some Moroccan women in the Netherlands redefine chaste behavior by blending Moroccan and Dutch norms and values (Buitelaar, 2002). Furthermore, some U.S. Americans of Mexican descent identify as Chicanx (a blend of Mexican and American cultures) rather than as solely Mexican or American (Garza & Lipton, 1982). However, it is uncertain how the blending of one's own cultures and identities impacts social situations, such as the ways in which one views others. We therefore (a) proposed the concept of implicit biculturalism theories (IBTs), which connects seemingly disparate research on one's bicultural identity with that on person perception; (b) presented a novel method to assess IBTs; and (c) tested its validity, such that IBTs would correspond with participants' bicultural identity. Before introducing IBTs, we first review relevant research on biculturalism (specifically acculturation, bicultural identity, and cultural blendedness) and person perception.

Research on biculturalism

Acculturation and biculturalism

Immigrants, refugees, ethnic minorities, indigenous peoples, and sojourners engage in the process of acculturation – the adaptation to and negotiation of two cultures (Berry, 1997; Padilla, 2006).

Acculturation consists of two independent cultural orientations: the degree to which individuals participate in the dominant, majority culture (e.g., U.S. American culture in the US) and the degree to which they participate in their heritage or ethnic culture (e.g., Japanese culture, Mexican culture in the US). These two cultural orientations combine to create four distinct acculturation strategies: integration (high orientations to both cultures), assimilation (high orientation to the dominant culture coupled with low orientation to the heritage culture), separation (low orientation to the dominant culture coupled with high orientation to the heritage culture), and marginalization (low orientation to both cultures). Previous research studies, including one of over 2,000 participants across 13 countries (Berry et al., 2006), indicate that the majority of acculturating individuals use the integration strategy (i.e., highly oriented to both the dominant and heritage cultures).

Biculturalism research grew from the need to further understand variations among acculturating individuals using the integration strategy or, more specifically, *how* these individuals integrate their two cultures (Benet-Martínez et al., 2002). Rather than summing, however (e.g., Taiwanese Americans do not merely add their Taiwanese and American cultural experiences), the transformative theory of biculturalism suggests that biculturalism is a transformative process that involves the active negotiation of two cultures (West et al., 2017). This active process results in unique experiences and phenomena for bicultural individuals, including how they perceive themselves, others, and the world around them.

Bicultural identity

Given the multidimensional nature of both acculturation and biculturalism, cultural changes may occur via behaviors (language, practices, affiliations), values (beliefs), and/or identity (self-concept; Guo et al., 2012; Miller, 2007; Schwartz et al., 2010). Despite these myriad experiences and expressions of biculturalism, researchers have focused heavily on the identity dimension and typologies of individuals based on their bicultural identity (e.g., Amiot et al., 2007; Benet-Martínez & Haritatos, 2005; LaFromboise et al., 1993; Phinney & Devich-Navarro, 1997).

Bicultural identity integration (BII; Benet-Martínez & Haritatos, 2005; Huynh et al., 2011) provides a popular framework for studying bicultural identity and consists of two independent components: cultural harmony and cultural blendedness. Cultural harmony refers to the perception of compatibility, complementarity, and lack of conflict between one's two cultures. For example, a Pakistani American with a high level of cultural harmony can easily integrate Pakistani and American cultures and does not experience tension between the two. As the more affective component of BII, cultural harmony correlates with higher self-esteem, greater life satisfaction, lower stress (Chen et al., 2013), greater well-being, and lower depressive symptoms (Huynh et al., 2018).

Cultural blendedness (vs. compartmentalization), on the other hand, refers to the perception of overlap, merging, or fusion of one's two cultures (Benet-Martínez & Haritatos, 2005; Huynh et al., 2011). For example, a Viet American with a high level of cultural blendedness subscribes to a mix of Viet and American cultures and sees these cultures as overlapping rather than distinct or separate. As the more cognitive component of BII, cultural blendedness correlates with a higher likelihood of having a creative mind-set (Cheng et al., 2008; Saad et al., 2013). Further, individuals higher on blendedness tend to perceive ingroup members and themselves as more similar and overlapping (in terms of personality) than those lower on blendedness (Miramontez et al., 2008). Given its established link to social perception (Chiou, 2016; Miramontez et al., 2008), we focus on cultural blendedness in studying bicultural identity and person perception.

Cultural blendedness

Cultural blendedness (the overlapping organization and structure of one's two cultures and identities) relates to a wide-range of variables, from cultural environment and upbringing to personality and

creativity. Bicultural individuals who live in culturally diverse settings and face fewer language barriers tend to have higher levels of cultural blendedness (Benet-Martínez & Haritatos, 2005; Huynh et al., 2018). Among bilingual bicultural people, more culturally blended individuals typically learn their two languages simultaneously rather than sequentially (Nguyen & Ahmadpanah, 2014). More culturally blended individuals are also more open to new experiences – showing greater creativity, ideational fluency, and originality (Benet-Martínez & Haritatos, 2005; Cheng et al., 2008; Saad et al., 2013); for instance, developing more original culinary dishes (Cheng et al., 2008) and generating more ideas about how to use a paperclip (Saad et al., 2013).

Cultural blendedness also affects how bicultural individuals perceive and interact with others (West et al., 2017). For example, more culturally blended individuals tend to have more culturally diverse social networks (Repke & Benet-Martínez, 2018), and those belonging to ethnic minority groups generally relate better to majority group members than do their less culturally blended peers (Huff et al., 2020). Further, more culturally blended U.S. Latinx individuals show greater overlap in the personality ratings they ascribe to themselves and to their ingroup members (Miramontez et al., 2008). Building on this last finding (Miramontez et al., 2008) and based on the transformative theory of biculturalism (West et al., 2017), we sought to determine how bicultural individuals' perceptions and organization of their own two cultures and identities (i.e., cultural blendedness) extend to their perceptions of how other bicultural people organize their two cultures (i.e., IBTs).

