

Mind Broadening: Cognitive States and Traits Associated with Intrapersonal Creativity
and Diverse Cultural Experiences

by

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Dissertation

Submitted in partial fulfillment of the requirements
for the degree of Doctorate in Psychology at
The University of Texas at Arlington

August of 2022

Arlington, Texas

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Abstract

An experience with a different culture (cross-cultural experience; CCE) can provide opportunities to think about new and unfamiliar concepts and to solve problems using cross-cultural knowledge and inspired thinking. This could be because a CCE disrupts rigid thinking and compels open, unique, and integrative thinking. To test this, three experiments were executed. Each tested the influence of a temporary mindset of *deculturation*, which describes thoughts related to suppressing one's dominant culture while adapting to a new culture, on generative forms of creative thinking. Two of these experiments also evaluated the influence of the temporary mindset, *acculturation*, which describes thoughts of combining elements of distinct cultures while adapting to new cultures, on generative and convergent forms of creative thinking. The final experiment additionally assessed the influence of a joint mindset of deculturation (cultural suppression) and acculturation (cultural fusion) on generative and convergent forms of creative thinking. Furthermore, this research examined traits of *cognitive flexibility*, or adept mental task-switching and conceptualizing, *integrative complexity*, or mental diversification and recombinative thinking, *cultural adaptability*, or aptitude to experience diverse cultures, and *cultural identification*, or a developed sense of intrapersonal cultural identity. These experiments consistently determined that deculturation mindsets relate to enhanced creative performance, typically for numerous measures of divergent thinking. This project also determined that certain cultural identification strategies, namely *marginalization*, *integration*, and *assimilation*, and forms of cultural adaptability consistently relate to various creative performance outcomes. In contrast to previous research, integrative complexity and cognitive flexibility were not found to significantly associate with most creativity measures.

Keywords: creativity, acculturation, deculturation, diversity, multiculturalism, culture

Acknowledgements

I would like to thank the doctors serving as dissertation committee members for this project. Thank you to Daniel Levine, Helen Abadzi, Paul Paulus, Hunter Ball, and Logan Watts for contributing helpful expertise and insight as I completed this dissertation. Each of you has made a unique and lasting mark on my academic and professional career and future. It is an honor to learn and grow from you all. I would also like to thank the members of the Cognitive Psychology Lab of Dr. Daniel Levine, namely Dr. Amandeep Dhaliwal, Marta Tejada, Nabeel Eusufzai, Kristie Jones, Kyndall Jackson, and Aastha Arora. You have all been crucial to the success of this work and I am privileged to know you and work with you.

Introduction

Cross-cultural experience (CCE) and *multiculturalism* describe the development of familiarity with diverse cultural heritages, members, and societies. *Intrapersonal creativity* describes how capable a person is at producing new and valuable ideas. Contemporary reviewers of the topic have convened on the idea that people who experience various cultures tend to benefit with enhanced creative abilities, such as better personal (Maddux et al., 2021), academic (Sharif, 2019), and professional creative performance, including greater entrepreneurship, productivity, and innovation (Karlsson et al., 2021).

Research on the connection between CCE and creativity has many positive implications. Developing a better understanding of the processes connecting new cultural experiences with creativity can serve communities that are increasingly multicultural with opportunities to evolve, advance, and innovate. For example, cross-cultural research can facilitate cross-national goal development (e.g., pacts to curb climate change) and improve cross-national relations (Der-Karabetian et al., 2018) and creativity research can promote social harmony, sustainability, and revolutions in science and technology (Shao et al., 2019). Furthermore, societies with greater multiculturalism can serve residents by encouraging interpersonal learning and creative cognitive expansion (Li & Khamaksorn, 2020).

On an individual level, there is reason to believe that those who develop greater multiculturalism are less likely to endorse harmful social biases. People with more CCE tend to have lower levels of implicit racism and stereotype endorsement and are less likely to make discriminatory hiring decisions (Tadmor et al., 2012a). Greater CCE also appears related to enhanced occupational performance and success (Tadmor et al., 2012b), cultural intelligence, occupational cultural effectiveness, and leadership performance (Somoye, 2016). Research on

creativity enhancement as an incentive for cross-cultural engagement, then, has the potential to enhance diverse interpersonal relations and boost occupational and leadership effectiveness, both broadly and specifically in diverse workplaces.

Moreover, a better understanding of how CCE's improve creative thinking could have health and cognitive implications. Creative thinking is, potentially, the highest form of reasoning that a person can achieve (Sharif, 2019). Creative expression is related to enhanced physical and mental health, emotional well-being, life satisfaction, and a sense of personal fulfillment (Kaufman, 2018). Creativity is also associated with greater mental flexibility, openness, and positive self-esteem (Chen, 2022). Thus, fostering multiculturalism and creative thinking could enhance a person's abilities and wellbeing in numerous ways.

Current Research Limitations

Due, in part, to the differential approach used in studying the relationship between creativity and multiculturalism, understanding why these two variables seem to consistently associate is currently a challenge. Importantly, multiculturalism is multifaceted, influenced by cognitive factors, cultural identification strategies, cultural background and expertise, and cultural adaptability (Gocłowska et al., 2018; Kim, 2017; Vora et al., 2019), likely among other things. Vora et al. (2019) emphasize the need to assess all elements of multiculturalism in studies of creativity to properly understand the association.

An examination of one feature of creativity cannot provide a comprehensive view of how it relates to any phenomenon. Creativity has been assessed narrowly in studies designed to understand how it relates to multiculturalism in the past. For example, some research has focused only on CCE related to *convergent thinking*, or an ability to find the most appropriate solution to a creative problem (e.g., Maddux et al., 2010), while other research has focused only on a single

dimension of *divergent thinking*, or an ability to generate numerous creative solutions (e.g., *uniqueness* in Leung & Chiu, 2010). It could be beneficial to assess divergent creative thinking as comprehensively as possible, such as by including measures of *ideational fluency* (abundance of ideas) and *categorical flexibility* (diversity of idea categories) with measures of *originality* (statistical rarity) and *novelty* (imaginativeness and modernity).

The three experiments discussed in this paper have addressed some of the current limitations to research of cross-cultural experience and creativity. These experiments assessed multiple features of multiculturalism, such as cultural identification, prior cultural experience, and cultural adaptability, to better understand the association between these features and creativity. Moreover, these experiments assessed multiple divergent thinking dimensions, for both general and culture-specific creativity, and convergent thinking using four separate tasks and, at least, thirteen distinctive creativity measures. Finally, this research established that acute experience of another culture and associated adaptive cultural mindsets, rather than certain pre-existing attributes and prior depth and breadth of cross-cultural experience, influence creative performance of individuals.

Research Aim

The cross-cultural adaptation-linked mindsets of *deculturation*, or mental suppression of dominant cultural influences, and *acculturation*, or mental combining of disparate cultural influences, have the potential to benefit an individual's creativity (Kim, 2015). No study before the current work, experimental or otherwise, assessed these temporary mental states (i.e., deculturation and acculturation) separately or jointly for their influence on creativity. The experiments discussed in this paper test inductions of three disparate cross-cultural adaptive mindsets: 1) suppressing thoughts of one's dominant culture, 2) thoughts of merging one's

dominant culture with a new culture, or 3) suppressing thoughts of one's dominant culture, followed immediately by thoughts of merging elements of a dominant culture with a new culture.

Theoretical Framework

What is Cross-Cultural Experience?

Cross-cultural experience (CCE) describes the result of engaging with cultures that differ from one's dominant culture in some way, such as by interacting with or viewing unique cultural media, art, values, customs, history, regions, and citizens (Shirayev & Levy, 2020).

It should be noted that the term *culture* describes a diverse concept that is difficult to define. CCE's can be passively developed, such as by visiting a museum exhibition of ancient foreign societies or reading a foreign comic book, or actively developed, such as by cultivating friendships across cultures or by traveling or living abroad. Still, one can live within a culture and experience very little of what that culture has to offer if they decide not to embrace it. Conversely, a person can simply observe another culture, such as by watching a foreign play, and take away numerous insights that continuously shape how they view their self and the world around them. As such, the influence that any type of cultural experience has on thinking and behaving is likely shaped by how a person experiences their sense of multiculturalism and personal cultural identity.

Multiculturalism is a result of cross-cultural experience. One constructs their multiculturalism experientially and individually. It is not only the depth and breadth of the cultures that one encounters that impacts multiculturalism. Psychological adjustment is key in developing a cultural identity and to understanding one's own multiculturalism (Maddux et al., 2021). Currently, the interconnectedness of societies has resulted in nearly all people having encountered other cultures, even if only by observing them. Consequentially, nearly everyone

has developed some degree of multiculturalism. Still, not all will internalize a sense of multicultural identification. It should be noted that identifying as multicultural is quite common. Based on survey responses included in Korzillius et al. (2017), multicultural identification (45.2%) is more prevalent than is either monocultural (42.1%) or bicultural (12.7%) identification.

According to Vora et al. (2019), multiculturalism is continuously updated on three spectrums: cultural identification (identity), cultural knowledge, and cultural internalization (Vora et al., 2019). The dimension of cultural *identification* describes developing a cultural identity and related strategies to adapt to cultural groups. The dimension of cultural *knowledge* describes what we learn about and how we comprehend culture. The dimension of *internalization* describes unique mental traits underlying processing of cultural experiences and forming heuristic representations of cultures. While the term *multiculturalism* is broad, describing many elements of cross-cultural experience, the term *acculturation* focuses more narrowly on individual level psychological adjustment to new cultural influences.

Acculturation Processes and Strategies

Berry (1997) describes acculturation processes as an individual's means of psychologically adjusting their behaviors, ideas, and identity to suit newly experienced cultures. Acculturation strategies cultivate a unique cultural identity by helping a person choose from various cultural ideas and behaviors (Vora et al., 2019). Cultural context and prior cultural experiences influence acculturation strategies in each new cultural situation.

The unique choice of acculturation strategies describes which cultures and cultural elements to emphasize in one's cultural identity (Berry, 1997). For instance, one can jointly adopt elements of their home/dominant culture and the new/host culture into their identity, which

describes choosing a strategy called *integration*. One can otherwise choose to adopt mostly customs and concepts of a new culture and emphasize this culture over a familiar culture, which describes choosing a strategy called *assimilation*. Alternatively, one can decide to emphasize their familiar culture by maintaining identity with this culture over a new/different culture, which describes choosing a strategy called *separation*. More rarely, one can determine to maintain an identity that is distinct from any culture, thus choosing an acculturation identity strategy called *marginalization* (Berry, 1997).

To provide an example of acculturation strategy use, imagine a scenario involving a Jewish adolescent in America. She has a history of exposure to both Anglo-American and Israeli cultural influences and can choose which cultures to emphasize in her identity. When this child newly passes through the religious rite of passage known as *bat mitzvah*, she can adjust her ideas about how she identifies with independence, adulthood, and religious adherence. She can choose to jointly emphasize the Christian norms of her classmates and the Jewish norms of her family in her cultural identity (integration). She can choose to align herself more with the Christian norms of her classmates than the Jewish ideological influences of her family (assimilation). She can alternatively decide to minimize the Christian ideology espoused by her peers and to emphasize her Jewish heritage (separation). Lastly, she can decide that she does not identify with either of these perspectives and can rather maintain an identity that is distinct from both cultures (marginalization). She may even adopt multiple different strategies over time as her sense of multiculturalism develops. Acculturation strategies are selected not only due to whether one prefers the identity elements of one culture over another, but also due to their perception of external pressure. An understanding of the advantages and disadvantages of minimizing or

emphasizing the values and traditions of one culture over another plays a predominant role in choice of acculturation strategy (Berry, 1997).

What is Creativity?

To better understand how cultural experiences relate to creativity, it is important to understand what creativity is and how it functions within a person. Creativity is a diverse term. A conventional definition of the construct describes it as the expression of ideas that are original (unique) and appropriate (adaptive) in navigating a solution to a problem (Guilford, 1950). Ideas are considered more creative, typically, when they are somehow new, diversified, integrated, understandable, helpful, interesting, imaginative, and/or appropriate (Kaufman, 2021). Guilford's (1967) structure of intellect model proposes that creative thinking can take divergent and convergent forms. The use of divergent creative thinking involves the emergence of multiple and appropriate creative concepts. The use of convergent thinking, rather, involves convening upon the best or most appropriate solution to a problem that requires novel thinking.

The Creative Process

The creative process involves a continuous mental search to identify, define, inform, resolve and evaluate a novel and useful solution to a problem (McCarthy, 2019). It is likely that one's experiences and cognitive processes work in concert to compel creative idea generativity. Ivanovsky et al. (2018) determined that differences in cultural backgrounds are associated with differences in neural networks linked with activating and inhibiting creativity. This coincides with research that suggests that creativity is an adaptive as well as cognitive process.

Theoretical Models

Cross-Cultural Experience (CCE): The Three-Tiered Model

Vora et al. (2019) implores psychologists to focus on the spectrums for cultural knowledge, identification, and internalization in all future studies of CCE. Doing so contributes a better understanding of various phenomena connecting cultural self-schemas, multiculturalism, and creative thinking. Vora et al. (2019) discusses these dimensions as continuously adapted, strengthened, and weakened over time, both within and outside of a native cultural environment.

Vora et al. (2019) found that over half of the relevant psychological empirical studies acknowledged that internalized cognitive mechanisms were at least partially responsible for developing multiculturalism, but only 26% measured this construct in their investigations. Similarly, empirical psychological studies discussing multiculturalism assessed cultural knowledge 36% of the time. Relevant psychological literature investigating multiculturalism fared better with cultural identification, measuring this construct 96% of the time.

Cross-Cultural Experience: Diversifying Experiences Model

Gocłowska et al.'s (2018) diversifying experiences model suggests that cultural adaptation processes improve creativity, particularly if one perceives they can adapt and that they will benefit from doing so. Multicultural individuals with high adaptive resources, such as integrated cultural identities, tend to exhibit the greatest enhanced creativity, according to this model. Additionally, those who perceive diverse cultural situations as being passable challenges which offer potential gains are more likely to exhibit enhanced creativity than those who see the cross-cultural situation as a threat and emphasize losses. The diversifying experiences model proposes that creativity enhancement surfaces because of the schema violations that cross-

cultural experiences impose. These cross-cultural schema violations lead a person to seek alternative and novel ideas and solutions.

Cross-Cultural Adaptation and Creativity: Deculturation and Acculturation

The states of deculturation (i.e., cultural unlearning) and acculturation (multicultural learning) associate with adapting to diverse cultural experiences, developing a multicultural identity, and enhancing intrapersonal creativity (Fee and Gray, 2012; Kim, 2015). Berry (1997) theorizes that deculturation and acculturation states are most likely to occur when a predominant culture hinders adapting to a new culture or when a host culture is perceived as superior to one's home culture. Both mindsets are also said to sometimes accompany *culture conflict*. Culture conflict describes stress from a perceived lack of fit between an old and a new culture resulting in the loss of a familiar culture and the learning of a new culture.

Deculturation, or “cultural shedding” as Berry (1997) refers to it in the acculturation framework, immediately precipitates cultural learning and serves as a psychological component of the cross-cultural adjustment process. De la Garza & Ono (2015) view deculturation as associated with expansive thinking and preparation for integrating disparate cultural concepts into one's identity. Some researchers interchange the terms *deculturation* and *marginalization* (e.g., Jonsson & Ullah, 2019, Lilla et al., 2021, Rudmin, 2003). However, these two terms can indicate different forms of minimizing cultural influences. In this paper, the term deculturation refers to an immediate psychological state of minimizing one's dominant culture to prepare for cultural adaptation. This allows for a clear distinguishment to be made between *deculturation*, a brief cognitive state, and *marginalization*, a prolonged sense of cultural identification. This coincides with Kim and Ruben's (1988) and Kim's (2017) understanding of deculturation as an *acute* cross-cultural mindset experience.

Conversely, *acculturation* describes a mental state of comparing features of two or more cultures and combining these features in unique and situationally relevant ways. Both deculturation and acculturation processes can facilitate decision-making about which cultural elements to incorporate into one's cultural identity (Berry, 2017). Both mindsets also lead to using the disparate cultures to transform oneself psychologically and behaviorally and to develop creative ideas about how to marry these cultures (Kim, 2017).

Deculturation is also theorized to disturb cognitive fixedness to prepare a person to adhere to prospectively learned norms and expectations (Kim, 2015). For example, picture an American at a restaurant in China. They are trying to order a new dish and feel simultaneously anxious at the thought of looking foolish and hopeful at the thought of trying something exotic. As such, they feel compelled to create mental distance between their knowledge of American food and Western eating practices so they can open their mind to new eating practices and foods. Dropping ideas of their old culture helps the American to immediately adjust while in the restaurant. This gives them new cognitive space to incorporate new experiences and understandings. In this way, one can employ a deculturation mindset anytime that suppressing their culture can be useful to better learn new cultural ideas and customs.

The process of acculturation also helps people adapt to cross-cultural situations (Sharif, 2019). Acculturation describes a mental state which allows for integrating understandings of expectations, influences, and knowledge of two or more cultures (Schwartz et al., 2014). To provide an example, consider a similar restaurant patron to the American discussed in the previous anecdote. This person is newly visiting China and pops into the same Chinese restaurant. This American takes a moment to consider the dishes on the menu and compares them to Chinese dishes they have tried in America. They also think about the utensils they have

used and consider adopting the use of chopsticks over a knife and fork. After looking around, the patron decides to attempt to incorporate the dialect they hear from others into their speech when ordering. While eating their meal, the American uses mustard, a sauce they are familiar with, along with hoisin sauce, a condiment they have never tried. They could even merge both sauces together during some bites, perhaps regrettably so. Thus, they use acculturation as a strategy to allow them to mentally combine home cultural concepts with host cultural concepts to better suit themselves to the new cultural environment and learn how to adapt most comfortably. The visitor can employ an acculturation mindset anytime they believe it will be useful to adopt unique combinations of their home culture with those of a new culture to adjust.