Research on person perception

Person perception involves the ways that individuals judge and draw conclusions about others, subsequently dictating how they interact with them (Fiske, 1993). Individuals may interpret information about others based on a set of bipolar constructs (i.e., personal construct theory; Kelly, 1955) or traits (i.e., idiographic personality theories; Grice, 2007), or according to beliefs about the configuration and relations among those traits in one person (i.e., implicit personality theories; Asch, 1946; Bruner & Taiguri, 1954; Rosenberg et al., 1968). For example, an individual may evaluate others as either warm or cold and, based on that perception, conclude that they are either generous or stingy. These theories reveal more about perceivers than targets, reflecting their cognitions about themselves rather than necessarily representing reality (Hong et al., 1997; Kelly, 1955). Indeed, people often engage in egocentric projection, whereby they assume that others have the same network of traits, thoughts, and habits that they do (e.g., Critcher & Dunning, 2009). For example, someone who is both persistent and idealistic tends to believe that other people who are persistent must also be idealistic, and that other people who are idealistic must also be persistent. Thus, individuals use knowledge about themselves and their own personality to draw conclusions about others and those others' traits; hence, they use implicit personality theories (e.g., Asch, 1946).

Extending implicit personality theories to biculturalism, in general, and to cultural blendedness, in particular, we posit that bicultural individuals have IBTs that structure their beliefs about how other bicultural individuals configure their cultural identities. This accords with the transformative theory of biculturalism (West et al., 2017), which states that the process of negotiating two cultures affects cognition such that bicultural individuals make sense of social information through their bicultural lens. Therefore, they may either hold the IBT that other individuals blend their cultures (blended IBTs) or the IBT that other individuals compartmentalize their cultures (compartmentalized IBTs). For example, blended IBTs would involve the assumption that a Korean American person overlaps or combines elements of their blended Korean American cultures. In contrast, compartmentalized IBTs would involve the assumption that the Korean American person keeps their Korean and American cultures separate and compartmentalized, identifying as either principally Korean *or* American.

Drawing from egocentric projection theory (Critcher & Dunning, 2009; Krueger et al., 2006), we further propose that IBTs reflect the perceiver's own level of cultural blendedness rather than facts or reality. Someone with blended Korean and American cultures would thus see the two cultures as blended in other Korean Americans, even those who actually compartmentalize or separate their

Korean and American cultures. Similarly, a Korean American with low levels of blendedness (i.e., compartmentalized identities) would see these two cultures as compartmentalized in other Korean Americans, even those who actually blend or merge their Korean and American identities into one.

The current study

We therefore proposed the concept of IBTs, introduced an innovative method to assess IBTs, and tested the validity of the IBT construct in the current work. First, IBTs describe beliefs that bicultural individuals hold about the configuration of cultures (as blended or compartmentalized) within other bicultural people, and the content of these IBTs (as blended or compartmentalized) depends on the extent to which the bicultural perceiver blends versus compartmentalizes their own cultures. Second, person-specific analyses can be used to generate an IBT "score" for each bicultural perceiver (see Method section).

Third, as evidence of its validity, we expected that the content of bicultural individuals' IBTs would correspond to their own levels of cultural blendedness but not the degree to which they endorse the integration strategy of acculturation. Specifically, we hypothesized that bicultural individuals with more blended IBTs would have higher levels of cultural blendedness because they project their cultural blendedness level onto others in the form of a blended IBT. We further hypothesized that bicultural individuals' IBTs would not correlate with the integration strategy of acculturation because acculturation strategies are not included in the content of IBTs. (It is possible that individuals using the integration strategy would have implicit *acculturation* theories that other acculturating individuals also use the integration strategy rather than an assimilation, separation, or marginalization strategy; however, that question requires future testing.) Additionally, some bicultural individuals using the integration strategy of acculturation have higher levels of blendedness and are thus hypothesized to have more blended IBTs, whereas others using the integration strategy of acculturation have lower levels of blendedness and are thus hypothesized to have less blended IBTs. These two expected patterns of effects should cancel each other out, yielding a null association between the integration strategy of acculturation and IBTs.

Culture as values

In this study, we operationalized culture as cultural values because values form an essential – if not the most central – aspect of culture (Schwartz, 2006). Whereas culture includes "the norms, values, attitudes, and behaviors that are typical of an ethnic group [...] transmitted across generations" (Phinney, 1996, p. 920), values represent ideas about what is good, right, and desirable, serving to guide and explain actions (Schwartz, 2006). Measuring values may therefore be an efficient method to study and understand cultures (Morris, 2014).

Bicultural individuals have two sets of cultural values: those of their dominant and heritage cultures. For bicultural individuals, dominant and heritage cultural *values* are usually independent of each other (Miller, 2007; Park & Kim, 2008), whereas dominant and heritage cultural *behaviors* may negatively correlate (Perez & Padilla, 2000; Tsai et al., 2000). Furthermore, although engagement in heritage behaviors tends to decrease across generations (Kim et al., 1999; Rosenthal & Feldman, 1992), endorsement of heritage values remains relatively consistent across generations (e.g., Kim et al., 1999; Leung et al., 2006; Park & Kim, 2008; Perez & Padilla, 2000; Rosenthal & Feldman, 1992). We therefore chose cultural values as the operationalization of culture for this sample, in which the participants came from multiple generations.

Asian Americans

Most biculturalism and bicultural identity research sampled bicultural individuals of Asian descent (e.g., Benet-Martínez & Haritatos, 2005; Chen et al., 2013; Cheng et al., 2008; Chiou, 2016; Saad et al., 2013). Moreover, the sizable literature on Asian Americans' cultural values (e.g., Kim et al., 1999; Miller, 2007; Park & Kim, 2008) provides a solid empirical foundation for us to build the current study

introducing and testing the validity of IBTs; we therefore chose to focus specifically on Asian Americans here.