Intercultural Transformation and Stress, Adaptation, and Growth Approaches

The intercultural transformation theory supposes that placing less emphasis on a familiar culture during intercultural identity development alleviates the stress of harmonizing with a new culture. This attenuated emphasis on one's home culture is said to cultivate problem-solving capabilities required for cross-cultural self-renewal (Kim, 2008). Kim (2015) also links cognitive processes associated with creativity to unlearning one's dominant culture, individuating the self from culture, merging multiple cultural ideas, and using cognitive complexity.

Fee and Gray (2012) suggest both deculturation and acculturation accompany enhanced creativity in distinctive ways. The authors posit that those with long-term experiences abroad become familiar with the deculturation and acculturation states. These states allow a person to surrender elements of a familiar culture by overturning functional fixedness. This then allows them to develop new culture-specific understandings. A deculturation state is said to naturally coincide with the experience of enhanced creative ideational fluency (generation of more numerous creative ideas) and the ability to "process situations more flexibly, and become adept

at recognizing multiple meanings, resolving internal discrepancies, and bringing competing ideas together” (Fee and Gray, 2012, p. 1519). Fee and Gray (2012) suggested that acculturation led to different creativity outcomes than deculturation, such as enhanced originality and broad creative thinking. The authors linked creative novel ideations and unique mental combinations with using what is learned from experiencing distinct cultures.

Empirical Support of Enhanced Intrapersonal Creativity from Cross-Cultural Experience

Several empirical studies published within the last quarter century have concluded that greater experience with multiple cultures relates to enhanced intrapersonal creativity. For example, Fee and Gray (2012) evaluated a group of Australian expatriates after twelve months from the onset of a work assignment in one of eighteen developing nations. Those who worked abroad for this period exhibited greater general creativity and creative flexibility when compared to those who spent this period working domestically. In addition, those who worked abroad experienced enhanced general creativity and categorical flexibility and marginally enhanced ideational fluency and creative elaboration between pre- and post-test timepoints. Fee and Gray (2012) determined that extended experience abroad shifted creative ability in these individuals due to cognitive shifts associated with deculturation and acculturation.

Xiong (2015, study 3) assessed differences in creative ideas generated by Chinese college students based on self-reported cross-cultural experience. Xiong (2015, study 3) concluded that greater cross-cultural experience related to greater idea novelty. Leung and Chiu (2010, study 2) found a positive association between self-reported levels of various indicators of cross-cultural experience (CCE), such as cultural identity integration, and gift idea uniqueness. Lee et al. (2012) determined Asian college students who had actual study abroad experience exhibited significantly enhanced creativity while those who merely desired to study abroad did not. These

results suggest that cultural identity and cross-cultural experience in one's background enhance creative thinking and that this enhancement is unlikely to be due to these individuals sharing in creative ability with those who are predisposed to want to have cross-cultural experiences.

There is additional research to support that cross-cultural experience-linked creativity can be independent of having actual travel or living abroad experiences. Chang et al. (2014) found that adolescents from binational families performed better on ideational fluency, categorical flexibility, and originality than adolescents from mononational families. Lu et al. (2017) determined that having intercultural romantic partners predicted better divergent and convergent creativity (study 1), that those who reflected on dating cross-cultural partners benefited with enhanced convergent creative thinking (study 2) and that intercultural learning mediated this relationship. Vezzali et al. (2016) found a main effect of peer group diversity, compared to uniformity, on creativity for Italian schoolchildren. Dzielizewicz et al. (2014) also assessed creativity in school-aged children. Dzielizewicz et al. (2014) determined that participation in a nine-month educational cross-cultural competence program related to enhanced fluency, flexibility, originality, and creative imagination at the time of post-intervention testing in Polish school children, aged 8 – 12 years.

Additional studies support that creativity can be enhanced in those who undergo lab-induced manipulations, such as priming, of a cross-cultural experience. For example, Maddux and Galinsky (2009, study 3) found that priming participants to write about living abroad enhanced their convergent creative thinking. Maddux et al. (2010, study 1) found that those primed to recollect learning about a foreign culture outperformed those primed to recollect learning about their own culture and that those primed to think of cross-cultural learning related to function (study 2) and successful adaptation (study 3) outperformed others on convergent

creative thinking tasks. Similarly, Maddux and Galinsky (2009, study 5) determined that participants primed to imagine adapting while living abroad outperformed all comparison participants on divergent creative task performance.

Cheng and Leung's (2013, study 2) determined that priming participants with a mindset that emphasized cultural differences resulted in their superior convergent creative thinking task performance, but only after being exposed to highly distinctive cultures. Thus, there was an interaction between difference mindset emphasis and distinctiveness level of experienced cultures. Cheng et al. (2011, study 1) found that those who compared elements of two cultures exhibited significantly enhanced creative ideational fluency and categorical flexibility. Tan et al. (2019, study 1) determined that priming participants with a cross-cultural slideshow enhanced the culture-specific creative originality of the fables they contributed. Leung and Chiu (2010, study 1) similarly determined that cross-cultural priming manipulations enhanced the culture-specific creativity of fables. In a follow-up, Leung and Chiu (2010, study 1) introduced a creative time analogy task to the same participants and found support for general creativity enhancement 5-7 days after the initial priming study concluded.

Taken together, these results suggest that cross-cultural experiences and deculturation and acculturation mindsets are associated with enhanced creative abilities. Self-reported levels of cross-cultural experience, cultural learning, and cultural identification appear to be related to enhanced creativity. Furthermore, priming interventions of cross-cultural experience seem to be effective methods to study creative performance enhancement in experimental paradigms.

Cultural Identity and Associated Cross-Cultural Experience and Creativity

The relationship between developing cross-cultural experience (CCE) and improving creativity is associated with developing strategies to cope with cross-cultural situations (See:

Falavarjani & Yeh, 2018, Fee and Gray, 2012, Maddux & Galinsky, 2009, Maddux et al., 2010, Tadmor et al., 2012a). In Berry's (1997) acculturation strategy model, perception of cross-cultural adaptation value influences how one uses various cultural influences to develop a cultural identity. If there is less value in maintaining identification with one's dominant culture and more value in adopting the influences of a different culture, a person will strive to identify as *assimilated*—a strategy to maximize identification with the new culture. Other strategies include a joint home and host culture emphasis, or *integration*, joint home and host culture suppression, or *marginalization*, and emphasis of home culture over host culture, or *separation*. It is suggested that greater CCE leads a person to continuously assess the merits of incorporating elements of dominant and new cultures into their cultural identity and this process involves and results in creativity (Maddux et al., 2021).

There is empirical work to support the link between acculturation strategy use and creative performance. Falavarjani and Yeh (2018) determined that choice of acculturation strategy and degree of multiculturalism influence creative achievement and convergent creativity in Iranian immigrants living in Malaysia. In this study, the strategy of marginalization related to the highest proportion of correct solutions (51.7%), followed by integration (49.3%), assimilation (34.3%) and separation (13.3%) strategies.

Comparable results have been found in studies of divergent creative thinking. For example, Mok & Morris (2010) found that Asian-Americans who were highly bicultural (integrated) performed better on novelty when primed with their host culture compared to those primed with their home culture (Asia). Asian-Americans who did not emphasize either culture (i.e., marginalized) performed better on novelty when exposed to primes of their home culture (Asia) compared to those primed with their host culture (America). Similarly, Tadmor et al.

(2012) determined that MBA students (studies 1 and 2) and Iranian professionals (study 3) with integrated cultural identities exhibited significantly better ideational fluency and categorical flexibility and marginally better novelty compared to other groups.

Sharif (2019) and Tadmor et al. (2012) propose that those with integrated identities draw from a complex array of experiences, while those with marginalized identities are more selective in their strategy use, and that both abilities contribute to enhanced creativity and innovation. Those who actively engage both cultures in their cultural identities (i.e., those who identify as multiculturally integrated) and those who minimize both cultures in their cultural schema could share in having better developed flexible thinking (Botello, 2018) and integrative complexity (Tadmor et al., 2012). Different strategies used to culturally identify could relate to different cultural adaptation styles and expressions of creativity.

Traits of Cognitive Flexibility, Integrative Complexity, and Cultural Adaptability

Cognitive flexibility describes the proficiency with which one can adjust their mental activity, switch between different tasks, ideas, and corresponding behaviors, maintain multiple mental concepts, and shift their attention. For example, an individual evidencing cognitive flexibility in a new culture would be more likely to maintain a mental continuum of the customs they observe, assess their understanding of these customs by comparing them to preexisting knowledge, and detect and correct inaccurate ideas about other cultures.

Aytug et al. (2018b, study 1) found that self-reported levels of cognitive flexibility fully explained the relationship between multicultural experience levels and that general divergent thinking, and creative ideational fluency and flexibility levels (Aytug et al., 2018b, study 2). Kim (2016) determined that cognitive flexibility levels explained the positive relationship between levels of multicultural experience and creative fluency and flexibility. Cognitive flexibility also

explained the positive relationship between bilingualism and creative fluency, originality, and flexibility.

Integrative complexity describes one's ability to use mental differentiation and integration to compare and convene upon solutions. Integrative complexity involves complex thinking and reasoning that allows for the recognition and integration of different views, relationships, and contingencies. To provide an example, an individual in a new culture can evidence integrative complexity by juxtaposing ideas of their own and the new culture, distinguishing elements of these cultures into understandings of superior and inferior forms, and combining disparate cultural ideas and behaviors in ways that optimally suit the person experiencing them. Integrative complexity allows for a new cultural experience to enhance a person by lending to their ability to synthesize cultures into superior forms.

Cheng & Leung's (2010) experimental results indicated that mental states akin to integrative complexity explain the creative performance in those exposed to distinct cultures. In this experiment, participants primed with a difference mindset and who were exposed to highly different cultures performed better on a creativity task than those exposed to highly similar cultures. This paradigm simulates the differentiation and juxtaposition processes associated with integrative complexity by enforcing cultural difference mindsets in participants. Also of note, three studies of Tadmor et al. (2012a) determined that levels of integrative complexity mediated the relationship between acculturation strategy use and levels of both lab-based and external creative achievement.

Finally, *cultural adaptability* describes one's ability to use cultural metacognition (i.e., executive functions used to learn about and understand cultures), knowledge, behavioral adherence, and motivation to adjust to other cultures (Ang, 2007). Better cross-cultural

adaptability relates to improvements to complex and well-developed cultural thoughts and behaviors (Maddux et al., 2010). To provide an example, a person could exhibit cross-cultural adaptation by learning about and adhering to common phrases of a new culture and seeking out cultural historical knowledge and artforms. Cross-cultural adaptation can result in numerous applications that could be considered creative, simply due to their being new, appropriate, and unconventional for the individual applying them.

Bultseva & Lebedeva (2019) determined that greater levels of self-reported *cross-cultural learning*, which is analogous to mental processes associated with cultural adaptability, significantly enhances creativity and that the development of greater *intercultural competence*, which relates to all elements of cultural adaptability, explains the positive influence of multicultural peer relationships on creative fluency, flexibility, and originality. Lu et al. (2017) further determined that intercultural learning explained the relationship between reflecting on cross-cultural experience and convergent creative task performance. In their study, Maddux and Galinsky (2009, study 4) found that extent and quantity of self-reported foreign culture adaptation experiences explained the relationship between cross-cultural experience levels and convergent creative thinking task performance of participants. Lastly, Korzilius, et al., (2017) determined that cross-cultural intelligence and adaptability fully mediated the relationship between multiculturalism and innovative work behavior. Taken together, these results suggest that certain cognitive qualities, such as cognitive flexibility, integrative complexity, and preparedness to learn from and adapt to new cultures, can act in concert with cultural identification during and after new cultural experiences to influence creativity differently in individuals.

Maddux et al. (2021) suggest that the creativity enhancement resulting from developing cross-cultural experience coincides with concurrent intrapersonal improvements to mental flexibility, integrative complexity and cultural adaptation and learning. Gocłowska and Crisp (2014) discuss these three states in their dual identity processes model as constructs overlapping with cultural identity development and creative thinking. Empirical research also supports that cognitive flexibility, integrative complexity, and cultural adaptability can explain the relationship that cross-cultural experience (CCE) has with creative performance (e.g., Aytug et al., 2018b, Korzilius et al., 2015, Tadmor et al., 2012a).

Summary of Experiments

The forthcoming experiments discussed in this paper are founded on the previously discussed empirical works (e.g., Bultseva & Lebedeva, 2019; Falavarjani and Yeh, 2018; Fee and Gray, 2012) and theoretical models (e.g., Berry, 1997; Gocłowska et al., 2018; Vora et al., 2019) linking multiculturalism and creativity to cultural adaptation mindsets. These experiments were conducted with the aim of providing the scientific community with new knowledge of whether precipitating and temporary mindsets of deculturation and acculturation are involved in creative thinking enhancement subsequent to experience of a new culture. The forthcoming experiments also sought to detail how deculturation and acculturation mindsets associate with other qualities, such as cultural adaptability and acculturation strategies, which have been previously associated with multiculturalism and creative performance. Several experimental studies have determined that priming manipulations of cross-cultural experience can boost intrapersonal creativity (e.g., Leung & Chui, 2010, Mok & Morris, 2010, Tan et al., 2019). To date, however, no study has manipulated the mindsets of deculturation and acculturation.

The following three experiments examine the influence of priming a deculturation mindset and self-reported levels of distinctive cultural identification strategies (i.e., assimilation, marginalization, integration, and separation) on creativity. Experiment One examines the effect of priming manipulations of either deculturation or acculturation mindsets on creativity and additionally inspects self-reported cultural adaptability and perceived cross-cultural identity harmony and blending. The subsequent experiment compares the influence of a primed mindset of deculturation to a passive observational exposure to a foreign culture on creativity and additionally assesses preexisting levels of both interactions with and passive exposures to foreign cultures. Experiment Three assesses distinctive and combined manipulations of mindsets of deculturation and acculturation. Experiment Three additionally examines how levels of traits cognitive flexibility, integrative complexity, and cultural adaptability associate with creativity.

Instruments

As suggested by Vora et al. (2019), these experiments assessed three dimensions of multiculturalism: multicultural aptitude/adaptability, cognitive processes, and cultural identity. Each of the three experiments assessed the role of cross-cultural identification strategy choice and strength in participants. The second experiment included an additional examination into the role of self-reported cultural experience depth and breadth of participants. The first and final experiments additionally assessed cultural aptitude and adaptability. The final experiment also included assessments of cognitive trait levels of integrative complexity and cognitive flexibility.

Demographics

Demographics data assessed participant age, occupation, ethnicity, gender, and nationality. the demographics questionnaire Also assessed cross-cultural experience qualities,

such as multilingualism and cultural experience nation specificity, frequency, and depth (see Appendix A).

Adapted Bicultural Identity Integration Scale-II (BIIS-II).

The first experiment utilized an adapted version of the bicultural identity integration scale (BIIS-II; Huynh et al., 2018) to assess participant cross-cultural identification qualities and to validate a new four-item scale designed to assess specific acculturation strategy adoptions of participants. The BIIS-II has reliably assessed cultural identification perception in past multiculturalism and creativity experiments (e.g., Benet-Martinez et al., 2006; Mok & Morris, 2010). A recent test of the psychometric properties conducted by the original authors determined this test to be valid and to reliably indicate self-perceived bicultural harmony and bicultural blending using two subscales (Huynh et al., 2018). The BIIS-II bicultural blendedness subscale assesses self-perceived overlap and integration of multiple cultural identities and has evidenced strong inter-item consistency ($\alpha = .81$). The BIIS-II bicultural harmony subscale assesses self-perceived cross-cultural agreement and has similarly evidenced strong inter-item reliability ($\alpha = .86$). Both subscales revealed good test-retest stability (harmony = .77, blendedness = .73) as well.

It has been previously determined that multicultural identification (45.2%) is more prevalent than monocultural (42.1%) or bicultural (12.7%) identification (Korzilius et al., 2017). The adjustments made to the BIIS-II adapted version were implemented with this understanding in mind. An item added to the 17-item BIIS-II addressed self-reported multicultural identification in participants (for the full scale, see Appendix B). Additionally, minor modifications were made to the BIIS-II to incorporate terminology to reflect diverse forms of cultural identification, rather than only bicultural identification. An example adapted item from

the BIIS-II *blendedness* subscale is as follows: *I cannot ignore the cultural sides of me*. The preceding item was altered from the original, which identified cultures by name in the item.

Short Acculturation Strategy Index (SASI).

While the BIIS-II can assess perceptions of agreement and merging of cultures, it was not intended to distinguish particular levels of acculturation strategies adopted by test-takers. Acculturation strategies of separation, assimilation, integration, and marginalization were assessed in this project using a newly created, short-form instrument, called the Short Acculturation Strategy Index (SASI). Ascending scores for each SASI item indicate the strength of the presence of each acculturation strategy. Each item is also intended to be a measure that is distinguishable from bicultural harmony and blendedness.

The SASI was administered to participants jointly with items from the BIIS-II in Experiment One to assess some indications of the psychometric robustness of the four items on the SASI. Each item was provided to participants with a Likert scale that ranged from 1 (strongly disagree) to 5 (strongly agree). The four items are as follows: *I identify with my native culture and do not identify with any other culture* (separation), *I do not identify with my native culture and do identify with one or more different cultures* (assimilation), *I identify with two or more cultures, including my native culture* (integration), and *I do not identify with my native culture or with any other culture* (marginalization). Following the validation efforts in Experiment One, the SASI was utilized as the sole measure of acculturation strategy adoption in Experiment Two and the Experiment Three (for the full scale, see Appendix C).

Four-Factor Cultural Intelligence Scale (CSQ).

Experiment's One, Two, and Three assessed self-reported levels of cultural aptitude and adaptability using the 20-item four-factor cultural intelligence scale (CSQ; Ang, 2007). This

scale has evidenced strong internal consistency ($\alpha = .94$) from an inter-item correlational analysis by the original authors. There are four subscale dimensions assessed in this questionnaire. Four items assess cultural *metacognition*, or adaptive strategizing relevant to executive functioning, in one subscale. A subscale of five items assesses *motivation* to adapt to diverse cultures. A subscale of five items assesses cultural *behavior* adaptation tendencies. A final subscale uses six items to assess cultural expertise and *knowledge* (for the full scale, see Appendix D). An example knowledge subscale item is as follows: *I know the rules for expressing non-verbal behaviors in other cultures*. Responses to all items fall on a Likert scale that ranges from 1 (strongly disagree) to 7 (strongly agree).