Bicultural Asian Americans usually express their dominant and heritage cultural values independently even if their culturally adopted behaviors are inversely related (Miller, 2007; Park & Kim, 2008; Tsai et al., 2000). For example, a confirmatory factor analysis using data from Asian Americans indicated that Asian cultural values comprised an "Asian Values" factor, whereas U.S. American cultural values comprised an "American Values" factor (Miller, 2007). We suspected that this does not apply for all Asian Americans, however. Some Asian Americans, specifically those with high levels of cultural blendedness, may fuse or merge their cultural values into a combined cultural value system. Furthermore, they may project this onto others, expecting the two value systems to be merged (or correlated) in others as in themselves. In other words, those with higher levels of cultural blendedness would express blended IBTs in which two different cultural value systems are subsumed under one common component, whereas those with lower levels of blendedness would express compartmentalized IBTs in which the two value systems are less blended or correlated.

Method

Participants

Asian American undergraduate students at a large, public university in California participated in exchange for partial course credit ($N = 54$; 37 women, 17 men; $M_{age} = 19.30$ years $SD = 2.08$, range = 18–31). Participants represented 12 different Asian ethnic groups: Chinese ($n = 25$), Filipinx ($n = 11$), Korean ($n = 8$), Viet ($n = 8$), Taiwanese ($n = 5$), Cambodian ($n = 3$), Indian ($n = 3$), Hmong ($n = 2$), Indonesian ($n = 1$), Japanese ($n = 1$), Malaysian ($n = 1$), and Thai ($n = 1$). Note that the sum of these numbers is greater than the total number of participants because 16 participants were multiethnic Asian American. Participants born outside the United States ($n = 14$) reported 12.50 years of residence on average ($SD = 5.03$).

Measures

Cultural blendedness
Participants completed the cultural blendedness subscale of the Bicultural Identity Integration Scale – Version 2 (Huynh et al., 2018) as a measure of cultural blendedness. This subscale contains nine items rated on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*) in which higher mean scores indicate higher levels of cultural blendedness. An example item is "I relate better to a combined [piped with participant's response for heritage culture, such as Filipinx]-American culture than to [piped with participant's response for heritage culture, such as Filipinx] or American culture alone." For our sample, these items yielded reliable scores, α =.77. The scale has been used with participants from a variety of ethnic backgrounds, including Asian Americans (Huynh et al., 2018).

Integration strategy of acculturation
Participants also completed the Vancouver Index of Acculturation (Ryder et al., 2000) as a measure of their acculturation. This acculturation scale consists of two 10-item cultural orientation subscales rated on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). One subscale refers to participants' heritage culture (e.g., "I often participate in [piped with participant's response for heritage culture, such as Hmong] cultural traditions"), and the other refers to participants' dominant culture (e.g., "I often participate in mainstream American cultural traditions"). Higher mean subscale scores indicate a stronger orientation to the given culture. To generate a score for the integration strategy of acculturation, we computed the product of the dominant and heritage subscales, with higher scores indicating integration and lower scores indicating marginalization. This multiplication method has been used to compute an integration score from an American cultural orientation score and

a Hispanic cultural orientation score (Birman, 1998), and is preferred over the median-split and subtraction methods when computing an integration score from two cultural orientation scores (Nguyen & Benet-Martínez, 2007). Further, the multiplication method better reflects current theory than the additive method (West et al., 2017). The cultural orientation subscales demonstrated good internal consistency reliability here (αs = .83), and a meta-analysis of the reliability of several acculturation scales showed that the Vancouver Index of Acculturation yields reliable scores in multiple samples, including Asian Americans ($M_α$ = .83; Huynh et al., 2009).

IBTs

Each participant's IBT score is the statistical result (i.e., fit index) of a person-specific analysis (i.e., multiple-group confirmatory components analysis or MGCCA; see Analytic Plan below) of their responses to the Role Construct Repertory Test (Rep Test; Kelly, 1955). Designed to uncover the personal constructs that participants use to construe other people, the Rep Test consists of a construct (the attributes or traits that individuals use to think about or describe others) by element (the people or targets being described) grid or matrix.

For this study, participants first identified six targets. We instructed them to think specifically of Asian Americans in various roles, such as "a person who has been like a mother or female mentor to you," "a person who has been like a sibling or close friend to you," or "a friend or classmate" based on role titles used in previous Rep Tests (Grice, 2004; Kelly, 1955). These role titles encourage participants to think about multiple targets instead of only one general, prototypical Asian American person, and multiple targets are necessary to generate the data to conduct person-specific analyses. Second, participants rated their familiarity with each target along a five-point scale ("How well do you know . . . ?"; 1 = not at all, 5 = very well). Participants may be more familiar with some targets than others, and ratings of targets should reflect participants' IBTs rather than actual knowledge of targets; we therefore statistically adjusted for familiarity in our analyses. Third, participants rated the extent to which they believed each target would endorse six cultural values along a four-point scale (1 = strongly disagree, 4 = strongly agree). We identified these six cultural values by choosing the three values Kim and colleagues identified as most indicative of Asian values in the Asian Values Scale-Revised (Kim & Hong, 2004; see also Kim et al., 1999) and the three values most indicative of American values in the European American Values Scale for Asian Americans-Revised (S. Hong et al., 2005; see also Wolfe et al., 2001). Before making these ratings, however, participants first chose an anchor target for each cultural value item to maximize variability on ratings; specifically, they identified the target who would most endorse a particular value and the target who would least endorse that value, rating all other targets relative to them. The Idiogrid software program (Grice, 2002) presented the 36 cells of this 6 (construct; i.e., Asian and American values) × 6 (element; i.e., target persons) grid at random (see Appendix).

Procedure

Before data collection, five Asian American undergraduate students (separate from this study's sample) provided pilot data, which helped us to further refine the procedure. For example, based on pilot participants' suggestion, we piped study participants' individual heritage culture responses into the online administration system's display of items from the Bicultural Identity Integration Scale – Version 2 (Huynh et al., 2018) and the Vancouver Index of Acculturation (Ryder et al., 2000). In addition, we added "other" as a third option to a demographic question about gender. The pilot study also helped us to identify two typographical errors in our instructions.

Study participants completed the study in two parts. They first completed measures assessing their cultural blendedness, integration strategy of acculturation, and demographic characteristics (gender, age, ethnicity, country of birth, and years living in the US if applicable) using the online survey tool QuestionPro.com. Approximately one week later, they reported their IBTs in the lab by rating other

people using the Idiogrid software program (Grice, 2002). This study was conducted in compliance with the university's Internal Review Board.

Analytic plan

IBT score

We assessed participants' IBTs using a person-specific or idiosyncratic approach, where researchers focus on the pattern of variables within one individual, rather than the more widespread variable-centered or variable-oriented approach, where researchers examine the relations among variables across individuals (Bergman & Magnusson, 1997; Howard & Hoffman, 2018; Molenaar & Campbell, 2009). For our person-specific analyses, the 54 participants in our sample are analogous to 54 separate studies in the more common variable-centered approach. We note that although a sample size of 54 participants would be considered relatively small for variable-centered approaches, that is not the case for person-specific approaches, where analyses can be conducted with as few as one participant due to the focus on intra-individual patterns rather than inter-individual differences (Howard & Hoffman, 2018). In other words, person-specific analyses do not require a minimum sample size, and 54 participants suffice for conducting these analyses.

The person-specific analysis we conducted is MGCCA, which is analogous to the more well-known factor or components analysis used in the variable-centered approach (Guttman, 1952). The major difference between MGCCA and its person-specific factor-analytic counterpart (multiple-group confirmatory factor analysis) is that all variance (unique as well as common variance, rather than only common variance) for each item is included in the analyses, making MGCCA more appropriate for Rep Test data (Grice et al., 2006). MGCCA is based on least squares and uses pattern coefficients to evaluate the fit of a model (i.e., the root mean square residual; RMR).

We conducted MGCCA via the Idiogrid software (Grice, 2002) to analyze each participant's cultural value structure. Specifically, we conducted 54 MGCCAs, one for *each* of the 54 participants. We used MGCCA to test a one-component model of cultural values, containing Rep Test ratings of both Asian values and American values, which represented a combined or overlapping Asian *and* American cultural value system. The fit index (RMR) for the model tested using MGCCA served as an indicator of participants' IBTs, with lower RMR values indicating better fit and, here, more blended IBTs. In other words, each participant had an IBT "score," which is the fit index for their individual MGCCA, in which lower scores indicated more blended IBTs.

Validity of IBTs

To test the validity of IBTs, we shifted from a person-specific to a variable-centered approach. Across participants, we correlated their IBT score (i.e., RMR from MGCCA) to their cultural blendedness score and their integration strategy of acculturation score. We expected that the RMRs would correlate negatively with cultural blendedness, indicating that a one-component model of cultural values would have a better fit (indicating blended IBTs) for biculturals with higher levels of cultural blendedness. Reflecting the conceptual independence between cultural blendedness and the integration strategy of acculturation, we expected that RMRs (indicating IBTs) would *not* correlate with integration levels.

Results

One goal of the current study was to test the validity of IBTs by examining their correspondence with bicultural perceivers' own level of cultural blendedness. To that end, we computed a Pearson's product-moment correlation to test the hypothesis that bicultural individuals with blended IBTs would have higher levels of cultural blendedness. As expected, participants' IBT score (i.e., RMR of the one-component model of cultural values) and their cultural blendedness score significantly, moderately, and negatively correlated (see Table 1 for descriptive statistics and correlations among all variables). The significance, direction, and magnitude of this association remained the same even

Table 1. Descriptive statistics and correlations among all study variables.

	M	SD	Range	2	3	4	5
1. IBT	.52	.14	0–1	−.33*	−.12	−.17	−.05
				(−.33*)	(−.12)	(−.17)	(−.06)
2. Cultural Blendedness	4.00	0.48	1–5		.25	.34*	.09
3. Integration Strategy of Acculturation	15.17	3.37	1–25			.82***	.86***
4. Dominant Cultural Orientation	3.96	0.48	1–5				.42**
5. Heritage Cultural Orientation	3.80	0.54	1–5				

*p <.05. **p <.01. ***p <.001.
Correlations statistically adjusting for participants' familiarity with targets displayed in parentheses.

after controlling for participants' familiarity with targets ($M = 4.06$, $SD = .50$). Thus, participants with higher levels of cultural blendedness had more blended IBTs, as operationalized by a better-fitting one-component model of cultural values. In other words, blended participants were more likely to perceive cultures as blended (combined, fused, merged, overlapping, and correlated) in other bicultural people.

As evidence of discriminant validity, we computed another Pearson's product-moment correlation to test the hypothesis that bicultural individuals' IBTs would not correlate with their integration strategy of acculturation. As expected, participants' IBT score did not significantly correlate with their integration score. The significance, direction, and magnitude of this association remained the same even after controlling for participants' familiarity with targets. Thus, the content of participants' IBTs (blended vs. compartmentalized) was independent of their level of integration. In summary, IBTs relate to bicultural perceivers' cultural blendedness level but not to their integration strategy of acculturation.

Discussion

Our goals for the current study were three-fold: (1) to introduce the concept of IBTs, (2) to present a method for assessing IBTs, and (3) to demonstrate the validity of IBTs. First, IBTs are beliefs about how two cultures are organized, structured, and configured in bicultural people. Bicultural individuals may hold blended IBTs, or the belief that two cultures are fused, merged, combined, and overlapping within the same person. Conversely, bicultural individuals may also hold compartmentalized IBTs, or the belief that two cultures are separate, distinct, distant, and compartmentalized within the same person. Second, the degree to which IBTs are blended can be assessed using a fit index (RMR) for a statistical technique (MGCAA) testing a one-component model of two cultures (such as two sets of cultural values) conducted for each participant, one participant at a time. The fit index serves as the participant's IBT score, with lower scores indicating more blended IBTs. Third, as hypothesized, more blended (but not more integrated) perceivers are more likely to hold blended IBTs, suggesting that bicultural perceivers who perceive their *own* cultures to be combined (e.g., high levels of cultural blendedness) also assume that *other* bicultural individuals' cultures are combined. Put another way, the psychometric structure of blended, bicultural Asian Americans' conceptions of Asian and American values systems reflects the perceptual structure of their two cultures, as proposed by egocentric projection theory (Critcher & Dunning, 2009; Krueger et al., 2006).