Multicultural Experience Assessment (MExA).

In the second experiment, levels of self-reported cross-cultural exposures and cross-cultural interactions were assessed in participants using the two nominal Multicultural Experience Assessment (MExA; Aytug et al., 2018a) subscales. The use of the MExA allowed for comparisons to be drawn between self-reported levels of passive exposures to various foreign cultures and active interactions with various foreign cultures. Moreover, these subscale scores were used to detect changes in levels of passive exposure to foreign cultures in participants who viewed a video of a new culture. MExA subscale scores for interactions were used to assess differences in creativity in those imagining interacting with a new culture compared to other groups. The original authors determined a Cronbach's alpha of .88 for multicultural exposure, .93 for multicultural interaction, and .84 for the combined subscale item reliability statistics (for the full scale, see Appendix E).

Cognitive Flexibility Inventory (CFI).

Experiment Three included an assessment of self-reported trait levels of cognitive flexibility using the 20-item Cognitive Flexibility Inventory (CFI; Dennis & Wal, 2010) as a pre-manipulation measure. The CFI is a brief self-report measure of the type of cognitive flexibility (CF) needed to adapt one's thinking strategies. Specifically, this scale assesses the strength with which a person detects multiple alternative scenarios, outcomes, explanations, and behaviors, perceives they have control over challenging circumstances, and creates numerous potential solutions to problems (for the full scale, see Appendix F). Validation efforts on behalf of the original authors of this scale resulted in evidence of strong internal consistency for the items ($\alpha = 0.77$; Dennis & Vander Wal, 2010).

Lumpers and Splitters Questionnaire (LSQ).

Experiment Three additionally assessed self-reported trait levels of integrative complexity using the 12-item Lumper-splitter Questionnaire (LSQ; Oleynick, 2015) as a pre-test measure. Those scoring highly as lumpers and splitters emphasize both similarities/connections and differences/separateness when forming decisions, which coincides with high levels of integrative complexity (for the full scale, see Appendix G). The LSQ scale has evidenced high internal consistency for the six integration subscale items ($\alpha = 0.79$) and for the six differentiation subscale items ($\alpha = 0.83$) after an inter-item correlational analysis by the original author (Oleynick, 2015). An example of one of the six lumpers (i.e., integration) subscale items is: *I see core similarities that unite all people or all things*. An example of one of the six splitters (i.e., differentiation) subscale items follows: *I see fundamental differences that distinguish types of people or types of things*. Responses to all items fall on a Likert scale that ranges from 1 (strongly disagree) to 7 (strongly agree).

Creative Thinking Performance Instruments

Convergent Creative Thinking Measures

Convergent creative thinking outcomes were measured by utilizing one (as in Experiment One) or three (as in experiments two and three) items each from the anagrams within the verbal convergent items list compiled by Dow and Mayer (2004) and the word-pairing tasks taken from the Remote Associates Test (RAT; Mednick, 1962). The RAT has been independently vetted (Marko et al., 2019), found to evidence strong test re-test reliability ($\alpha = .90$), and is widely considered a valid measure of associative and lexical creative thinking abilities. The anagram items taken from Dow and Mayer (2004) were implemented to assess similar verbal convergent creative thinking dimensions to the RAT word-pairings and to serve as comparable measures for verbal convergent creative thinking. A single task was taken from each test for the initial experiment and three items were taken from each convergent task compilation for Experiment Two and the Experiment Three. The latter two experiments additionally added a time limit of 180 seconds, or one minute per task, for each convergent measure. The outcomes of the two assessments, both the anagram items and the word pairing items, were compared to better ensure the reliability of both instruments (each of the six items used can be found in Appendix H).

Divergent Creative Thinking Measures

For the three experiments, scores for ideational fluency, categorical flexibility, novelty, and originality indices of divergent thinking were assessed using two tasks, with both being time-limited to two minutes. Measures of general divergent thinking were derived from the uses for a rubber tire item on Guilford's Alternative Uses Test (AUT; Guilford, 1967). In this task, participants were asked to list as many possible uses for a rubber tire as possible (the prompt can be found in Appendix I). The *uses* tasks developed by Guilford are some of the most common

items used in historical and modern research on divergent forms of creative thinking to assess various dimensions of generative creative ability (Kanlı, 2020). Culture-specific creativity was assessed from ideas generated for the *Tourist Problem* (McLeod et al., 1996). This task asked test-takers to generate as many creative ideas as possible that could attract foreign tourists to their current residing country (the prompt can be found in Appendix J).

Ideational fluency, categorical flexibility, and novelty were each assessed using the Consensual Assessment Technique (CAT; Amabile, 1982), a standard practice of rating creative thinking dimensions that bases scores on the judgments of experts of creativity. Following the completion of the time-limited portion of these tasks, from which scores for ideational fluency and categorical flexibility were derived, participants underwent a choice ranking procedure to determine idea novelty. The participant choice ranking method resulted in up to three ideas that were subsequently assessed for novelty.

Divergent creative thinking tasks, including the uses for a tire task, are found to be robust measures of numerous creativity indices in a two-minute, time-limited format which uses the participant choice ranking procedure (Benedek, 2003). Shorter duration creative exercises (e.g., two-minute tasks) are more dependable at distinguishing fluency scores (.85) from novelty scores when participant novelty is assessed from the top three (particularly) or two (to a lesser degree) choices. This method produces an average of 10 ideas in two minutes. Furthermore, this method obtained high internal consistency for the ideational fluency measure when used for the rubber tire uses task (Benedek, 2003). The alpha coefficients went up slightly with time-on-task and plateaued at roughly two minutes. This suggests that ideational fluency was assessed reliably for a two-minute, timed divergent thinking task. For this task, originality scores also evidenced strong reliability (.80).

Experiment One

The first experiment assessed whether individuals who were primed with a mindset of deculturation (i.e., cultural identity dissociation) or acculturation (cross-cultural identity integration) would exhibit enhanced creative performance for numerous general and culture-specific creativity tasks in comparison to individuals primed to imagine experiencing their home culture and control participants receiving no manipulation. This experiment also assessed dimensions of bicultural identity harmony (i.e., perceived cross-cultural identity agreement) and blendedness (i.e., perceived cross-cultural identity overlap) in relation to mindsets of deculturation and acculturation and in relation to acculturation strategies (as ancillary examinations). Finally, this experiment newly addressed whether scores indicating cross-cultural adaptability associate with perceptions of bicultural identity harmony.

Experiment One Hypotheses

A mental state that deemphasizes a familiar culture, indicative of a *deculturation* mindset, can shift formerly rigid cognitive structures and dispel obsolete cross-cultural ideas in preparation for adapting to previously unlearned cross-cultural norms and expectations (Kim, 2015).

H1: It is predicted that participants who are primed to experience the mindset of deculturation, or dominant culture suppression, will exhibit better performance of general and cultural-specific novelty, ideational fluency, and categorical flexibility compared to individuals who experience home-culture mindset priming and no manipulation.

A mental state of combining elements of distinctive familiar and new cultures, indicative of a mindset of acculturation, can aid adoption of cognitive strategies to merge elements of a new

culture into one's identity and form unique, adaptive ideas. Furthermore, this state could aid appropriate cultural behavioral adherence, comprehension, and competence (Kim, 2017).

H2: It is predicted that participants who are primed to experience the mental state of acculturation, or dual-culture merging, will exhibit enhanced culture-specific creative thinking performance scores, and enhanced general idea originality and convergent creative task performance compared to participants who experience a home-culture mindset priming manipulation and no priming manipulation.

Moreover, manipulations of deculturation and acculturation mindsets could differentially influence subscale scores for perceptions of cross-cultural harmony and blendedness. A deculturation mindset could negatively associate with subscale scores for *blendedness*, a construct denoting the merging of multiple cultures. Additionally, the influence of a deculturation mindset could negatively associate with subscale scores for *harmony*, a construct denoting a feeling of agreement shared between multiple cultures one has experience with.

H3: It is predicted that participants primed with a deculturation mindset will experience significant attenuation to adapted BIIS-II cultural harmony and blendedness subscale scores between pre-and post-test timepoints.

The influence of a mindset of acculturation, which involves combining elements of disparate cultures, could positively associate with subscale scores for *blendedness*, a construct denoting the merging of multiple cultures. Moreover, the influence of a mental state of acculturation could positively associate with subscale scores for *harmony*, a construct denoting the feeling of agreement shared between disparate cultures.

H4: It is predicted that participants primed to experience an acculturation mental state will experience significant enhancement to adapted BIIS-II cultural harmony and blendedness subscale scores between pre-and post- manipulation timepoints.

Cross-cultural blendedness associates positively with divergent creativity (Saad et al., 2013). Furthermore, cultural intelligence and adaptability (determined from the cultural intelligence scale; CSQ) positively associate with bicultural identity blendedness in those who complete study abroad semesters (Nguyen, 2010). However, harmony subscale scores have yet to be associated with CSQ. Cultural adaptability levels relate to how one adapts to other cultures and develops an intercultural identity (Vora et al., 2019). As such, this experiment aims to confirm that cultural adaptability scores will positively associate with adapted BIIS-II subscale scores for cultural harmony.

H5: It is predicted that higher scores denoting cultural adaptability will relate to higher pre-manipulation BIIS-II cultural harmony subscale scores.

Experiment One Method

All participant data were collected using the online platform of QuestionPro. Participants were recruited through the online platform of Amazon Mechanical Turk (Mturk). As part of the pre-manipulation survey set, participants completed an adapted version of the bicultural identity integration scale (BIIS-II; Huynh et al., 2018) and the short acculturation strategy index (SASI; Stephens, 2022) to validate the latter instrument and to collect data on perceptions of cultural harmony and blendedness and differential acculturation strategy adoption strength in participants. Participants also completed the background demographics questionnaire.

Following completion of the initial surveys, participants were randomly assigned to one of four groups. Three groups of participants took part in a priming and writing exercise and a

fourth group of participants served as a control. For one potential manipulation, “deculturation prime” condition, participants were tasked with imagining and writing about adapting to a holiday celebration of another culture (see Appendix J). In another manipulation, the “acculturation prime” condition, participants were tasked with imagining a scenario wherein they combined their culture with a new and unfamiliar culture while adapting to a holiday celebration of another culture. In a third manipulation, the “home culture prime” condition, participants were tasked with imagining embracing their own cultural identity to fit in during a familiar holiday celebration.

Following completion of the manipulation, or immediately following the pre-test surveys for participants assigned to the control condition, two convergent creativity thinking task items, both an anagram and a RAT item, and two divergent creative thinking task items, both the uses for a tire task and the tourist task, were administered. After this, all participants subsequently completed the CSQ and were readministered the adapted BIIS-II and the SASI before concluding participation.

Experiment One Data Analysis

Divergent creative thinking task results of the AUT and tourist problem were assessed by trained lab assistant raters who were unaware of participant condition assignment on four indices. Raters were trained using a formal presentation of the constructs and assessments. This training presentation included operational definitions and example items of the constructs being assessed. Following the presentation, a question-and-answer session took place. Operational definitions and scales were also embedded in the excel documents which contained the anonymized participant responses. Three raters assessed novelty of the first, second, and third participant-chosen ideas drawn from both the general and culture-specific tasks. The three

selected ideas from both the general tire uses task and the cultural tourist problem task were Likert-rated using a 1-4 scale, with the lowest scores indicating an item to be “*Not at all new, innovative, or imaginative*” (1) and the highest score indicating an idea to be “*Highly new, innovative, and imaginative*” (4). The average general and culture-specific novelty, derived from the ICC2 was .89, 95% CI [.848, .923], suggesting strong agreement for the measure. Rater scores for each of the six novelty dimensions for each participant cell were combined into six independent means for novelty data analysis purposes.

General ideational fluency and culture-specific ideational fluency were assessed by three independent lab assistant raters and general and culture-specific categorical flexibility measures were assessed by two independent lab assistant raters, who were unaware of participant condition assignment, using a similar method. The average general and culture-specific ideational fluency rating ICC2 was .73, 95% CI [.577, .824], suggesting strong agreement for the measure. The average general and culture-specific categorical flexibility rating ICC2 was .74, 95% CI [.596, .832], suggesting strong agreement for the measure. Rater scores for each fluency and flexibility measure were combined into means for the purposes of data analysis of these constructs.

One trained rater assessed originality as the statistical rarity of first, second, and the third participant selected ideas for general and culture-specific divergent creative thinking tasks. For originality scoring, individual participant-preferred items from the tourist and rubber tire task were initially pooled distinctively, resulting in two idea pools, for all participants. Following this, both idea sets per each participant were assessed for commonalities with ideas in the larger pool of other, task-relevant participant ideas. Originality scores were determined from the idea responses contributed by $\leq 1\%$ of participants, which were awarded 2 points, and the idea responses contributed by 1% - 5% of participants, which were awarded 1 point. These points

were summed to assign a culture-specific and general originality score ranging from 0-6 to each participant.

The responses on the two convergent creative thinking task items, one RAT and one anagram item, were assessed in a binary fashion. Responses were coded as '1' for correct and '0' for incorrect by one independent and trained rater who was unaware of participant condition assignment. These two scores were distinctively assessed for Experiment One only.

Bicultural identity integration scale-II (BIIS-II) and the four-factor cultural intelligence scale (CSQ) responses were distinctively summed to provide total numerical scores for these scales. BIIS-II subscale scores for bicultural identity harmony (i.e., perceived ease of identifying with disparate cultures) and bicultural identity blendedness (i.e., perceived overlap of disparate cultural elements) were distinguished from one another and summed to provide subscale score measures of bicultural identification harmony and blendedness for the purposes of analyzing hypotheses three and four. A similar procedure was followed with the CSQ to assess hypothesis five. Subscale scores for the metacognition, cognition, motivation, and behavior subscale items were distinctively summed for each participant.

The four SASI item responses were distinguished from one another and summed. Each item score provided an indication of the strength of one of four potential acculturation strategy adoptions (i.e., integration, marginalization, separation, or assimilation). Participant scores, at both pre- and post- manipulation timepoints, for the SASI were assessed in relation to scores for the BIIS-II, at both pre- and post-manipulation timepoints, to determine the construct validity of the SASI instrument.

Experiment One Results

Participants

The initial sample of participants in Experiment One consisted of 93 adults. Two of these individuals indicated national residency outside of a requisite nation meeting the inclusionary criteria for this study and were subsequently eliminated from the dataset. Nine participants were excluded due to providing invalid responses to the manipulation condition writing prompts (e.g., leaving the response blank).

The final pool of participants consisted of 82 adults. Each participant was compensated \$2.00 for participation in the study.. All participants ($n = 82$) reported current residency in the United States of America, despite recruitment efforts which included other nations, and English language proficiency. The gender make-up of the final sample consisted of 31 females and 51 males, who ranged in age between 18 to 62 years. Most of the retained participants reported being monolingual ($n = 61$). Bilingualism was the next most common spoken language count status ($n = 13$). Otherwise, two participants reported speaking three languages and three participants reported speaking four languages. Three responses were missing for the spoken language count item. Most participants ($n = 66$) reporting visiting at least one other country aside from their current residing nation at some point.

Due to a disproportionate number of participants assigned to the manipulation groups contributing invalid responses in the initial experiment, the participant condition assignments were unbalanced. A total of 13 participants comprised the final sample who experienced a condition of a primed deculturation mindset. A total of 17 participants comprised the final sample who experienced a condition of a primed acculturation mindset. A total of 28 participants comprised the final sample who experienced a condition of a primed home-culture mindset. Finally, a total of 24 participants comprised the final control group sample who experienced no manipulation.

Manipulation Check

To provide a manipulation check in Experiment One, presence of deculturation and acculturation were assessed distinctively by three independent raters who were unaware of the participant condition assignments. The raters took part in formal training and had operational definitions of the two constructs provided in advance of taking part in the ratings procedure. The raters assessed all paragraphs written by participants for deculturation and acculturation levels using distinctive 4-point Likert scales. These scales assessed the level of deculturation as the level of home-culture suppression (e.g., 1 = no deculturation presence; 4 = strong deculturation presence) and the level of acculturation and the level of home-culture and new culture integration (e.g., 1 = no acculturation presence; 4 = strong acculturation presence). Rater agreement was assessed in the results of intraclass correlations analyses per each rating category. The average ICC2 of three deculturation ratings was .20, 95% CI [-.373, .528], suggesting weak correspondence. The average rating ICC2 of three acculturation ratings was .38, 95% CI [-.052, .639], suggesting weak correspondence. In support of the manipulation efficacy, deculturation presence means were higher in paragraphs written by participants in the deculturation condition ($M = 1.31, SE = .17$) compared to participants in the acculturation condition ($M = 1.16, SE = .09$) and home-culture priming condition ($M = 1.11, SE = .08$). Additionally, in support of the manipulation efficacy, acculturation presence means were higher in paragraphs written by participants in the acculturation condition ($M = 2.16, SE = .24$) compared to participants in the deculturation condition ($M = 1.64, SE = .32$) and home-culture priming condition ($M = 1.57, SE = .018$). Additionally, raw alpha reliabilities statistics were computed to provide an additional measure of rater correspondence. The alphas for ratings of deculturation ($\alpha = .94$) and acculturation ($\alpha = .81$) were found to be strong. Even while rater ICC was weak, the average

means for deculturation and acculturation assigned to the distinctive conditions suggests that the manipulations differentially induced deculturation and acculturation mindsets in the relevant participants.

Normality Tests

Before assessing hypotheses, a test of the distributional normality of participant data was conducted. Initial normality analyses included assessments of skewness and histogram plots per each of the 14 creativity index dependent measures. The results indicated abnormally large negative skewness for each creativity dimension distribution. As such, Z-score transformations of these scores were conducted and normality of these scores was subsequently assessed in histogram plots and found to be established. These Z-transformed scores were utilized for data reporting purposes.