Blendedness and IBTs are therefore linked and may rely on an egocentric process, though the exact mechanism for doing so remains unknown. For instance, individuals might use their own levels of cultural blendedness to develop theories about others' cultural blendedness because they have more information about themselves and because that self information is more accessible (Krueger et al., 2006), or they might create theories about their own biculturalism that they then use to infer the biculturalism of others (Critcher & Dunning, 2009; see also McAdams, 2001). Alternatively, individuals' cultural perceptions of targets may merely be an extension of their blended cultural schema (Martin & Shao, 2016), or how they more generally perceive cultures as blended versus compartmentalized, such that IBTs are subsumed within blendedness rather than distinct from it (Benet-Martínez & Haritatos, 2005; Huynh et al., 2011). Thus, our findings that blended biculturals perceive cultural

values as combined and correlated in others may stimulate research questions that would help to refine theories on cultural blendedness and IBTs.

Implications

The existence of IBTs has tremendous implications for theory, research, and interpersonal relations. First, our findings lend support for the transformative theory of biculturalism (West et al., 2017) by showing that bicultural processes, including the organization of one's two cultures and identities in a blended versus compartmentalized way, relates to perceptions and beliefs about others – specifically the configuration of cultures in other biculturals. Bicultural processes therefore not only concern variations in bicultural identity but may also affect person perception. This proposition emphasizes that bicultural individuals are not merely the sum of their cultural parts (e.g., Indonesian and American); rather, they are unique in their experiences due to the bicultural processes in which they engage while negotiating their two cultures. It is therefore crucial for researchers to move beyond studying typologies in bicultural identity to better understanding bicultural processes, such as differences and changes to biculturals' social cognition.

With this study, we contribute to the empirical literature on bicultural identity and person perception in unique and novel ways. Until now, there had only been one study on this topic (Miramontez et al., 2008), finding that bicultural U.S. Latinx individuals with high levels of cultural blendedness perceive prototypical ingroup members (other Americans and other Latinxs) and themselves as having overlapping personality profiles. Here, a sample of Asian American participants demonstrated that bicultural individuals not only see similarities in personality traits with ingroup members but also similarities in *how* real ingroup members negotiate and organize their two cultures (i.e., as blended or compartmentalized). More important, this correspondence in perceivers' own cultural blendedness and their perception of others' cultural blendedness provides support for the proposition from cultural psychology that culture and psyche mutually constitute each other (Schwartz et al., 2020). That is, bicultural individuals with higher levels of cultural blendedness have more likely grown up in multi-cultural settings that allowed them to engage in deep and immersive cultural mixing at an early age (Martin & Shao, 2016). Context might therefore affect the person, such that environments with mixed or blended cultures facilitate blending among bicultural individuals. Further, the person might also affect the context, such that bicultural individuals (re)construct culture via their perceptions and interpretations (e.g., via their IBTs), which also influence their interactions (Schwartz et al., 2020).

In other words, our findings have implications for social interactions, including how bicultural perceivers enact their IBTs and how targets respond to perceivers' judgments and behaviors. For example, IBTs may determine whether a bicultural Chinese American perceiver interacts with another Chinese American person in a Chinese, American, or blended Chinese American way. That is, a blended Chinese American bicultural individual may speak "Chinglish" to, or cook fusion food for, another Chinese American bicultural target, assuming (based on their IBT) that the target is also blended. However, if the target is compartmentalized rather than blended, then they may respond by thinking that the perceiver lacks the appropriate language skills to speak Chinese or English (thus forcing the person to speak Chinglish) and, instead of evaluating the fusion dish as innovative, may simply consider it inauthentic or even reprehensible (Cheon et al., 2016). One's IBTs may therefore affect how a perceiver acts, how a target perceives the perceiver, and the subsequent relationship between the two. Further research would need to explore the role of IBTs in interpersonal relationships to better understand these possibilities and indeed, researchers studying social relations may benefit from examining IBTs.

Limitations and future directions

Because we only sampled Asian Americans and limited IBTs to the perception of other Asian Americans, the study's external validity would benefit from replicating the research with bicultural individuals from other racial groups (e.g., Latinxs) and in other countries (e.g., the

Netherlands, Singapore). In addition, future research could determine whether Asian Americans have IBTs concerning other bicultural individuals, such as Latinxs or Black/African Americans. Yet, despite the sample's racial homogeneity, it was extremely ethnically diverse, drawing heritage from 12 different countries. Whether the results might differ by ethnic group also remains unknown; thus, future work may wish to examine the roles of ethnicity on bicultural individuals' IBTs directly. Moreover, the participants consisted of students at a large public university in California, prompting the question of whether the findings might generalize to bicultural individuals of other ages or education levels, or those living in areas with a lower percentage of Asian Americans.

The correlational nature of this study also limits the ability to parse whether participants projected their cultural blendedness onto others or whether the Rep Test ratings reflect how the targets actually structure their cultural identities. That is, individuals may surround themselves with other people who engage in the same levels of cultural blendedness that they do, giving them insight about the level of cultural blendedness of the familiar others that they identified. However, our findings did not change after controlling for participants' familiarity with the targets. Further, perceptions and judgments of others often reflect one's self because self information is more plentiful, available, and salient than information about anyone else (Critcher & Dunning, 2009; Krueger et al., 2006). We therefore do not expect that the current findings would change if bicultural Asian American strangers replaced familiar others; though we acknowledge that this remains an empirical question. The association between bicultural individuals' level of cultural blendedness and assumptions about others' blendedness might also stem from a third variable, such as processing style. Individuals with a global processing style may not only perceive their own cultures as blended (Mok & Morris, 2012), but may also be more likely to believe that two different cultures combine within the same individual. Understanding the direction of this association would require future research.