An identical normality assessment procedure was administered to the data for the dependent measures of pre- and post-manipulation total BIIS-II scores, BIIS-II subscale scores for bicultural identity blendedness and harmony, and the scores for total CSQ and subscales for CSQ knowledge, adaptability, motivation, and behavior. Scores uniformly fell within the normal distribution ranges. These untransformed scores were subsequently utilized for data analysis and reporting purposes.

Hypotheses Tests

To test hypothesis one, that the experience of a prime of a deculturation mindset relates to greater mean scores for general and cultural novelty, ideational fluency, and categorical flexibility than experience of a home-culture mindset prime and no manipulation, and hypothesis two, that experience of a prime of an acculturation mindset relates to greater mean scores for general originality, all dimensions of cultural creativity, and convergent task performance than

the experience of a home-culture mindset prime and experience of no manipulation, a multivariate analysis of variance (MANOVA) was conducted.

Initially, the results of Levene's test supported that group differences in scores for each creativity measure included in the MANOVA varied homogeneously except for scores for novelty of first and third preferred general creative ideas and novelty of second-preferred culture-specific creative ideas. Due to the small sample size and results suggesting that equal variances could not be assumed, the Dunnett T3 post-hoc test of multiple pairwise comparisons was included, along with separate analyses using unadjusted pairwise comparison tests, to assess mean differences for each divergent thinking index measure, which totaled 12, by participant condition assignment.

Several significant between-groups differences emerged in the initial results. A significant and moderately robust main effect of condition on novelty of mean first-choice cultural idea was observed, $F(3, 78) = 2.70, p = .05, \eta^2 = .094$. Also, results revealed a significant and moderately robust main effect of condition on mean novelty of the second-choice cultural idea, $F(3, 78) = 3.44, p = .02, \eta^2 = .117$. An additional significant and moderately large main effect of group condition on mean novelty of participant's first-preferred general idea, $F(3, 78) = 2.79, p = .05, \eta^2 = .097$ was observed. Finally, while not significant, a marginal and moderately large effect of condition on general categorical flexibility of ideas was observed, $F(3, 78) = 2.12, p = .10, \eta^2 = .08$.

The data derived from the Dunnett T3-adjusted multiple comparisons evidenced no significant pairwise differences for any measure. However, less conservative Least Square Difference analyses evidenced notable results in alignment with some of the parameters of hypothesis one and so are included in Table 1. The less conservative results suggested that

general and cultural novelty were enhanced for some participant ideas for those in the deculturation mindset priming condition compared to the home-culture and/or control condition (see Figures 1 and 2). Unadjusted pairwise comparisons revealed only marginal effects for general novelty of one idea, compared to control participants, and general categorical flexibility, compared to home-culture assigned participants, for the acculturation primed participants. As these results were taken from unadjusted pairwise group comparisons, they should be interpreted as null effects. No other differences between groups were revealed for divergent creative thinking measures in alignment with hypotheses one or two based on the unadjusted pairwise comparison results.

To test the remaining parameter of hypothesis two, independent samples *t*-tests were conducted. These tests compared acculturation primed participant scores to home-culture primed participants, followed by control participants, on correct versus incorrect responses to RAT and anagram convergent thinking task items. No significant two-tailed results were indicated for either insight task. Regarding hypothesis two, no other significant effects were observed.

To assess hypotheses three and four, that an attenuation to scores for cultural harmony and blendedness subscale scores would be exhibited in those primed with a deculturation mindset and an enhancement to cultural harmony and blendedness subscale scores would be exhibited in those primed with an acculturation mindset, respectively, four paired samples *t*-tests were conducted. Each *t*-test assessed mean differences in harmony or blendedness subscale scores between pre- and post-manipulation timepoints in the distinctive conditions.

The results indicated there were no significant group differences between the first and second administration of the subscale blendedness and harmony items for either the deculturation or the acculturation primed participants. Mean differences between pre- and post-test timepoints

can be found in Table 2. The acculturation primed participant scores indicating cultural harmony increased slightly, though not significantly. Cultural harmony means for the deculturation primed participants dipped, though not significantly. Bicultural blendedness scores slightly increased in participants in the acculturation mindset primed group, though not significantly. Unexpectedly, bicultural blendedness scores slightly *rose* in the deculturation primed participants, contrary to the supposition of hypothesis three, though this shift was not significant. Though insignificant, shifts to perceived blendedness and harmony between cultures were otherwise in the anticipated directions of hypotheses three and four for the deculturation and acculturation primed groups.

To test the assumption of hypothesis five, a bias-adjusted Pearson bivariate correlation was conducted, comparing participant scores for cultural intelligence and adaptability to pre-test scores for bicultural blendedness and bicultural harmony. Hypothesis five was not supported (for full results, refer to Table 2). Total mean cultural adaptability scores were significantly positively related to bicultural blendedness scores. Contrary to hypothesis five, cultural adaptability scores were significantly negatively—rather than positively—correlated to bicultural harmony scores. It was also determined that bicultural harmony negatively corresponded with CSQ subscale scores for cultural knowledge and behavioral adaptability. Cultural harmony did not significantly relate to CSQ cultural metacognition or motivation scores. Blendedness significantly positively related to CSQ metacognition, knowledge, and behavior scores, though not to motivation scores.

Short Acculturation Strategy Index Validation

Ancillary examinations into the relationships of scores for bicultural blendedness and harmony with scores for similar SASI measures, the acculturation strategies of integration, assimilation, and marginalization, were performed to validate these items as similar yet distinguished from the BIIS-II subscale items. Initially, a bias-adjusted Pearson bivariate

correlational analysis compared pre- and post-manipulation blendedness and harmony scores to pre- and post-manipulation scores for the Likert-rated integration, separation, assimilation, and marginalization items. These were the cultural identity *integration* indicating item, *I identify with both my home culture and at least one different culture*, the cultural identity *separation* indicating item *I identify with my native culture and do not identify with any other culture*, the cultural identity *assimilation* indicating item, *I do not identify with my native culture and do identify with one or more different cultures*, and the cultural identity *marginalization* indicating item, *I do not identify with either my home or a different culture*.

The results suggested that each measure significantly or marginally related to the other measures, except for separation item scores (for full results, see Table 3). The moderate strength of many of these correlations for the three relevant measures suggests these scores assess independent, but related, dimensions. The separation item finding is expected, as separation indicating scores suggest different outcomes (i.e., identification adherence with home, rather than diverse, cultures) than bicultural harmony and blendedness scores indicate. Scores also corresponded similarly between items for both pre- and post-manipulation time periods.

BIIS-II scores indicating greater self-perceived blending of experienced multiple cultures strongly and positively corresponded to the SASI item indicating cultural identity integration. Moreover, there was a small positive relationship between scores indicating blending of cultures and the SASI item scores indicating cultural identity marginalization. Scores indicating cultural blending also moderately and positively corresponded to scores for the SASI item indicating assimilation. This suggests that self-perceived merging of disparate cultures corresponds to identifying with neither culture to a small degree, identifying with only a host culture to a moderate degree, and identifying with two or more cultures to a strong degree.

Furthermore, BIIS-II scores indicating harmony were strongly and negatively related to scores indicating integration. Harmony scores were strongly and negatively related to marginalization indicating scores. Finally, harmony scores were strongly and negatively associated with assimilation scores. This suggests that self-perceived agreement between one's various experienced cultures shares a strong negative relationship with identifying with either no culture, both cultures, or a host culture. The experience of differential participant conditions did not substantially alter the relationships between blendedness and harmony concerning levels of integration, assimilation, and marginalization. This could suggest these qualities exhibit stable associations that are resistant to the influence of mindsets taken on during acute cultural experiences.

To assess the test-retest reliability of the items, bias-adjusted Pearson Bivariate analyses were conducted to compare the associations between pre- and post-manipulation score averages for each cultural identity item. Pre-manipulation SASI item scores were sufficiently correlated to all analogous post-manipulation scores.

SASI Scores and Creativity Index Measures

A bias-adjusted Pearson bivariate correlational analyses comparing SASI item scores to the various creativity index scores, was also conducted (for full results, see Table 4). Results indicated that the cultural identification strategies of assimilation, marginalization, and integration significantly related to all creativity index scores, except for general originality. Cultural identity separation was found only to significantly associate with general originality scores.

Subsequently, a MANCOVA assessing the moderating effects of assimilation, integration and marginalization revealed that these item scores exerted significant influence on

most divergent thinking dependent measures. Assimilation, integration, and marginalization items each significantly moderated the effect of condition on participant creative task performance for each divergent creative thinking dimension, except for general originality. The effect of condition on creativity remained significant even after controlling for each of these cultural identification strategies except in the cases of general categorical flexibility, novelty of first-preferred participant general idea, and novelty of first and second preferred culture-specific ideas.

When cultural identity assimilation was controlled for, general categorical flexibility lost significance but maintained a marginally significant effect $F(3,78) = 2.59, p = .06, \eta^2 = .09$ based on group assignment. After controlling for assimilation, novelty of first-preferred $F(3,78) = 2.94, p = .04, \eta^2 = .10$ general creative idea, and novelty of first-preferred $F(3,78) = 3.10, p = .03, \eta^2 = .11$ and second-preferred $F(3,78) = 3.92, p = .01, \eta^2 = .13$ culture-specific creative ideas maintained significant differences between groups. When cultural identity marginalization was controlled for, general categorical flexibility $F(3,78) = 5.34, p < .001, \eta^2 = .22$, novelty of first-preferred general creative idea, $F(3,78) = 5.19, p < .001, \eta^2 = .22$, and novelty of first-preferred $F(3,78) = 6.15, p < .001, \eta^2 = .24$, and second-preferred, $F(3,78) = 6.20, p < .001, \eta^2 = .25$, culture-specific creative ideas significantly differed between groups. Similarly, when cultural identity integration was controlled for, general categorical flexibility, $F(3,78) = 6.00, p < .001, \eta^2 = .24$, novelty of first-preferred general creative idea, $F(3,78) = 5.05, p = .001, \eta^2 = .21$, and novelty of first-preferred, $F(3,78) = 5.67, p < .001, \eta^2 = .23$, and second-preferred, $F(3,78) = 7.50, p < .001, \eta^2 = .28$, culture-specific creative ideas significantly differed between groups.

Additionally, a bias-adjusted Pearson bivariate correlational analysis was conducted to determine whether bicultural harmony scores related to the various creativity dependent

measures. Cultural harmony scores were found to significantly relate to general fluency, flexibility, and novelty of first, second, and third-preferred ideas, to cultural fluency, flexibility, originality, and novelty of first, second, and third-preferred participant ideas and to correct answers to the anagram, $r(82) = +.44, p < .001$, and RAT, $r(82) = +.25, p = .03$, insight items.

A similar analysis was conducted to determine whether bicultural blendedness scores associated with various creativity dependent measures. Blendedness subscale scores significantly related to fewer measures, and these were uniformly negative associations. Blendedness scores negatively related to general creative flexibility and novelty of third preferred participant ideas and to cultural originality and novelty of second-preferred ideas (for full results, see Table 5).

Furthermore, Pearson bivariate correlational analyses were conducted to assess the interrelationships between cultural adaptability subscale scores and creativity index measures. Several significant inverse relationships were determined, most abundantly between CSQ knowledge and creativity index measures. The results of this analysis can be found in Table 6.

Experiment One Discussion

The results of the first experiment are interesting and suggest that cross-culturally induced deculturation and acculturation mental states could influence creativity outcome measures differentially, though conservative analyses did not support individual group differences for any creativity outcome measure. For less conservative analyses, deculturation mindsets related to enhanced cultural novelty and deculturation and acculturation mindsets related to enhanced general novelty of some ideas, compared to the control group. Acculturation only marginally related to enhancement of two features of general creativity, in relation to comparison groups. An analysis of the trends of the means per participant condition also suggests that means for each participant creativity index score were higher in the deculturation

and acculturation groups in comparison to the home culture and control groups, although these trends were largely insignificant. The most substantial mean difference trends appeared for general and cultural novelty for the deculturation mindset induction group and general novelty and categorical flexibility for the acculturation mindset induction group, compared to other groups.

It was additionally determined that the hypotheses that blendedness and harmony scores would significantly diminish after exposure to a deculturation priming manipulation and significantly rise after exposure to an acculturation prime were not supported. The results indicated that bicultural harmony and blendedness did not significantly differ between pre- and post-manipulation based on assignment to either deculturation or acculturation conditions. This, however, coincides with the understanding that deculturation and acculturation mental states are temporary, do not significantly enhance or attenuate cultural identity integration, and rather serve as mental preparation mechanisms that can assist immediate adaptation to new cultures.

Moreover, bicultural harmony related significantly to numerous creativity measures. Harmony subscale scores significantly positively related to correct insight solution obtainment to both convergent creative thinking tasks, and general and culture-specific fluency, flexibility, and novelty. This suggests that convergent and divergent creative thinking associates with perceptions of the compatibility between cultures one has experienced. Blendedness scores, rather, often negatively associated with creativity measures, suggesting creative thinking is inversely related to perceptions of overlap of disparate cultures one has experience with.

Contrary to hypothesis five, cultural adaptability scores significantly inversely corresponded with perceptions of bicultural harmony. Self-reported higher levels of cultural knowledge and behavioral adherence related to lower levels of self-reported bicultural harmony.

This suggests that expertise and behavioral readiness to adapt to new cultures opposes agreement perceived between different cultures and that cultural adaptability relates to difficulty in finding harmony between separate cultures. This unifies well with the understanding of the use of deculturation as a means of decoupling from cultural influences to facilitate cultural adaptation.

Also, in alignment with previous research (e.g., Nguyen, 2010), cultural adaptability corresponded positively with degree of perceived blendedness between experienced cultures. Specifically, the greater the degree of self-reported cultural metacognition, knowledge, and behavioral adherence the greater was the degree of self-reported blending of multiple experienced cultures. This suggests that merging and blending of two or more cultures into one's identity associates positively with strategizing about cultural adaptability, expertise about other cultures, and cross-cultural behavioral adoption readiness. This coincides with the current understanding of cultural blendedness facilitating cultural adaptability.

Both blendedness and cultural adaptability scores, however, also tended to negatively relate to divergent thinking measures. This finding could suggest that something is shared between the perceptions of overlap between disparate cultures, adaptive preparedness to experience other cultures, and detriments to some features of idea creativity.

Finally, items assessing levels of cultural identity strategies— separation, assimilation, marginalization, and integration— were found to have adequate test-retest reliability and discriminant validity and to correspond to many divergent thinking measures. Cultural identity strategies of integration, assimilation, and marginalization significantly associated with cultural harmony and blendedness scores and with numerous creativity dependent measures.

Experiment Two

The initial experiment was likely underpowered, as several participants were disproportionately excluded from the manipulation groups for contributing invalid responses. The second experiment was designed to, among other contributions, correct this. The second experiment also assessed whether those primed with a deculturation mindset differed from those who passively observed another culture by watching a video on 15 creativity index scores dimensions. Furthermore, degree of self-reported preexisting levels of cross-cultural interactions was examined for potential influence on creativity with the aim of associating cross-cultural interaction levels with a deculturation mindset and creativity, should such an association exist. Finally, the second experiment assessed potential changes to cultural exposure scores in those who merely observed a culture by watching a video. This experiment included four additional convergent task problems: two additional RAT items and two additional anagram items. Experiment Two also included additional validity precautionary measures, such as assigning a larger proportion of participants to each condition, including participant identification code items at the onset and conclusion of the study to authenticate responses, and including timers and forced response additions to many items.

Experiment Two Hypotheses

It has previously been determined that an experience involving interacting with other cultures is more influential to creativity outcomes than an experience of mere exposure to other cultures (Aytug et al., 2018a). Therefore, those who are primed with a deculturation mindset are anticipated to experience superior general and cultural creative task performance compared to those not primed, while those merely exposed to observe another culture are not expected to exhibit enhanced creative thinking abilities.

H1: Participants who are primed with a mental deculturation state (i.e., induced to suppress thoughts of their home culture) will exhibit superior creative task performance on dimensional measures taken from a battery of creative tasks compared to participants who experience no manipulation. Participants who experience manipulation of mere exposure to a video of a different culture are not expected to exhibit enhanced performance for any creativity dimensions being assessed in the creativity tasks.

Cross-cultural interaction subscale scores derived from the Multicultural Experiences Assessment (MExA; Aytug et al., 2018a), which indicate strength of interpersonal engagement with different cultures, likely influence how one experiences mindsets related to cultures (Aytug et al., 2018a). The influence of cross-cultural experience interaction levels on deculturation mindsets has yet to be tested. Self-perceived greater levels of active, rather than passive, engagement with other cultures could influence how states of deculturation act on creative thinking. It is proposed that MExA scores for cross-cultural interactions, will enhance the relationship between deculturation and creative thinking mindsets used during cultural adaptation experiences.

H2: Higher pre-test MExA scores indicating cross-cultural interactions will interact with a deculturation mental state to enhance convergent and divergent creative thinking performance. Participants primed with a deculturation mindset and who report higher levels of cross-cultural interactions are expected to exhibit the highest divergent thinking task outcome scores, compared to individuals with lower levels of cross-cultural interactions, those exposed to merely observing a cultural video, and control assigned participants.

Observing elements of another culture is associated with cultural exposure subscale scores of the MExA (Aytug et al., 2018a). As such, participants exposed to a video of cross-

cultural experience could experience changes to their self-reported levels of cross-cultural exposure after viewing a cultural video. It is proposed that MExA subscale scores indicating levels of cross-cultural exposures will change between pre-and post- manipulation timepoints, and only for participants assigned to a cross-cultural video exposure group.

H3: Those in the condition of mere-exposure to a cultural video will exhibit significant increases to scores taken from a subsequent administration of the MExA subscale of cross-cultural exposures, indicating greater levels of passive observance of another culture, between pre-and post-manipulation timepoints, compared to those in a control group.

Experiment Two Method

All participant data was collected using the online survey platform of QuestionPro. Participants were recruited through Amazon Mechanical Turk (MTurk). As a validation measure, participants were asked to enter their unique MTurk worker code upon consenting to participate in the study and their unique QuestionPro response ID on the MTurk platform upon completion of the study.