Recent studies have also indicated that cultural blendedness can change (Cheng & Lee, 2013; Mok & Morris, 2012), such that bicultural individuals shift their perception of the overlap versus distance between their two cultures under certain conditions. For example, individuals report higher levels of cultural blendedness when recalling positive bicultural experiences than negative or neutral experiences (Cheng & Lee, 2013). Additionally, individuals blend their two cultures more when adopting a global versus local processing style (Mok & Morris, 2012). If bicultural individuals' level of cultural blendedness can be manipulated, then their IBTs might be malleable too, providing a promising direction for future research.

Conclusion

Bicultural individuals' IBTs provide insight into how they organize their own cultures and then use that mind-set to interpret others' biculturalism. In addition to introducing and investigating the concept of IBTs and their assessment, the current study also extends previous research on cultural blendedness and person perception in several ways. First, we investigated perceptions of targets with whom participants are familiar, as opposed to abstract, prototypical ingroup members. Hence, target ratings assessed in this study are more realistic: targets are concrete and specific family members, friends, and acquaintances; not abstractions of "typical" people. Second, targets were rated on cultural values rather than on personality. Culture and one's thoughts about it are highly relevant to bicultural individuals and may impact their everyday lives in profound ways. Third, we investigated cultural blendedness and person perception in Asian Americans, a group that has been understudied in social perception. The present findings demonstrate the role of cultural blendedness in social situations via IBTs and supply additional evidence for the existence of cultural blendedness as an important psychological construct and social phenomenon.

Acknowledgments

Disclosure statement

ORCID

Angela-MinhTu Nguyen http://orcid.org/0000-0003-0983-8398
Nicholas O. Rule http://orcid.org/0000-0002-2332-9058

References

Amiot, C. E., de la Sablonnière, R., Terry, D. J., & Smith, J. R. (2007). Integration of social identities in the self: Toward a cognitive-developmental model. *Personality and Social Psychology Review*, *11*(4), 364–388. https://doi.org/10.1177/1088868307304091

Asch, S. E. (1946). Forming impressions of personality. *The Journal of Abnormal and Social Psychology*, *41*(3), 258–290. https://doi.org/10.1037/h0055756

Benet-Martínez, V., & Haritatos, J. (2005). Bicultural identity integration (BII): Components and psychosocial antecedents. *Journal of Personality*, *73*(4), 1015–1050. https://doi.org/10.1111/j.1467-6494.2005.00337.x

Benet-Martínez, V., Leu, J., Lee, F., & Morris, M. (2002). Negotiating biculturalism: Cultural frame switching in biculturals with oppositional versus compatible cultural identities. *Journal of Cross-Cultural Psychology*, *33*(5), 492–516. https://doi.org/10.1177/0022022102033005005

Bergman, L. R., & Magnusson, D. (1997). A person-oriented approach in research on developmental psychopathology. *Development and Psychopathology*, *9*(2), 291–319. https://doi.org/10.1017/S095457949700206X

Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology: An International Review*, *46*(1), 5–68. https://doi.org/10.1111/j.1464-0597.1997.tb01087.x

Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). Immigrant youth: Acculturation, identity, and adaptation. *Applied Psychology: An International Review*, *55*(3), 303–332. https://doi.org/10.1111/j.1464-0597.2006.00256.x

Birman, D. (1998). Biculturalism and perceived competence of Latino immigrant adolescents. *American Journal of Community Psychology*, *26*(3), 335–354. https://doi.org/10.1023/A:1022101219563

Bruner, J. S., & Taiguri, R. (1954). The perception of people. In G. Lindsay (Ed.), *Handbook of social psychology* (Vol. 2, pp. 634–654). Addison–Wesley.

Buitelaar, M. W. (2002). Negotiating the rules of chaste behaviour: Re-interpretations of the symbolic complex of virginity by young women of Moroccan descent in The Netherlands. *Ethnic and Racial Studies*, *25*(3), 462–489. https://doi.org/10.1080/01419870020036701b

Chen, S. X., Benet-Martínez, V., Wu, W. C., Lam, B. C., & Bond, M. H. (2013). The role of dialectical self and bicultural identity integration in psychological adjustment. *Journal of Personality*, *81*(1), 61–75. https://doi.org/10.1111/j.1467-6494.2012.00791.x

Cheng, C.-Y., & Lee, F. (2013). The malleability of bicultural identity integration (BII). *Journal of Cross-Cultural Psychology*, *44*(8), 1235–1240. https://doi.org/10.1177/0022022113490071

Cheng, C.-Y., Sanchez-Burks, J., & Lee, F. (2008). Connecting the dots within: Creative performance and identity integration. *Psychological Science*, *19*(11), 1178–1184. https://doi.org/10.1111/j.1467-9280.2008.02220.x

Cheon, B. K., Christopoulos, G. I., & Hong, Y. (2016). Disgust associated with culture mixing: Why and who? *Journal of Cross-Cultural Psychology*, *47*(10), 1268–1285. https://doi.org/10.1177/0022022116667845

Chiou, A. Y. (2016). Which cultural group I love depends on how I feel about my identities: The moderating effect of blendedness on the priming of cultural in-group love in undergraduate Asian-American biculturals. *International Journal of Intercultural Relations*, *54*, 87–96. https://doi.org/10.1016/j.ijintrel.2016.07.005

Critcher, C. R., & Dunning, D. (2009). Egocentric pattern projection: How implicit personality theories recapitulate the geography of the self. *Journal of Personality and Social Psychology*, *97*(1), 1–16. https://doi.org/10.1037/a0015670

Fiske, S. T. (1993). Social cognition and social perception. *Annual Review of Psychology*, *44*(1), 155–194. https://doi.org/10.1146/annurev.ps.44.020193.001103

Garza, R. T., & Lipton, J. P. (1982). Theoretical perspectives on Chicano personality development. *Hispanic Journal of Behavioral Sciences*, *4*(4), 407–432. https://doi.org/10.1177/07399863820044001

Grice, J. W. (2002). Idiogrid: Software for the management and analysis of repertory grids. *Behavior Research Methods, Instruments, & Computers*, 34(3), 338–341. https://doi.org/10.3758/BF03195461

Grice, J. W. (2004). Bridging the idiographic-nomothetic divide in ratings of self and others on the Big Five. *Journal of Personality*, 72(2), 203–241. https://doi.org/10.1111/j.0022-3506.2004.00261.x

Grice, J. W. (2007). Person-centered structural analyses. In R. W. Robins, R. C. Fraley, & R. F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 557–572). Guilford.