Participants who consented to take part in the experiment for Experiment Two completed three preliminary questionnaires to obtain background information: the demographics questionnaire, the SASI, and the MExA. Following administration of the MExA, participants were randomly assigned to one of three conditions. Participants in the control conditions completed pre- and post-test surveys and the creativity task battery only. Participants in the mere exposure condition observed a two-minute video of The Sami Culture (Please find the active video link here: <https://www.youtube.com/watch?v=V8p7V4pFN14>). Following observation of the video, participants in this condition were asked to imagine being in the Sami culture and to write about this experience. Participants in the deculturation priming condition were

administered a nearly identical prompt to similar participants in this condition in the initial experiment (prompts for conditions of Experiment Two can be found in Appendix M).

Following the condition exposures, participants took part in an identical battery of creativity tests for culture-specific and general divergent creative thinking as those in Experiment One. However, Experiment Two added two additional anagram items and two additional RAT word pairing items for a total of six convergent thinking task items.

Data Analysis

Creativity dependent measures for general and culture-specific divergent thinking parameters were obtained using a similar method as in Experiment One. Two raters, who were trained using assessed general and cultural ideational fluency and categorical flexibility of participant ideas for the uses for a tire and tourist problems using identical procedures as in Experiment One. Reliability analyses were conducted for the measures using multiple raters. The average general and culture-specific ideational fluency rating ICC2 was .77, 95% CI [.653, .848], suggesting strong agreement for the fluency measure. The average general and culture-specific categorical flexibility rating ICC2 was .78, 95% CI [.669, .855], suggesting strong agreement for the flexibility measure. The average general and culture-specific novelty, derived from the ICC2 was .67, 95% CI [.548, .762], suggesting moderate agreement for the novelty measure.

The composite means of the raters' scores for these measures was used for subsequent data analysis and reporting purposes.

Experiment Two included eight novelty scores: three novelty scores for the three participant-selected general creative ideas, three novelty scores for the three participant-selected cultural creative ideas, and two distinct composite mean novelty scores for the general and cultural ideas. General and cultural novelty scores were initially assessed by three trained raters using identical procedures as in Experiment One. IRR for general and culture-specific novelty

was above .80 for each item. Analysis of interitem correlations between each idea contributed for the first-third general and culture-specific items revealed that these measures were distinct ($r < .70$). As such, the means for each item were subsequently separately analyzed and reported, when relevant, in addition to two composite means for each of the two novelty dimensions (general and culture-specific).

Insight task performance for anagram and RAT items was determined by summing each correct response for these six tasks for each participant. This sum, which ranged from 0-6, was subsequently used to analyze and assess overall convergent creative performance. Originality scores for general and culture-specific first-third preferred ideas was determined by a single, trained rater, using an identical procedure as in Experiment One.

Scores indicating levels of multicultural interactions (i.e., active experiences with non-native cultures) and multicultural exposures (i.e., passive observance of non-native cultures) were derived from the two relevant MExA subscales. Pre- and post-manipulation scores for each dimension were distinctively summed to provide total scores for these scales for the sake of pre-manipulation and post-manipulation data comparisons, by participant condition assignment, to test hypotheses two and three.

Acculturation strategy use was assessed in ancillary examinations conducted for Experiment Two. Scores indicating strength of presence of these distinct acculturation strategies (integration, marginalization, separation, and assimilation) were assessed using single Likert-rated items for each category, ranging from 1-5. As with Experiment One, these sums were subsequently analyzed as distinctive measures of acculturation strategies in participants.

Experiment Two Results

Participants

A total of 108 participants completed the second experiment data collection process. Individuals who did not contribute valid responses to the manipulation prompt or who did not contribute at least one valid response to at least one item on either the general or culture-specific divergent thinking tasks were eliminated from the dataset utilized for the main analyses. Ten participants were rejected for contributing invalid responses. Four participants were rejected due to reporting current residence in a country which did not meet the requisite inclusionary criteria included in the informed consent document. Two participants were rejected for providing numerous duplicated responses, suggesting these participants were the same subject. Data for two participants who indicated familiarity with the Sami culture after observing the video assigned to the cultural exposure manipulation condition were eliminated from the pool.

The final sample of participants included 90 adults which comprised 57 males (63.3%) and 33 females (37.7%) between the ages of 21 and 71. Participants were compensated \$3.00 for participation in the study. Quantity of spoken languages was reported to be monolingual in 59 (65.6%), bilingual in 23 (25.6%), and trilingual in 8 (8.9%) participants. Participants reported residing in the United States ($n = 89$), with an exceptional participant reporting residing in Canada ($n = 1$). The ethnicity of participants was reported to be White in 76 participants (84.4%), Asian in 4 participants (4.44%), Hispanic in 3 participants (3.33%), Hawaiian or Pacific Islander in 3 participants (3.33%), and Black in 1 participant (1.11%). The final participant group assignment included 37 participants in the deculturation mindset priming condition, 21 participants in the cultural exposure condition, and 32 participants in the control condition.

Manipulation Check

To provide a manipulation check, deculturation presence was assessed by two independent raters who were blind to the participant condition assignments. The raters took part in formal training and had advanced understanding and an imbedded operational definition of the deculturation construct provided for the ratings procedure. The raters assessed all paragraphs written by participants for deculturation using a 4-point Likert scale. These scales assessed the level of home-culture suppression on a 4-point Likert scale (e.g., 1 = no deculturation presence and 4 = strong deculturation presence). The average deculturation rating ICC2 was .64, 95% CI [.392, .787], suggesting moderate agreement between the raters. Deculturation presence means were higher in paragraphs written by participants in the deculturation condition ($M = 1.93$, $SE = .25$) compared to participants in the mere cultural exposure condition ($M = 1.17$, $SE = .16$). This suggests that the deculturation priming condition participants experienced a greater presence of the mental state of deculturation than did participants merely exposed to a foreign culture.

Normality Tests

The dependent creativity index measures of general and culture-specific novelty, fluency, flexibility, and originality scores were assessed for normality by exploring descriptive statistics, including skewness, kurtosis, and normality plots. The results indicated that all dependent measures were within the normal range of skewness (-1.00 – 1.00) and kurtosis (-2.00 – 2.00), except for culture-specific fluency. Examination of skewness values and histogram plots revealed that Z-transformed scores for culture-specific fluency transformed from highly positively skewed and leptokurtic to a distribution falling within the normal range for skewness (.25). Kurtosis remained heavy-tailed (4.22). An examination of the data revealed a single participant outlier with an abnormally high number of ideas ($n = 17$). Because these responses were deemed to be valid, the participant outlier remained in the dataset. A normality log

transformation of the scores for culture-specific fluency was performed. The resulting log-transformed scores for culture specific fluency were within the normal range of skewness (.26) and kurtosis (-.60). Log-transformed scores for culture-specific fluency were subsequently utilized for data analysis and reporting purposes.

An identical normality assessment procedure was administered to the data for the dependent measures of pre- and post-manipulation total MExA scores, the four items indicating cultural identification strategy use, and the single item indicating cross-cultural experience saturation. An analysis of the skewness, kurtosis, and histogram plots for these dependent measures revealed that each fell within the normal distribution ranges, with the exception of the cross-cultural experience saturation item. This variable was then normality log transformed. The results indicated normality of skewness and kurtosis for this variable and the log transformed scores were subsequently used for data analyses and reporting purposes.

All subsequent analyses of variance tests for Experiment Two included an analysis of Levene's tests for homogeneity of variance. In every case, the data supported that all groups shared equal variance.

Hypotheses Tests

To test hypothesis one, that the experience of a primed mental state of deculturation relates to greater mean scores for divergent and convergent thinking measures of creativity compared to a control condition, a multivariate analysis of variance (MANOVA) was conducted, including general and culture-specific means for novelty, originality, ideational fluency, and categorical flexibility and a sum representing correct response counts for six convergent tasks as dependent measures and participant condition assignment as the grouping parameter. As equal variances could be assumed for this sample and the number of dependent measures ($n = 15$) was

large, Tukey's tests of multiple pairwise comparisons were utilized to assess mean performance differences for each continuous creativity index measure by participant condition assignment.

The results revealed a significant and moderately robust main effect of condition on composite novelty of culture-specific creative ideational fluency $F(3, 85) = 5.15, p = .008, \eta^2 = .11$. In support of hypothesis one, the results of pairwise comparisons revealed that a composite of mean novelty of all ideas generated for a culture-specific task was higher in those primed with a deculturation mindset ($M = 2.34, SE = .11$) compared to the control condition ($M = 1.85, SE = .12$), $p = .007$. No significant mean differences in cultural novelty were observed between those in the deculturation state group and those in the cultural exposure group ($M = 1.99, SE = .15$). Also of note, the novelty of the first, $F(3, 85) = 5.10, p = .008, \eta^2 = .11$, and third, $F(3, 85) = 3.65, p = .03, \eta^2 = .079$, preferred ideas generated for the cultural task significantly differed between groups. The mean novelty of the first-preferred cultural idea was higher in those primed with a deculturation mindset ($M = 2.54, SE = .13$) than the control condition ($M = 1.97, SE = .14$), $p = .009$. No significant differences in mean cultural novelty were observed between those in the deculturation state group and those in the cultural exposure group ($M = 2.10, SE = .17$). The mean novelty of third-preferred cultural idea was higher in those primed with a deculturation mindset ($M = 2.19, SE = .14$) than those in the control condition ($M = 1.94, SE = .15$), $p = .03$. No significant mean differences in cultural novelty were observed between those in the deculturation state group and those in the cultural exposure group ($M = 2.00, SE = .19$).

The results also revealed a significant and moderately large main effect of condition on general ideational fluency $F(3, 85) = 3.54, p = .03, \eta^2 = .077$. In support of hypothesis one, the results of pairwise comparisons revealed that mean general ideational fluency of those primed with a deculturation mindset ($M = 4.81, SE = .43$) was significantly higher than those in the

control condition ($M = 2.23$, $SE = .41$), $p = .03$. No significant mean differences in mean ideational fluency of general creative ideas were present between those in the deculturation state priming group and those in the cultural video exposure group ($M = 3.90$, $SE = .55$).

The results also revealed a significant and moderately robust main effect of condition on general categorical flexibility $F(3, 85) = 3.76$, $p = .03$, $\eta^2 = .081$. In support of hypothesis one, the results of pairwise comparisons revealed that mean general categorical flexibility of those primed with a deculturation mindset ($M = 3.67$, $SE = .30$) was significantly higher than those in the control condition ($M = 2.47$, $SE = .32$), $p = .02$. There were no significant differences in mean categorical flexibility of general creative ideas between participants in the deculturation state group and those in the cultural exposure group ($M = 3.23$, $SE = .40$).

The results also revealed a significant and large main effect of condition on cultural ideational fluency, $F(3, 85) = 8.27$, $p < .001$, $\eta^2 = .163$. In support of hypothesis one, the results of pairwise comparisons revealed that mean fluency of culture-specific ideas was higher in those primed with a deculturation mindset ($M = 4.95$, $SE = .41$) compared to the control condition ($M = 2.56$, $SE = .43$), $p < .001$. Those in the deculturation priming condition exhibited marginally higher means for culture-specific ideational fluency compared to the cultural exposure group ($M = 3.39$, $SE = .55$), $p = .08$.

The results also evidenced a marginally significant and moderately robust main effect of condition on cultural originality of ideas $F(3, 85) = 2.76$, $p = .07$, $\eta^2 = .061$. In support of hypothesis one, the results of pairwise comparisons revealed that mean culture-specific originality of those primed with a deculturation mindset ($M = 4.81$, $SE = .43$) was significantly higher than those in the control condition ($M = 2.23$, $SE = .41$), $p = .03$. No significant mean

differences in culture-specific originality were present between those in the deculturation state priming group and those in the cultural exposure group ($M = 3.90, SE = .55$).

Finally, the results revealed a marginally significant and moderately robust main effect of condition on insight task performance $F(3, 85) = 3.38, p = .07, \eta^2 = .074$. Contrary to hypothesis one, the results of pairwise comparisons revealed that the sum of correct insight solutions of those in the cultural exposure group ($M = 3.91, SE = .42$) was significantly higher than those in the control condition ($M = 2.56, SE = .33, p = .04$). There were no significant differences between those exposed to a cultural video and those primed with a deculturation mindset ($M = 3.44, SE = .31$) on creative insight performance. Regarding hypothesis one, no other significant main or simple effects were determined. Means and other descriptive statistics related to this analysis can be found in Table 7.

To test hypothesis two, that initial scores indicating participant's level of cross-cultural interactions would enhance convergent and divergent creative performance in those primed with a deculturation mindset rather than those who merely observe a cultural video or control participants, a multivariate analysis of covariance (MANCOVA) was performed. The results revealed no significant covarying effect of MExA interaction scores on creativity outcomes when added into the multivariate model. Contrary to hypothesis two, no significantly different creativity index scores were determined by grouping after controlling for MExA subscale scores for cross-cultural interactions.

To test hypothesis three, that those in the cultural video exposure group would exhibit significant increases in mean multicultural experience exposure subscale scores between pre- and post- manipulation data collection time points, a repeated-measures ANOVA was conducted, with pre-and post-manipulation scores for MEXA assessed as within-subjects measures and

group assignment assessed as the between-subjects measure. The results indicated that the third hypothesis failed to find support. The means of cross-cultural exposure subscale scores observed in those exposed to a cross-cultural video were not significantly different between pre-manipulation and post-manipulation data collection timepoints.

Ancillary Examinations

Based on the results of Experiment One, ancillary examinations were conducted to assess the role of cultural identification strategies of assimilation, separation, marginalization, and integration on culture-specific and general divergent and convergent creativity index scores. Initially, a bias-adjusted Pearson bivariate correlational analysis was conducted to assess the interrelationships between creativity index scores and each acculturation strategy (see Table 8). The results revealed significant correlations between strategies of integration, marginalization, and assimilation, and many creativity index scores. Integration, assimilation and marginalization significantly inversely related to general and culture-specific fluency and flexibility, culture-specific idea novelty of second preferred idea, and insight scores. Integration and marginalization additionally associated with culture-specific novelty of first-preferred ideas. Marginalization uniquely associated with composite culture-specific novelty and cultural novelty of third-preferred ideas. Marginalization and separation significantly associated with mean general novelty of participant ideas. Only separation significantly predicted general novelty of third-preferred participant ideas.

To follow-up, four separate MANCOVA's were conducted, with participant scores for measures indicating levels of integration, marginalization, assimilation, and separation entered as covariates in the distinct analyses. Each divergent and convergent creativity dimension score was entered as a dependent measure, and participant condition assignment was entered as the grouping factor.

The results of the MANCOVA assessing integration strategy level revealed that the covariate significantly influenced mean differences in insight task performance, novelty of participant's first preferred culture-specific creative idea, and both general and culture-specific fluency and categorical flexibility of creative ideas. An analysis of the results of controlling for integration scores determined that participant group assignment maintained a significant effect on differences in insight performance $F(3,85) = 5.07, p = .003, \eta^2 = .15$, general fluency $F(3,85) = 7.38, p < .001, \eta^2 = .16$, general flexibility, $F(3,85) = 7.38, p < .001, \eta^2 = .23$, participant's first preferred culture-specific creative idea, $F(3,85) = 5.89, p = .001, \eta^2 = .17$ and culture-specific fluency, $F(3,85) = 8.53, p < .001, \eta^2 = .23$. No other significant moderating effects of integration strategy use predicting creative performance based on group assignment were observed.

The results of the MANCOVA assessing marginalization strategy use revealed that the covariate significantly influenced mean differences in composite culture-specific novelty, novelty of participant's first, second, and third-preferred culture-specific ideas, second preferred idea general novelty, general and culture-specific fluency and categorical flexibility of ideas, and creative convergent thinking performance. An analysis of the results of controlling for marginalization scores determined that participant group assignment maintained a significant effect on differences in insight performance, $F(3,85) = 4.96, p = .003, \eta^2 = .15$, general fluency, $F(3,85) = 4.86, p = .001, \eta^2 = .15$, general flexibility, $F(3,85) = 5.95, p < .001, \eta^2 = .18$, composite culture-specific novelty, $F(3,85) = 8.47, p < .001, \eta^2 = .23$, novelty of first preferred culture-specific ideas, $F(3,85) = 7.11, p < .001, \eta^2 = .20$ and culture-specific fluency, $F(3,85) = 7.26, p < .001, \eta^2 = .21$. No other significant moderating effects of marginalization strategy use predicting creative performance based on group assignment were observed.

The results of the MANCOVA assessing assimilation strategy revealed that the strategy significantly influenced group mean differences in convergent task performance, mean culture-specific novelty, and both general and culture-specific ideational fluency and categorical flexibility of ideas. An analysis of the results of controlling for assimilation scores determined that participant group assignment maintained a significant effect on differences in mean culture-specific novelty, $F(3,85) = 5.20, p = .002, \eta^2 = .15$, insight performance, $F(3,85) = 4.77, p = .004, \eta^2 = .15$, general ideational fluency, $F(3,85) = 5.73, p = .001, \eta^2 = .17$, general categorical flexibility, $F(3,85) = 7.73, p < .001, \eta^2 = .22$, and culture-specific fluency, $F(3,85) = 9.81, p < .001, \eta^2 = .26$. No other significant moderating effects of assimilation strategy use on group assignment predicting creative performance were observed.

Interestingly, number of countries visited and duration of time spent living abroad did not significantly correlate with any of the creativity dependent measures. Number of weeks spent traveling abroad significantly correlated only with novelty of third-preferred culture-specific idea. This suggests that, following an acute cross-cultural experience, cultural identity strategies play a more substantial role in influencing creativity than extent of cross-cultural experience.

An analysis of the correlations between MExA scores and cultural identity strategy levels evidenced significant and differential relationships between the constructs. Significant associations were found between integration strategy and multicultural interaction at post-manipulation ($r = .32, p = .002$) and exposure at pre- ($r = .39, p < .001$) and post-manipulation ($r = .40, p < .001$), assimilation strategy and multicultural exposure at pre- ($r = .24, p = .04$) and post-manipulation ($r = .25, p = .02$), marginalization strategy and exposure scores at post manipulation ($r = .21, p = .05$) and separation strategy and multicultural interaction scores at post-manipulation ($r = .23, p = .03$). Taken together, the results suggest that greater experience interacting with

cultures associates more closely with separated and integrated cultural identity strategies and that greater exposure to mere observance of other cultures associates with marginalization and assimilation strategies, as well as cultural integration strategies.

Experiment Two Discussion

The results of Experiment Two suggest that the mental state of deculturation enhances cultural novelty, ideational fluency, and originality and general ideational fluency and categorical flexibility compared to a no cultural experience mindset manipulation and to a greater extent than does mere exposure to a video of another culture. This supports the theory that mentally suppressing ideas related to one's native culture allows for a more fluid, open, adaptive, and generative state of mind that lends itself to producing more numerous and novel creative ideas and idea categories (Fee and Gray, 2012). Additionally, this supports the theory that more imaginative and unique content of culture-specific creative ideas are generated by creating mental distance from ideas of one's home culture during adaptation to a new culture (Kim, 2015).

It was also determined that mere exposure to a video of another culture contributed far less of an influence on creativity outcomes. Interestingly, cross-cultural experience duration and quantity of countries visited did not significantly correlate with creativity outcomes. Unexpectedly, MExA scores for cross-cultural interaction levels did not significantly correlate with any of the creativity outcome measures and did not interact with a deculturation mental state to influence creativity enhancement.

Acculturation strategy use, particularly integration, marginalization, and assimilation, did correlate with many creativity dependent measures. This may be due to acculturation strategies

exerting influence on cognitive states associated with cross-cultural adaptation, which coincides with the findings of Tadmor et al. (2012b) and Falavarjani and Yeh (2018).

Experiment Three

Experiment Three assessed creativity outcomes associated with joint, compared to separate or no, deculturation and acculturation mindset experiences and the influence of additional cognitive qualities on this relationship. The preceding experiments and other empirical works (e.g., Cheng & Leung, 2013; Maddux et al., 2010; Maddux & Galinsky, 2009; Mok & Morris, 2010; Tan et al., 2019) suggest that priming manipulations of cross-cultural experience can reliably enhance the creativity of human subjects. While distinctive deculturation and acculturation mindsets were experimentally manipulated in Experiment One, prior to this study, a joint mindset of deculturation and acculturation had yet to be manipulated experimentally in a study of intrapersonal creativity. Furthermore, while cross-cultural adaptability, in Experiment One, and acculturation strategies, in both experiments, were assessed in conjunction with culturally related mindset manipulations, other underlying cognitive qualities had yet to be assessed for potential influence on distinctive acculturation and deculturation mental states until this experiment. Each of these qualities were also not yet associated with joint acculturation and deculturation primed mindset influences and creative performance. As such, Experiment Three aimed to establish the roles of cultural adaptability and acculturation strategies along with traits cognitive flexibility and integrative complexity, which were previously established as influential to creativity in studies on multiculturalism in the past, in the relationship between joint acculturation and deculturation mindset priming manipulations and creative performance. This would better establish whether bolstered creativity outcomes related to acute and adaptive cultural mindsets were explained by certain underlying, preexisting cognitive qualities.

Experiment Three Hypotheses

It is proposed that the experience of a different culture could strengthen and reinforce expressions of creativity due to the experience of joint deculturation (i.e., cultural suppression) and acculturation (i.e., cross-cultural unification) mindsets during a cross-cultural experience. By imposing a mindset which includes both deculturation and acculturation, individuals could use strategies of suppressing potentially hindering cultural concepts along with merging ideas related to a familiar and less familiar culture to support their creative performance. For example, these joint mindsets could facilitate forming mental juxtapositions (e.g., by contrasting familiar and unfamiliar cultural elements) and foster adaptive strategy development (e.g., from comparing advantages and disadvantages of adopting distinct cultural features) both of which could influence creative thinking. This joint mindset could assist a person in learning and behaving appropriately during a new cross-cultural encounter.

H1: Experience of a joint deculturation and acculturation state prime will relate to enhanced general and culture-specific fluency, flexibility, and novelty, culture-specific originality, and convergent task performance compared to experience of no priming manipulation.

The thinking required to accept and implement new cultural ideas and behaviors into one's cultural schemas likely requires a certain level of cognitive flexibility. Experience of diverse cultures has the potential to interrupt rigid thinking and broaden the cognitive space needed to optimally utilize cognitive flexibility. Cognitive flexibility levels could drive the adjustment or development of new general and culture-specific mental categories and ideas that coincide with adopting a joint acculturation and deculturation mindset.

H2: Trait levels of cognitive flexibility will explain differences in performance for undetermined creativity indices predicted only by condition of priming of a joint acculturation and deculturation mindset.

Integrative complexity could influence the adeptness with which one forms cognitive associations and reconciliations between old and new cultural understandings after joint deculturation and acculturation mental state experiences. As such, those with higher levels of integrative complexity could have a better ability to stimulate expansive, novel, unique, and fluid forms of thinking (i.e., divergent creative thinking) which support fluid conceptual problem-solving in those facing competing cultural ideas. Integrative complexity could also explain enhancement to creative associative thinking (i.e., convergent thinking) related to determining correspondence, divergence, and superior combinations of various culture-specific schemas in those adopting a joint acculturation and deculturation mindset.

H3: Trait levels of integrative complexity will explain differences in performance for undetermined creativity indices predicted only by condition of priming of a joint acculturation and deculturation mindset.

Cross-cultural adaptability relates to one's expertise and understanding of cultural elements as well as one's motivation and ability to adopt diverse cultural ideas and practices. Those with higher levels of cross-cultural adaptability could be more adept at vetting and appraising cultural information for potential advantages, threats, and superior adoptions. Cross-cultural adaptability levels could also potentially explain how well an individual rapidly and continuously implements behavioral and conceptual culturally learned alternatives in those adopting a joint acculturation and deculturation mindset.

H4: A sum of scores indicating broad cultural adaptability will explain differences in performance for undetermined creativity indices predicted only by condition of priming of a joint acculturation and deculturation mindset.

Finally, it is proposed that the creativity enhancement associated with cross-culturally influenced mental states will differ based on levels of cultural identity assimilation (i.e., host culture emphasis), integration (i.e., multiple cultural emphases), and marginalization (i.e., broad cultural suppression) strategies. Acculturation strategies describe how a person adapts their cultural self-schema based on cross-cultural experiences. It is proposed that the difference in scores indicating degree and quality of cultural identity can influence the effect of adopting a joint deculturation and acculturation mindset prior to creative task performance.

Those who emphasize a marginalization strategy could be more likely to engage open and expansive forms of thinking that coincide with fluid ideations and categorical flexibility. Marginalized individuals could more readily rely on individualized methods of adapting to new cultures and this could relate to their ability to generate more unique and novel idea products.

H5: Levels of cultural identity marginalization will explain the effect of joint deculturation and acculturation state priming on creativity outcomes related general and culture-specific novelty and originality.

Those who emphasize an integration strategy could share in better abilities to select from competing perspectives, assess optimal choices from perceived adaptation advantages and disadvantages, and mentally unify elements of disparate cultures. Individuals who are more integrated could be better able to identify with multiple disparate elements than those individuals who identify as marginalized. Therefore, they may be more capable of merging cross-cultural ideas and generating novel concepts, as was evidenced in the results of Mok and Morris (2010).

H6: Levels of cultural identity integration will explain the effect of joint deculturation and acculturation state priming on creativity outcomes related to general and culture-specific novelty.

Those who adopt an assimilation acculturation strategy could be more likely to generate new ideas and knowledge categories related to experiencing and adapting to an unfamiliar culture. This could facilitate their ability to selectively adopt a host culture into their identity and to create more numerous ideas and idea categories when undertaking a creativity task.

H7: Levels of cultural identity assimilation will explain the effect of joint deculturation and acculturation state priming on creativity outcomes related to general and culture-specific ideational fluency and categorical flexibility.

Experiment Three Method

Sampling

All procedures were administered to participants using the online platform of QuestionPro. Similar to experiments one and two, the Experiment Three recruited participants from the online platform of Amazon Mechanical Turk (MTurk). This recruitment forum allowed for the selection of participants from countries wherein English is spoken with high proficiency by most of the population (> 90%) and international travel is common, including the UK, Australia, the Netherlands, Ireland, Canada, Norway, and the USA. Participants who did not self-identify as having strong proficiency with the English language or citizenship in one of these nations were excluded, as were participants who did not complete the study, such as by having multiple missing responses or otherwise contributing invalid or plagiarized responses to the relevant manipulation or creativity task items.

Statistical Power

The statistical significance of the effect of the manipulations on measures of creativity will depend on the size of the effect, the size of the participant sample, and the overall variability between individuals within the sample data. In this study, a power equal to at least 80% (Power = $1 - .2$) was sought when determining adequate sample sizes for each condition. This provided an 80% chance of detecting a real effect, should one exist, of the manipulation (here, primed states of cultural mindsets) with an alpha level of 5% ($\alpha = .05$), which indicates the likelihood of incorrectly supporting a significant effect. A target of $d = .4$ is suggested as an appropriate target effect size and indicates a manipulation will evidence differences between roughly two-thirds of the sample, to assume in a psychological study of this kind (Brysbaert, 2019). This understanding determined the number of participants recruited and assigned to each condition.

Procedure

After agreeing to participate and electronically submitting the signed informed consent, participants completed five preliminary questionnaires to obtain demographics information, cultural background information, and self-reported levels of variables hypothesized to influence the relationship of interest, including acculturation strategy use, cognitive flexibility, integrative complexity, and cultural adaptability. Following this, participants were assigned to one of four conditions, three of which induced a mindset related to adapting to a cross-cultural experience and adjoined a brief writing exercise. Following this, participants completed a battery of creativity assessments identical to that in Experiment Two. Six items assessed convergent creative thinking and two items, one general and one cultural-specific, assessed divergent creative thinking.

The manipulations in this experiment employed primes of imagined experiences of mental states of deculturation, acculturation, and joint deculturation and acculturation. Each manipulation was also followed by a short, related writing exercise. Experiment Three included two conditions that were analogous to those in the initial experiment— distinctive deculturation or acculturation mindset priming groups— and added a joint deculturation and acculturation mindset priming group to test whether superordinate effects were experienced in participants included in the latter group.

In the deculturation mindset prime condition, participants were asked to imagine a scenario wherein they suppressed ideas related to their dominant culture and cultural identity during a new cultural experience. In a second condition, the acculturation mindset prime condition, participants were asked to imagine a scenario wherein they merged ideas related to their dominant culture and cultural identity with a new and unfamiliar culture. In a third condition, the joint deculturation and acculturation mindset prime condition, participants were asked to imagine a scenario wherein they initially suppressed ideas about their dominant culture and subsequently merged ideas related to their dominant culture with those of the new and unfamiliar culture they were faced with in the scenario. Each prompt was identical, except for language related to the cultural mindset priming (see Appendix M)..

Data Analysis

Five lab assistant raters were trained as a group using a formal presentation, question-and-answer forum, response examples, and operational definitions and were provided with embedded definitions of the constructs during the ratings procedure. These raters, each of whom was blind to the condition assignments of participants, analyzed results for the four divergent thinking indices of novelty, ideational fluency, categorical flexibility, and originality for the

AUT rubber tire task and tourist problem. Two of these raters assessed novelty of the first, second, and third participant-preferred ideas drawn from both tasks. The three participant-selected responses from each task were Likert-rated using the same 1-4 scale as in the previous experiments. Rater reliability was assessed using an intraclass correlational analysis of both novelty type measures. The average general and culture-specific novelty, derived from the ICC2, was .70, 95% CI [.654, .745], suggesting strong rater agreement for the measures. An analysis of the relationship of each novelty item within the general and culture-specific task was conducted to determine whether the measures should be combined in future data analysis. As none of the three items in either task related strongly to one-another ($\sim r < .59$), a composite novelty score was not subsequently computed or assessed in Experiment Three.

Two independent and lab assistant raters who were blind to the participant condition assignment assessed general and culture-specific ideational fluency by counting each non-redundant and actual participant idea contributed in the distinctive two-minute, time-limited rubber tire and tourist task idea pools for each participant. Each individual score provides a sum of total ideas given by each participant for the distinctive tasks to indicate a measure of ideational fluency. Two independent raters, who were unaware of participant condition assignment, also assessed general and culture-specific categorical flexibility using a similar method. The raters initially swept all participant ideas for each task, then created a master list of categories of ideas. A subsequent sweep was implemented to identify the categories contributed by each participant. Following this, a final sweep resulted in a category tally, which provided a categorical flexibility score. The average general and culture-specific ideational fluency rating ICC2 was .792, 95% CI [.747, .830], suggesting strong agreement across the raters. The average general and culture-specific categorical flexibility rating ICC2 was .68, 95% CI [.608, .736],

suggesting moderate agreement across the raters. Subsequently, means of scores garnered from raters of general and culture-specific ideational fluency and categorical flexibility were subsequently used for data analysis purposes.

One trained rater assessed originality as the statistical rarity of first, second, and third participant-selected ideas for the general and culture-specific divergent creative thinking tasks. The rater identified keywords to indicate an idea (e.g., “a barrier” was identified as the idea *barrier*) and combined each of these occurrences in a pool. A count of the occurrences of each idea in the total pool of participant ideas in the general and culture-specific task, respectively, was then taken. Following this, the unique ideas contributed by each participant for each task were assigned a proportion value to indicate how frequently the idea appeared in the total pool of ideas. Originality scores were determined by assessing these values. As with experiments one and two, responses contributed by < 1% of participants garnered an award of 2 points while responses contributed by 1% - 5% of participants garnered an award of 1 point. More common responses were not awarded points for originality. The points were summed for the respective general and culture-specific tasks to give an originality score measure ranging from 0-6 points for each participant. These two scores were subsequently used for data analysis purposes.

Additionally, correct and incorrect response counts were assigned for each of six convergent creative thinking tasks. Binary correct and incorrect responses were coded as 1 and 0, respectively. These scores were then summed for each participant. The sum of correct responses to the six convergent thinking task items subsequently served as the measure of convergent thinking task performance in participants.

The participant’s scores for the Lumpers and Splitters Questionnaire (LSQ), Cognitive Flexibility Inventory (CFI), and the Four-Factor Cultural Intelligence Scale (CSQ) were

distinctively summed to provide total scores for these scales as pre-manipulation measures of these traits and to analyze these scores to test hypotheses 2-4. The CSQ subscale scores for the metacognition, knowledge, motivation, and behavior items were distinguished and summed for each participant. The four SASI items were also distinguished from one another, with each item score providing measures of the strength of one of the four acculturation strategies (i.e., integration, marginalization, separation, or assimilation) corresponding to it. Participant sums for the four-item scores for the Short Acculturation Strength Inventory (SASI) were analyzed to test hypotheses 5-7.

Experiment Three Results

Participants

The initial sample of participants consisted of 524 adults. A total of 130 participants were excluded for one of the following reasons: submitting no responses to any of the convergent creativity items or excluding more than one response to the divergent thinking measure items, submitting non-responses (e.g., “NA” or “12345”) to the writing prompts or the divergent thinking measure items, submitting entirely plagiarized responses taken from sources on the internet. A total of ten individuals indicated national residency outside of a requisite nation meeting the inclusionary criteria for this study and were expunged from the dataset. A total of eight individuals were found to have entirely duplicated their responses to the manipulation writing prompts and/or the creativity dependent measures and were excluded for this reason. A total of seven participants were excluded due to providing invalid responses within the writing prompts for their assigned manipulation condition. In one case, a duplicate IP address was indicated in a pair of participant response sets. The first set of responses was retained and the subsequent set was eliminated in this case. The final pool of participants consisted of 368 adults,

each of whom indicated residency in the United States of America and English language proficiency, who were compensated \$5.00 for participation in the study.

The gender make-up of the final sample comprised 147 females, 218 males, and 3 non-binary participants. Participants ranged in age from 19 to 72 years. The ethnicity of participants was reported to be White in 298 participants (81%), Asian in 22 participants (6%), Hispanic in 17 participants (4.6%), American Indian or Alaskan in four (1.1%), and Black in 27 participants (7.3%).

Of the 368 participants, 238 identified as monocultural, 68 identified as bicultural, and 62 identified as multicultural. Most participants reported being monolingual ($n = 300$). Around one-fifth of participants ($n = 63$) reported being bilingual. Otherwise, four participants reported speaking three languages and one participant reported speaking five languages. Participant condition assignment was fairly evenly distributed in the final sample. A total of 91 participants were assigned to the deculturation mindset condition, 97 to the acculturation mindset condition, 85 to the joint cultural mindset condition, and 95 to the control condition.

Manipulation Check

To provide a manipulation check, deculturation and acculturation levels were Likert-rated within the written essays of participants in each manipulation group by two independent raters who were blind to the participant condition assignments in a procedure analogous to that in Experiment One. The raters completed formal training in a group setting using a question-and-answer forum and presentation and were provided operational definitions of both constructs in advance of taking part in the rating procedure. The raters assessed all paragraphs written by participants in the three manipulation prompt conditions for deculturation and acculturation levels using 4-point Likert scales. These scales assessed the level of home-culture suppression (e.g., 1 = no deculturation presence and 4 = strong deculturation presence) and home-culture and

new culture unification (e.g., 1 = no acculturation presence and 4 = strong acculturation presence). Rater agreement was assessed in the results of intraclass correlations analyses per each rating category. The average deculturation rating ICC2 was .62, 95% CI [.523, .659], suggesting moderate agreement of the measure. The average acculturation rating ICC2 was .48, 95% CI [.347, .587], which is weak agreement which nears moderate agreement ($> .50$) of the measure. Deculturation presence means were higher in paragraphs written by participants in the deculturation condition ($M = 2.27, SE = .12$) compared to participants in the acculturation condition ($M = 1.13, SE = .03$) and were more similar, though still higher, to those in the joint priming condition ($M = 1.77, SE = .10$). It was also found that acculturation presence means were higher in paragraphs written by participants in the acculturation condition ($M = 2.22, SE = .06$) compared to participants in the deculturation condition ($M = 1.41, SE = .13$) and were more similar, though still higher, to those in the joint priming condition ($M = 1.93, SE = .10$). These results imply that the deculturation, acculturation, and joint deculturation and acculturation manipulations were effective at inducing distinctive mental states of deculturation, acculturation, and a combined state in the relevant participants.