Grice, J. W., Jackson, B. J., & McDaniel, B. L. (2006). Bridging the idiographic-nomothetic divide: A follow-up study. *Journal of Personality*, 74(4), 1191–1218. https://doi.org/10.1111/j.1467-6494.2006.00407.x

Guo, X., Suarez-Morales, L., Schwartz, S. J., & Szapocznik, J. (2012). Some evidence for multidimensional biculturalism: Confirmatory factor analysis and measurement invariance analysis on the Bicultural Involvement Questionnaire–Short Version. *Journal of Latina/o Psychology*, 1(S), 52–65. https://doi.org/10.1037/2168-1678.1.S.52

Guttman, L. (1952). Multiple group methods for common-factor analysis: Their basis, computation, and interpretation. *Psychometrika*, 17(2), 209–222. https://doi.org/10.1007/BF02288783

Hong, S., Kim, B. S. K., & Wolfe, M. M. (2005). A psychometric revision of the European American Values Scale for Asian Americans using the Rasch model. *Measurement and Evaluation in Counseling and Development*, 37(4), 194–207. https://doi.org/10.1080/07481756.2005.11909760

Hong, -Y.-Y., Chiu, C.-Y., Dweck, C. S., & Sacks, R. (1997). Implicit theories and evaluative processes in person cognition. *Journal of Experimental Social Psychology*, 33(3), 296–323. https://doi.org/10.1006/jesp.1996.1324

Hong, -Y.-Y., Morris, M. W., Chiu, C.-Y., & Benet-Martínez, V. (2000). Multicultural minds: A dynamic constructivist approach to culture and cognition. *American Psychologist*, 55(7), 709–720. https://doi.org/10.1037/0003-066x.55.7.709

Howard, M. C., & Hoffman, M. E. (2018). Variable-centered, person-centered, and person-specific approaches: Where theory meets the method. *Organizational Research Methods*, 21(4), 846–876. https://doi.org/10.1177/1094428117744021

Huff, S. T., Saleem, M., & Rivas-Drake, D. (2020). Examining the role of majority group attitudes and bicultural identity integration on bicultural students' behavioral responses toward White Americans. *Cultural Diversity and Ethnic Minority Psychology*, 26(2), 149–162. Advance online publication. https://doi.org/10.1037/cdp0000284

Huynh, Q.-L., Nguyen, A.-M. D., & Benet-Martínez, V. (2011). Bicultural identity integration. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 827–844). Springer.

Huynh, Q.-L., Benet-Martínez, V., & Nguyen, A.-M. D. (2018). Measuring variations in bicultural identity across U.S. ethnic and generational groups: Development and validation of the Bicultural Identity Integration Scale–Version 2 (BIIS-2). *Psychological Assessment*, 30(12), 1581–1596. https://doi.org/10.1037/pas0000606

Huynh, Q.-L., Howell, R. T., & Benet-Martínez, V. (2009). Reliability of bidimensional acculturation scores: A meta-analysis. *Journal of Cross-Cultural Psychology*, 40(2), 256–274. https://doi.org/10.1177/0022022108328919

Kelly, G. A. (1955). *The psychology of personal constructs*. Norton.

Kim, B. S. K., Atkinson, D. R., & Yang, P. H. (1999). The Asian Values Scale: Development, factor analysis, validation, and reliability. *Journal of Counseling Psychology*, 46(3), 342–352. https://doi.org/10.1037/0022-0167.46.3.342

Kim, B. S. K., & Hong, S. (2004). A psychometric revision of the Asian Values Scale using the Rasch model. *Measurement and Evaluation in Counseling and Development*, 37(1), 15–27. https://doi.org/10.1080/07481756.2004.11909747

Krueger, J. I., Acevedo, M., & Robbins, J. M. (2006). Self as sample. In K. Fiedler & P. Juslin (Eds.), *Information sampling and adaptive cognition* (pp. 353–377). Cambridge University.

LaFromboise, T., Coleman, H. L., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. *Psychological Bulletin*, 114(3), 395–412. https://doi.org/10.1037/0033-2909.114.3.395

Leung, C., Pe-Pua, R., & Karnilowicz, W. (2006). Psychological adaptation and autonomy among adolescents in Australia: A comparison of Anglo-Celtic and three Asian groups. *International Journal of Intercultural Relations*, 30(1), 99–118. https://doi.org/10.1016/j.ijintrel.2005.09.002

Martin, L., & Shao, B. (2016). Early immersive culture mixing: The key to understanding cognitive and identity differences among multiculturals. *Journal of Cross-Cultural Psychology*, 47(10), 1409–1429. https://doi.org/10.1177/0022022116639391

McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology*, 5(2), 100–122. https://doi.org/10.1037/1089-2680.5.2.100

Miller, M. J. (2007). A bilinear multidimensional measurement model of Asian American acculturation and enculturation: Implications for counseling interventions. *Journal of Counseling Psychology*, 54(2), 118–131. https://doi.org/10.1037/0022-0167.54.2.118

Miramontez, D. R., Benet-Martínez, V., & Nguyen, A.-M. D. (2008). Bicultural identity integration and self/group personality perceptions. *Self and Identity*, 7(4), 430–445. https://doi.org/10.1080/15298860701833119

Mok, A., & Morris, M. W. (2012). Managing two cultural identities: The malleability of bicultural identity integration as a function of induced global or local processing. *Personality and Social Psychology Bulletin*, 38(2), 233–246. https://doi.org/10.1177/0146167211426438