Normality Tests

To assess the plausibility of the range of scores for the various dependent measures, a test of the distributional normality of participant data was conducted, first for the dependent creativity measures and subsequently for the measures of cognitive flexibility, integrative complexity, cultural adaptability, and acculturation strategy.

The dependent creativity index measures were assessed for normality by exploring descriptive statistics, including skewness, kurtosis, and normality plots. The results indicated that all dependent measures were within the normal range of skewness ($-1.00 - 1.00$) and kurtosis ($-2.00 - 2.00$), except for culture-specific originality (kurtosis = 4.12, skewness = -2.15) and, to a

lesser degree, culture-specific fluency (kurtosis = 1.59, skewness = 1.02). These scores were then Z-transformed. Examination of skewness and kurtosis values and histogram plots revealed that Z-transformed scores for culture-specific originality and fluency remained overly skewed and leptokurtotic. As such, a two-step normality log transformation of both scores was performed.

Subsequent normality analyses determined that culture-specific originality transformed from highly negatively skewed and leptokurtotic to a more normal, but still slightly negatively skewed distribution (-1.16). Histogram plot analysis revealed the distribution to more closely approximate a bell shape to suggest it to be adequately normalized. Kurtosis levels (.023) were reduced to within the normal range. The subsequent normality analysis also determined that culture-specific fluency transformed from slightly positively skewed and leptokurtotic to a more normal distribution (kurtosis = -.08, skewness = .14). Log-transformed scores for culture-specific originality and fluency were subsequently utilized for data analysis and reporting purposes.

Identical normality test procedures were conducted for the measures of cognitive flexibility, integrative complexity, cultural adaptability, and acculturation strategy, the proposed intervening variables being tested in hypotheses 2-7. The scores taken from the CFI, LSQ, CSQ, and SASI tests were assessed for normality by exploring descriptive statistics, including skewness, kurtosis, and normality plots. An analysis of these measures revealed that each fell within the normal distribution ranges, apart from the SASI scores for the strategy indicator item for marginalization (skewness = 1.03, kurtosis = .01). As with culture-specific originality and culture-specific fluency scores, a two-step fractional rank transformation of the variable was then conducted to normalize the distribution for marginalization scores. The skewness and kurtosis of this measure then fell within normal ranges (skewness = .72, kurtosis = .06). The transformed scores for marginalization were utilized along with the untransformed scores for the other

measures tested for hypotheses 2-7 for subsequent data reporting purposes. All subsequent analyses of variance tests for Experiment Three included an analysis of Levene's tests for homogeneity of variance. In every case, the data supported that all groups shared equal variance.

Hypothesis One Test

To test hypothesis one, that experience of a joint deculturation and acculturation state prime relates to enhanced general and culture-specific fluency, flexibility, and novelty, culture-specific originality, and convergent task performance of participants, independent samples *t*-tests were conducted. These tests compared dummy coded-participant assignment to the joint acculturation and deculturation mindset priming condition (coded as 1) to dummy coded participant assignment to the control condition (coded as 0). Scores for mean general and cultural-specific ideational fluency, categorical flexibility, novelty, culture-specific originality, and the sum convergent task solution score were assessed as dependent measures. Results revealed that there were no differences between the joint acculturation and deculturation group compared to the control group on any dependent measure. Follow-up Pearson bivariate correlational analyses confirmed this finding. Hypothesis one was not supported.

Due to these results, no subsequent hypotheses tests into the mediational effects of cognitive flexibility, integrative complexity, cultural adaptability, or cultural identification strategy on creativity index measures based on condition assignment to the joint cultural mindset priming condition were performed.

Tests of Deculturation or Acculturation Mindset Priming

Instead, similar independent samples *t*-tests and bivariate correlational analyses of the two other cultural priming conditions, dummy coded deculturation mindset and acculturation mindset condition assignment compared to control condition assignment, on mean creativity index scores were performed. Confidence intervals and significance values are reported from the

Pearson correlational results. Two sided *t*-test and Pearson bivariate correlational analysis results revealed that deculturation mindset group assignment, compared to control participant assignment, related to enhanced general novelty of first, $t(184) = 2.94, r = .21, p = .004, 95\% \text{ CI } [.068, .345]$, and second preferred ideas $t(184) = 2.62, r = .19, p = .01, 95\% \text{ CI } [.046, .324]$ and cultural novelty of first preferred ideas $t(184) = 2.14, r = .16, p = .03, 95\% \text{ CI } [.012, .293]$.

Marginally significant group differences between the deculturation mindset primed participants and the control participants were determined for general novelty of third-preferred creative idea, $t(184) = 1.90, r = .14, p = .06, 95\% \text{ CI } [-.005, .277]$ and cultural originality, $t(184) = 1.86, r = .14, p = .06, 95\% \text{ CI } [-.009, .274]$. No other significant or marginal effects between deculturation mindset priming condition participants and control participants were evidenced.

ed. No significant relationships between acculturation mindset primed participants and control participants in creativity index measure scores were evidenced.

To follow up, a multivariate analysis of variance (MANOVA) was conducted and included Bonferroni post hoc pairwise tests. The MANOVA results indicated there was a significant and small main effect of participant condition assignment on mean novelty of the second-preferred general idea, $F(3, 364) = 2.90, p = .04, \eta^2 = .023$. No other significant main effects were revealed. Pairwise results indicated that participants assigned to the deculturation mindset group exhibited enhanced general novelty of first-preferred ideas ($M = 2.67, SD = .64$) compared to the control participants ($M = 2.37, SD = .73$), $p = .037$. The participants assigned to the deculturation mindset group also exhibited significantly enhanced general novelty of their second-preferred ideas ($M = 2.58, SD = .68$), compared to the control participants ($M = 2.31, SD = .75$), $p = .05$. No other significant group differences were revealed in the pairwise comparison

results. Descriptive statistics, including mean differences by group assignment, can be found in Table 9.

Tests of Cognitive Flexibility, Integrative Complexity, and Cultural Adaptability

Additional examinations were conducted to better establish the roles of trait level measures of cognitive flexibility, integrative complexity, cultural adaptability and sub-measures of cultural adaptability, and acculturation strategies.

The initial examination compared the sum of scores for items indicating trait levels of cognitive flexibility, integrative complexity, and cultural adaptability and its sub-measures to each creativity index measure score using a bias-adjusted Pearson bivariate correlational analysis. The full correlational results can be found in Table 10. The results indicated that cognitive flexibility did not relate to any creativity dependent measure. Integrative complexity scores related only to general novelty of the third-preferred participant idea, $r(368) = .62, p = .03$, 95% CI [.008, .210].

While total cultural adaptability scores did not relate to any creativity index scores, sub-measures of the construct did differentially relate to some creativity index scores. CSQ metacognition scores related to scores for general ideational fluency, $r(368) = .22, p < .001$, 95% CI [.123, .318], general categorical flexibility, $r(368) = .23, p < .001$, 95% CI [.127, .321], cultural originality, $r(368) = .11, p = .04$, 95% CI [.007, .209], and cultural categorical flexibility scores, $r(368) = .10, p = .05$, 95% CI [.000, .203]. CSQ metacognition scores did not relate to convergent task performance.

CSQ knowledge scores were significantly related to each divergent creativity dimension score apart from general novelty of first-preferred idea and cultural originality. Knowledge scores significantly inversely associated with general novelty of second, $r(368) = -.125, p = .02$,

95% CI [-.224, -.023] and third preferred idea scores, $r(368) = -.22, p = .02, 95\% \text{ CI} [-.22, -.019]$. CSQ knowledge scores also negatively associated with general ideational fluency, $r(368) = -.25, p < .001, 95\% \text{ CI} [-.344, -.153]$, and general categorical flexibility, $r(368) = -.27, p < .001, 95\% \text{ CI} [-.363, -.118]$. CSQ knowledge scores positively associated with general originality scores, $r(368) = .12, p = .03, 95\% \text{ CI} [.014, .215]$. Additionally, CSQ knowledge scores significantly negatively associated with cultural novelty of first, $r(368) = -.22, p < .001, 95\% \text{ CI} [-.313, -.118]$, second, $r(368) = .19, p < .001, 95\% \text{ CI} [-.283, -.085]$, and third-preferred idea scores, $r(368) = -.17, p < .001, 95\% \text{ CI} [-.263, -.064]$ as well as with cultural originality, $r(368) = .10, p = .05, 95\% \text{ CI} [-.201, -.002]$ cultural ideational fluency, $r(368) = -.28, p < .001, 95\% \text{ CI} [-.369, -.180]$, and cultural categorical flexibility, $r(368) = -.21, p < .001, 95\% \text{ CI} [-.308, -.112]$. CSQ knowledge scores did not relate to convergent task performance.

CSQ motivation subscale scores positively associated with four divergent thinking measures. CSQ motivation scores associated significantly with general ideational fluency, $r(368) = .117, p = .03, 95\% \text{ CI} [.015, .217]$, general categorical flexibility, $r(368) = .109, p = .04, 95\% \text{ CI} [.007, .209]$, cultural novelty of second preferred idea, $r(368) = .11, p = .03, 95\% \text{ CI} [.011, .213]$, and cultural originality scores, $r(368) = .107, p = .04, 95\% \text{ CI} [.004, .207]$. CSQ motivation scores did not relate to convergent task performance. CSQ behavioral scores did not significantly relate to any creativity dependent measure.

Tests of Acculturation Strategies

Subsequent examinations were conducted to better establish the roles of acculturation strategy type strength on creativity dependent measures. The initial examination compared the sum of scores for the SASI items indicating marginalization, assimilation, integration, and separation using a bias-adjusted Pearson bivariate correlational analysis. The full correlational results can be found in Table 11.

Marginalization acculturation strategy significantly and inversely associated with all divergent creative thinking measures, apart from general originality. Marginalization scores negatively associated with general novelty of first, $r(368) = -.12, p = .024, 95\% \text{ CI } [-.217, -.016]$, second, $r(368) = .20, p < .001, 95\% \text{ CI } [-.294, -.097]$, and third-preferred idea scores, $r(368) = -.19, p < .001, 95\% \text{ CI } [-.288, -.091]$. Marginalization scores negatively associated with general ideational fluency, $r(368) = -.32, p < .001, 95\% \text{ CI } [-.407, -.223]$, and general categorical flexibility, $r(368) = -.33, p < .001, 95\% \text{ CI } [-.419, -.237]$. Marginalization also negatively related to cultural novelty of first, $r(368) = -.18, p < .001, 95\% \text{ CI } [-.278, -.081]$, second, $r(368) = .18, p < .001, 95\% \text{ CI } [-.275, -.077]$, and third-preferred idea scores, $r(368) = -.17, p < .001, 95\% \text{ CI } [-.270, -.071]$ as well as with cultural originality, $r(368) = -.18, p = .05, 95\% \text{ CI } [-.274, -.076]$ cultural ideational fluency, $r(368) = -.24, p < .001, 95\% \text{ CI } [-.333, -.141]$, and cultural categorical flexibility, $r(368) = -.16, p = .003, 95\% \text{ CI } [-.254, -.054]$. Marginalization scores did not relate to convergent task performance.

Assimilation scores negatively associated with general novelty of second, $r(368) = .16, p = .003, 95\% \text{ CI } [-.254, -.054]$, and third-preferred idea scores, $r(368) = -.15, p = .005, 95\% \text{ CI } [-.246, -.045]$. Additionally, assimilation scores negatively associated with general ideational fluency, $r(368) = -.19, p = .000, 95\% \text{ CI } [-.268, -.089]$, and general categorical flexibility, $r(368) = -.22, p = .000, 95\% \text{ CI } [-.314, -.119]$. Assimilation also negatively related to cultural novelty of first, $r(368) = -.15, p = .003, 95\% \text{ CI } [-.251, -.051]$, and second idea, $r(368) = .18, p < .001, 95\% \text{ CI } [-.272, -.074]$ along with cultural originality, $r(368) = -.12, p = .001, 95\% \text{ CI } [-.268, -.070]$ cultural ideational fluency, $r(368) = -.17, p = .04, 95\% \text{ CI } [-.269, -.070]$, and cultural categorical flexibility, $r(368) = -.12, p = .04, 95\% \text{ CI } [-.064, -.004]$. Assimilation scores did not relate to convergent creative task performance.

Integration scores inversely related with general ideational fluency, $r(368) = -.126, p = .02$, 95% CI [-.225, -.024], general categorical flexibility, $r(368) = -.127, p = .02$, 95% CI [-.226, -.025], culture-specific ideational fluency, $r(368) = -.137, p = .008$, 95% CI [-.237, -.036], culture-specific categorical flexibility, $r(368) = -.12, p = .03$, 95% CI [-.215, -.013], and cultural originality scores, $r(368) = -.117, p = .03$, 95% CI [-.216, -.015]. As with marginalization and assimilation scores, integration scores did not associate significantly with convergent creative task performance.

Separation scores only associated, and inversely so, with general categorical flexibility of ideas $r(368) = -.12, p = .02$, 95% CI [-.221, -.020]. These results suggest that fluency and flexibility of ideas, and to a lesser extent novelty of ideas, in both cultural and general domains, consistently relate to lower levels of identification as distinguished from any culture and alignment to a host culture over a home culture. Lower levels of identification as culturally integrated related to cultural and general fluency and flexibility. Scores for the three identification measures also inversely related to cultural originality. Scores indicating separation from a host culture inversely related only to general categorical flexibility of ideas.

An ancillary examination into the correlations shared between participant demographics and background cross-cultural experience characteristics and all creativity dependent measures was also conducted. Concerning general demographics, age had a small, positive relationship to novelty of the first-preferred cultural idea. Novelty of first-preferred cultural idea correlated, to a small, negative degree, with the number of countries a participant reported visiting in their lifetime. Furthermore, spoken language count inversely associated with numerous creativity index scores. While living abroad experience did not relate to any creativity dependent measure, traveling abroad experience related to a small, positive degree to novelty of third-preferred

general idea. Cultural identification level (i.e., monocultural, bicultural, or multicultural) also related in a small, though negative way, to novelty of third-preferred general idea. The correlations between participant demographics and other background characteristics and creativity index scores for Experiment Three are provided in Table 12.

Experiment Three Discussion

The results of Experiment Three were not expected. However, these findings are interesting and support the notion that minimizing the influence of a dominant culture during an initial cross-cultural adaptation experience, or *deculturation*, promotes creative novelty of general and cultural ideas. Experiment Three could not determine that a joint deculturation and acculturation mindset, or one which combines cultural suppression with cultural concept comparison and synthesis, boosts creativity in comparison to other groups. Based on these results, only deculturation-induced thoughts of dominant cultural suppression, rather than other culturally related mindsets, appear to be related to novel ideations. This finding coincides with the understanding of deculturation as the psychological mechanism most closely associated with experiences of culture shock, which directly facilitates psychological transformation and growth, and which acts as a precursor for acculturation while remaining distinct from cultural identity development (Kim, 2017).

Furthermore, the results of Experiment Three suggest that deculturation mindsets can be more impactful to creativity than even levels of some traits that have been previously established to explain the relationship between cross-cultural experience and creativity (e.g., Tadmor et al., 2012). Namely, trait level indicator scores for cognitive flexibility and integrative complexity were unrelated to most creativity index measures. This seems to support the notion that acute adaptation mindsets, particularly those related to suppressing potentially hindering preexisting

frameworks, are more important to immediate creative performance than preexisting levels of certain cognitive qualities. This coincides with the findings of both Lu et al. (2017, studies 1 and 2) and Maddox and Galinsky (2009, study 4). After these researchers controlled for cognitive performance and personality factor indicators cross-cultural interpersonal relationships positively impacted creativity (Lu et al., 2017, studies 1 and 2) and cultural adaptation explained creativity in multicultural individuals (Maddox and Galinsky, 2009, study 4). It should be noted that an exception was present. Integrative complexity positively impacted one indicator of novelty of a creative idea. This could be due to thoughts requiring integrative complexity sharing patterns with thoughts related to continuous efforts towards new idea formation.

Experiment Three results also revealed that total cultural adaptability scores and subscale scores for behavioral cultural adaptability did not significantly relate to any creativity outcome measure. However, cultural intelligence subscale scores for metacognitive and motivational adaptability related positively with numerous creativity outcomes. Cultural metacognition and motivation positively related with cultural originality of ideas, but not general originality, and general ideational fluency and categorical flexibility. This suggests that feeling motivation to adapt to a culture and examining one's own thoughts both associate with generating unique ideas meant to resolve cross-cultural challenges and incongruities producing more abundant ideas and idea categories. These findings coincide with the intercultural transformation theory (Kim, 2008), which posits that cognitive enhancement and cultural identity transformation follow acute cultural adaptation experiences. Furthermore, this finding aligns with the finding of Xu & Chen (2017), that those with higher CSQ metacognitive and motivational scores tend to experience more cultural learning and workplace creativity.

Cultural metacognition scores could relate to creativity in that they enhance the ability to strategize and formulate novel solutions while adapting to other cultures. Metacognitive cultural adaptability was found to associate with cultural categorical flexibility, suggesting that the ability to reflect on one's thought process and problem-solving strategies relates to their ability to generate more numerous categories of creative ideas pertaining to culture.

Scores indicating motivation to adapt to culture associated positively with creativity in such a way that suggests an element of intrinsic motivation is shared between adapting to new cultures and expressing creative ideas. Motivational cultural adaptability associated with novelty of second-choice cultural idea. This could imply that intending to adapt to a new culture coincides with the drives to create new creative and adaptive ideas.