Molenaar, P., & Campbell, C. G. (2009). The new person-specific paradigm in psychology. *Current Directions in Psychological Science*, 18(2), 112–117. https://doi.org/10.1111/j.1467-8721.2009.01619.x

Morris, M. W. (2014). Values as the essence of culture: Foundation or fallacy? *Journal of Cross-Cultural Psychology*, *45*(1), 14–24. https://doi.org/10.1177/0022022113513400

Nguyen, A.-M. D., & Ahmadpanah, S. S. (2014). The interplay between bicultural blending and dual language acquisition. *Journal of Cross-Cultural Psychology*, *45*(8), 1215–1220. https://doi.org/10.1177/0022022114542849

Nguyen, A.-M. D., & Benet-Martínez, V. (2007). Biculturalism unpacked: Components, individual differences, measurement, and outcomes. *Social and Personality Psychology Compass*, *1*(1), 101–114. https://doi.org/10.1111/j.1751-9004.2007.00029.x

Padilla, A. M. (2006). Bicultural social development. *Hispanic Journal of Behavioral Sciences*, *28*(4), 467–497. https://doi.org/10.1177/0739986306294255

Park, Y. S., & Kim, B. S. K. (2008). Asian and European American cultural values and communication styles among Asian American and European American college students. *Cultural Diversity and Ethnic Minority Psychology*, *14*(1), 47–56. https://doi.org/10.1037/1099-9809.14.1.47

Perez, W., & Padilla, A. M. (2000). Cultural orientations across three generations of Hispanic adolescents. *Hispanic Journal of Behavioral Sciences*, *22*(3), 390–398. https://doi.org/10.1177/0739986300223008

Phinney, J. S. (1996). When we talk about American ethnic groups, what do we mean? *American Psychologist*, *51*(9), 918–927. https://doi.org/10.1037/0003-066X.51.9.918

Phinney, J. S., & Devich-Navarro, M. (1997). Variations in bicultural identification among African American and Mexican American adolescents. *Journal of Research on Adolescence*, *7*(1), 3–32. https://doi.org/10.1207/s15327795jra0701_2

Repke, L., & Benet-Martínez, V. (2018). The (diverse) company you keep: Content and structure of immigrants' social networks as a window into intercultural relations in Catalonia. *Journal of Cross-Cultural Psychology*, *49*(6), 924–944. https://doi.org/10.1177/0022022117733475

Rosenberg, S., Nelson, C., & Vivekananthan, P. S. (1968). A multidimensional approach to the structure of personality impressions. *Journal of Personality and Social Psychology*, *9*(4), 283–294. https://doi.org/10.1037/h0026086

Rosenthal, D. A., & Feldman, S. S. (1992). The nature and stability of ethnic identity in Chinese youth: Effects of length of residence in two cultural contexts. *Journal of Cross-Cultural Psychology*, *23*(2), 214–227. https://doi.org/10.1177/0022022192232006

Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of Personality and Social Psychology*, *79*(1), 49–65. https://doi.org/10.1037/0022-3514.79.1.49

Saad, C. S., Damian, R. I., Benet-Martínez, V., Moons, W. G., & Robins, R. W. (2013). Multiculturalism and creativity: Effects of cultural context, bicultural identity, and ideational fluency. *Social Psychological and Personality Science*, *4*(3), 369–375. https://doi.org/10.1177/1948550612456560

Schwartz, S. H. (2006). A theory of cultural value orientations: Explication and applications. *Comparative Sociology*, *5*(2–3), 137–182. https://doi.org/10.1163/156913306778667357

Schwartz, S. J., Szabó, Á., Meca, A., Ward, C., Martinez, C. R., Jr, Cobb, C. L., Benet-Martínez, V., Unger, J. B., & Pantea, N. (2020). The convergence between cultural psychology and developmental science: Acculturation as an exemplar. *Frontiers in Psychology*, *11*, 887. https://doi.org/10.3389/fpsyg.2020.00887

Schwartz, S. J., Unger, J. B., Zamboanga, B. L., & Szapocznik, J. (2010). Rethinking the concept of acculturation: Implications for theory and research. *American Psychologist*, *65*(4), 237–251. https://doi.org/10.1037/a0019330

Tsai, J. L., Ying, Y.-W., & Lee, P. A. (2000). The meaning of "being Chinese" and "being American:" Variation among Chinese American young adults. *Journal of Cross-Cultural Psychology*, *31*(3), 302–332. https://doi.org/10.1177/0022022100031003002

Van der Werf, F., Verkuyten, M., Martinovic, B., & Ng Tseung-Wong, C. (2020). Forms of blended bicultural identity: Identity conflict and harmony in culturally diverse Mauritius. *Journal of Cross-Cultural Psychology*, *51*(2), 134–148. https://doi.org/10.1177/0022022119895316

West, A. L., Zhang, R., Yampolsky, M., & Sasaki, J. Y. (2017). More than the sum of its parts: A transformative theory of biculturalism. *Journal of Cross-Cultural Psychology*, *48*(7), 963–990. https://doi.org/10.1177/0022022117709533

Wolfe, M. M., Yang, P. H., Wong, E. C., & Atkinson, D. R. (2001). Design and development of the European American Values Scale for Asian Americans. *Cultural Diversity and Ethnic Minority Psychology*, *7*(3), 274–283. https://doi.org/10.1037/1099-9809.7.3.274

Appendix.

Rep test grid.

		Asian American Target					
		A person who has been like a mother or female mentor to you	A person who has been like a father or male mentor to you	A person who has been like a sibling or close friend to you	A friend or class-mate	A person you like	A person you dislike
Asian Values	One need not achieve academically in order to make one's parents proud. (reverse-scored)						
	One should think about one's group before oneself.						
	Occupational failure does not bring shame to the family. (reverse-scored)						
American Values	You can do anything you put your mind to.						
	I prefer not to take on responsibility unless I must. (reverse-scored)						
	Partners do not need to have similar values in order to have a successful marriage. (reverse-scored)						