Cultural adaptability subscale scores for knowledge inversely associated with most creativity dependent measures, though an exceptional positive correlation with general originality was determined. The inverse associations present could relate to cultural knowledge indicating preexisting ideas and beliefs about other cultures (e.g., "I know the marriage systems of other cultures") rather than adaptive preparedness. Those who assume to know more about other cultures may be less inclined to adapt to new cultural information, and exhibit less creative thinking as well, as they could believe they already have enough knowledge to prepare them to adapt to new cultural situations.

The third experiment reestablished that assimilation, integration, and marginalization acculturation strategies relate to most creativity measures. It is remarkable that when acculturation strategy item scores significantly associated with any creativity measure, these associations were negative. This could suggest several things. It could be that those who are more inclined to express positive beliefs about any type of cultural identification, be it

suppression or alignment with a host culture, multiple cultures, or no culture, are less likely to express themselves creatively. Those who are less reliant on their cultural identification style could also be more inclined to generate creative ideas because they are less likely to rely on preexisting cultural knowledge to adapt to new cultural situations. For example, it has been found that acculturation strategies can differentially impact creativity stemming from culture shock, as these experiences can lead to a reliance on knowledge from a dominant culture (Falavarjani & Yeh, 2018). The acculturation strategy of separation only associated, and inversely so, with general categorical flexibility, possibly because this strategy is associated with creating distance from new cultures and resisting changing fixed manners of thinking, which may attenuate creative generativity.

It is also possible that participants were fatigued as they completed this final survey of the pre-manipulation survey set, and so began to mark answers errantly to expedite the survey process. However, the survey responses were normally distributed upon examining the distribution statistics and histogram plots, with the exception of marginalization scores, which were corrected for a more normal distribution. It should be noted, though, that most participant responses for each of the SASI items were contributed as the first possible answer choice. This seems unlikely to be an externally valid finding, though it is possible, given that each item represents highly distinctive cultural identification representations. It is additionally possible that the SASI is a measure of acculturation strategy that lacks psychometric robustness and may need modification and further validation to be considered a consistently reliable measure of acculturation strategy use in future studies of this kind.

Broad Discussion

These studies have determined that mental states related to minimizing the influence of a dominant culture can support unique, fluid, and highly differentiated forms of general and culture-specific creative thinking. The compiled correlations and descriptive statistics and results of multivariate analyses of main effects can be found below in Tables 13 and 14, respectively.

The findings of these experiments, taken together, suggest that altering the quality of one's thoughts by creating distance from ideas that could hinder adaptive thinking in situations involving new cultures can positively impact intrapersonal creativity. This coincides with the understanding that new cross-cultural adaptation experiences serve as catalysts for deculturation mindsets, and that these mindsets instill creative engagement with new cultures (Kim, 2015) and creative mental flexibility and fluidity (Fee and Gray, 2012). It is possible that creative thinking is burgeoned from the open and fluid states of mind that a deculturation mindset inspires. This agrees with the understanding of deculturation as a catalyst for psychological growth and change instilled by the excitement inherent to many new cross-cultural experiences (Song, 2022).

Table 13*Compiled Pearson Correlations, Means, and Standard Deviations for Experiments 1, 2, and 3*

| Creativity Dimension | Experiment One | | | | Experiment Two | | | | Experiment Three | | | |
|----------------------------|----------------|-------|--------------------|----|----------------|-------|--------------------|----|------------------|-------|--------------------|-----|
| | <i>r</i> | Mean | Standard Deviation | N | <i>r</i> | Mean | Standard Deviation | N | <i>r</i> | Mean | Standard Deviation | N |
| General Novelty, 1st Idea | .427** | .335 | .962 | 13 | -.024 | 2.304 | .875 | 90 | .212** | 2.511 | .738 | 368 |
| General Novelty, 2nd Idea | .278 | .237 | 1.110 | 13 | -.179 | 2.200 | .944 | 90 | .190** | 2.406 | .721 | 368 |
| General Novelty, 3rd Idea | .207 | .152 | .909 | 13 | -.132 | 2.315 | .819 | 90 | .139 | 2.490 | .762 | 368 |
| General Fluency | .166 | .262 | .916 | 13 | .243* | 4.039 | 2.540 | 90 | .106 | 4.552 | 2.630 | 368 |
| General Flexibility | .240 | .342 | .950 | 13 | .272* | 3.122 | 1.861 | 90 | .095 | 3.633 | 1.935 | 368 |
| General Originality | .037 | -.103 | .798 | 13 | -.127 | 4.078 | 1.274 | 90 | -.022 | 4.236 | 1.294 | 368 |
| Cultural Novelty, 1st Idea | .200 | .697 | 1.296 | 13 | .353** | 2.237 | .792 | 90 | .120 | 2.607 | .772 | 368 |
| Cultural Novelty, 2nd Idea | .187 | .718 | 1.347 | 13 | .208 | 2.104 | .855 | 90 | .156* | 2.465 | .785 | 368 |
| Cultural Novelty, 3rd Idea | .340* | .472 | 1.154 | 13 | .265* | 1.919 | .856 | 90 | .057 | 2.289 | .833 | 368 |
| Cultural Fluency | .397* | .338 | 1.089 | 13 | .432** | 3.732 | 2.635 | 89 | .078 | 4.071 | 2.224 | 368 |
| Cultural Flexibility | .249 | .325 | .963 | 13 | .156 | 2.133 | 1.556 | 90 | .105 | 3.037 | 1.618 | 368 |
| Cultural Originality | .249 | .193 | .983 | 13 | .257* | 3.910 | 1.697 | 89 | .136 | 5.115 | 1.102 | 368 |
| Convergent Tasks | M | M | M | M | .215 | .537 | .317 | 90 | .087 | 3.538 | 1.644 | 368 |
| General Novelty Mean | M | M | M | M | -.142 | 2.273 | .691 | 90 | M | M | M | M |
| Cultural Novelty Mean | M | M | M | M | .330** | 2.086 | .691 | 90 | M | M | M | M |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Note. “M” denotes missing dependent variable data due to the variable not being assessed in the experiment. Data is z-transformed in Experiment One. Deculturation mindset priming group, dummy coded “1”, compared to control group, dummy coded “0” for each cell in the table.

Table 14*Test Results of Between-Subjects, Main Effects Analyses of Each Experiment*

| Creativity Dimension | Experiment One | | | | | Experiment Two | | | | | Experiment Three | | | | |
|----------------------------|----------------|-------|------|--------------------|----------------|----------------|-------|-------|--------------------|----------------|------------------|-------|------|--------------------|----------------|
| | df | F | Sig. | Partial Eta Square | Observed Power | df | F | Sig. | Partial Eta Square | Observed Power | df | F | Sig. | Partial Eta Square | Observed Power |
| General Novelty, 1st Idea | 3 | 2.792 | .046 | .097 | .652 | 2 | .671 | .514 | .016 | .159 | 3 | 2.550 | .056 | .021 | .627 |
| General Novelty, 2nd Idea | 3 | 1.080 | .363 | .040 | .282 | 2 | .885 | .417 | .020 | .198 | 3 | 2.909 | .035 | .023 | .691 |
| General Novelty, 3rd Idea | 3 | 1.013 | .392 | .037 | .266 | 2 | 1.028 | .362 | .024 | .224 | 3 | 1.657 | .176 | .013 | .434 |
| General Fluency | 3 | 1.523 | .215 | .055 | .387 | 2 | 3.542 | .033 | .077 | .644 | 3 | .651 | .583 | .005 | .187 |
| General Flexibility | 3 | 2.142 | .102 | .076 | .526 | 2 | 3.763 | .027 | .081 | .673 | 3 | .553 | .646 | .005 | .164 |
| General Originality | 3 | .603 | .615 | .023 | .170 | 2 | 1.082 | .344 | .025 | .234 | 3 | .184 | .907 | .002 | .084 |
| Cultural Novelty, 1st Idea | 3 | 2.702 | .051 | .094 | .636 | 2 | 5.102 | .008 | .107 | .809 | 3 | .935 | .424 | .008 | .256 |
| Cultural Novelty, 2nd Idea | 3 | 3.444 | .021 | .117 | .753 | 2 | 2.198 | .117 | .049 | .438 | 3 | 1.716 | .163 | .014 | .448 |
| Cultural Novelty, 3rd Idea | 3 | 1.317 | .275 | .048 | .338 | 2 | 3.648 | .030 | .079 | .658 | 3 | .749 | .523 | .006 | .210 |
| Cultural Fluency | 3 | .678 | .568 | .025 | .187 | 2 | 8.268 | <.001 | .163 | .956 | 3 | .672 | .570 | .006 | .192 |
| Cultural Flexibility | 3 | .561 | .642 | .021 | .161 | 2 | 2.088 | .130 | .047 | .418 | 3 | .736 | .531 | .006 | .207 |
| Cultural Originality | 3 | .219 | .883 | .008 | .090 | 2 | 2.757 | .069 | .061 | .530 | 3 | 1.253 | .290 | .010 | .335 |
| Convergent Tasks | M | M | M | M | M | 2 | 3.381 | .039 | .074 | .623 | 3 | .577 | .631 | .005 | .169 |
| Mean Cultural Novelty | M | M | M | M | M | 2 | 5.147 | .008 | .108 | .813 | M | M | M | M | M |
| Mean General Novelty | M | M | M | M | M | 2 | .578 | .563 | .013 | .143 | M | M | M | M | M |

Note. Computed using alpha = .05

The results of the initial experiment determined that instilling a mindset involving suppression of one's dominant culture, rather than thoughts of merging disparate cultures, can enhance the novelty of general and cultural creative ideas. Moreover, Experiment One determined that bicultural identity harmony and blendedness are differentially related to creativity measures.

Bicultural identity harmony feelings tended to positively associate with most creativity dependent measures. It is also possible that cultural harmony feelings support attitudes of openness to new cultural influences and that this coincides with enhanced creative performance.

Bicultural identity blendedness beliefs, conversely, tended to negatively associate with multiple creativity dependent measures. Perhaps, imposing distinctiveness, rather than blendedness, between elements of disparate cultures compels creative ideations meant to resolve cross-cultural conflicts or discrepancies. Thus, resolving culture-specific cognitive dissonance could inspire creative thinking. This finding coincides with the situated cognitive view of bolstered creativity in those who readily distinguish distinct cultures. The situated cognition model supposes that multicultural experience eases the comprehension and resolving of cultural discrepancies because these experiences, when amassed over time, prepare individuals to alter their own cognitive processes more capably (Hong et al., 2000). This is termed *cultural frameshifting*. Cultural frameshifting is suggested to help a person understand the implications of their behaviors in diverse cultural contexts by keeping cultural ideas distinctive, as some behaviors work well in one culture (e.g., handshaking in America) but not another (e.g., handshaking in Vietnam). This view supports the notion that those who are more inclined to keep cultures distinct from one another— which is likely the case in those exhibiting lower levels of

bicultural blendedness— and those who are more inclined to suppress ideas related to a dominant culture— which is likely the case in those experiencing deculturation— could share an enhanced ability to grasp multiple, diverse cultural concepts and to exhibit culturally adaptive problem-solving and creativity.

The results of the second experiment suggest that acute mindsets associated with suppressing a predominant culture are more influential to creativity outcomes than mere exposure to culture, as determined from the MExA. The results of the second experiment also revealed that deculturation mindsets related to numerous creativity dimensions, including cultural novelty, general and culture-specific ideational fluency, cultural originality, and general categorical flexibility.

The results of Experiment Three concluded that acculturation mindsets, wherein one mentally combines elements of disparate cultures together, are less related to creativity outcomes than deculturation mindsets, wherein one mentally distances the self from concepts related to a familiar culture. Furthermore, Experiment Three determined that cultural adaptability dimensions of metacognition and motivation positively impact creativity, which was a departure from Experiment One. This coincides with research that suggests that creativity is an adaptive as well as cognitive process. Intrapersonal expressions of creativity are influenced by a combination of factors, such as intrinsic drives to achieve a creative solution to a problem (Amabile & Pillemer, 2012). It is possible that cross-cultural experience and deculturation act with adaptive metacognition and motivation to compel creative idea generation.

The dimension of culturally adaptive knowledge of cultures related to diminished scores for most dimensions of creativity. This finding seems to imply that preexisting, strongly held

cultural expertise relates to mental rigidity and fixation that suppresses creativity. Perhaps enhanced cultural knowledge relates to one assuming to already know enough about cultures and this prevents the engagement of creativity when adapting to new cultures.

The results of the Experiment Three also revealed that numerous self-reported indicators of preexisting cross-cultural experience did not substantially impact most creativity dependent measures. The number of languages spoken by a participant represented an exception, and inversely related to multiple creativity dependent measures, which agrees with the findings of Experiments One and Three, that cultural knowledge levels tend to associate with attenuated creative performance. Additionally, this finding coincides with Maddox and Galinsky (2009, study 4), who found that degree of adaptation to foreign cultural experiences explained the influence of background cross-cultural experience on creative insight performance.

Experiment Three results also suggest that neither cognitive flexibility nor integrative complexity levels relate substantially to creativity. This result could be due to the measures used to assess cognitive flexibility and integrative complexity requiring revalidation efforts for continued use. Alternatively, both measures may simply not be inclined to associate strongly with the creativity dimensions assessed or the priming manipulations imposed in Experiment Three. It is also possible that the population sampled in Experiment Three, mainly White men from America, represent a distinctive demographics departure from those populations studied by researchers who have found substantial relationships between cognitive flexibility or integrative complexity and creativity in those with greater multiculturalism in the past. For example, in a study determining that cognitive flexibility mediated the relationship between cross-cultural experience levels and creativity, Aytug et al. (2018b) utilized a sample that was largely female

(54%) and which represented over 40 countries. Additionally, Tadmor et al. (2012a), who found that integrative complexity explained the relationship between multiculturalism and creative performance, used a sample of European college students representing 26 different nationalities.

Each of the preceding experiments established that three acculturation strategies inversely associated with numerous creativity measures. Higher levels of strategies of assimilation, marginalization, and integration, derived from a newly created scale, the *SASI*, inversely related to several creativity index scores. This could be because individuals taking part in this study who identified as lowly culturally integrated were more likely to use their unique perspectives in shaping how they adjusted to new and unfamiliar situations and used their creative abilities. Those who identified as lowly marginalized could have been more likely to emphasize cultural experiences to support creative thinking. Finally, those who were less likely to assimilate to a new culture could be more autonomous and, therefore, more likely to generate innovative ideas.

The findings of each of these experiments support the theory brought forward in the diversifying experiences model of Gocłowska et al. (2018), which proposes that an immediate cross-cultural experience enhances creativity of individuals because these experiences impose schema violations that motivate a person to seek a *discovery of alternatives*. It is possible that the priming manipulations functioned as schema violation prompts, elicited a motivated cognitive rejection of concepts related to a dominant culture, and led participants to seek new and unique conceptual understandings of the cultural situation imparted in the manipulations.

Additionally, the creativity enhancement resulting from a deculturation mental state could relate to a distinctive stage of the creative cognitive process. Heilman (2016), who updates the model of Wallas (1926), put forward a model which posits that creativity is the result of a

series of linear cognitive stages. These stages are idea development, then incubation, followed by realization, or insight. It is possible that a new cross-cultural experience serves as a creative adaptation problem that the mind can begin to work on during the idea development stage. Following this, deculturation-induced mental suppression of a dominant culture could unfold during the idea incubation stage and this could encourage use of disengaged, independent, expansive, and flexible thinking to compel a creative insight. Deculturation mindsets, then, could enable or bolster cognitive processes associated with creative thinking used to solve problems associated with cross-cultural adjustment.

Implications

The findings of this research could have political, educational, social, and professional implications. An understanding of the benefit of creating mental distance from potentially intrusive thoughts related to one's dominant culture can aid policy makers who engage in cross-national cooperation and affiliation efforts. Additionally, this area of research has the potential to foster creative learning and achievement in children, adolescents, and college students in academic settings with diverse peers and educators. This research could additionally support these populations in more capably adapting themselves to diverse settings, collaborating with those from diverse cultures, and developing intercultural competence. Furthermore, research on the constructive influence of suppressing preexisting notions, which may affirm harmful biases, could serve workplaces with a diverse workforce, to instill social harmony. This research could additionally support an ethnically diverse workplace by helping employees and departments, such as research and development, instill innovation and ingenuity. Finally, this project contributes to an understanding that freedom from potentially intrusive thoughts related to a

dominant culture can liberate personal creativity. This area of research can serve the cause of promoting broad social inclusivity and equity and can also encourage individuals to more readily affiliate with diverse others, to learn and grow when in unfamiliar contexts, and to creatively achieve in such a way that could benefit their personal wellbeing and the wellbeing of others.

Limitations

This study collected all participant data from the third-party website *MTurk*. As such, there was no physical oversight of participants during data collection for these experiments. Given this, it is not possible to discern whether participants were fielding distractions as they completed the survey measures or received the manipulations. Additionally, attention levels could have varied between participants. While guidelines were suggested in the informed consent document, it was not possible to impose restrictions on the devices used. With this understanding, smaller devices, such as phones or tablets, could have presented challenges to some participants, such as smaller font sizes and difficulty in contributing responses, if absent a full-sized keyboard.

Even while participants were recruited from several nations where citizens would be more likely to have both abroad experience and to speak English fluently, most participants were from The United States of America. Most participants also reported being White. As a result, the participant sample represents only a narrow range of citizenship statuses and ethnic backgrounds.

There are inherent limitations to using a sample derived from *MTurk*. While *MTurk* is considered one of the most cost effective and quickest means of recruiting participants, the samples are often not largely representative of the larger world population (Boas, et al., 2020).

The participant samples are, typically, largely white and urban, and are better educated, younger, and wealthier than the average person. Participant characteristics within each of the three previously discussed experiments appeared to match the tendencies consistent with MTurk samples. As such, the population may have represented a larger degree of multiculturalism than would be present in the broader world population, as wealthier individuals may possess a greater potential to travel abroad and more urban individuals may have greater access to individuals from diverse cultural backgrounds.

In an assessment of three large population sampling platform, MTurk was determined to comprise the most attentive and cooperative participants (Boas, et al., 2020). Still, some participants in each of the three previously discussed experiments were found to contribute invalid, absent, or plagiarized responses and were eliminated from the final pool of participants. The resulting attrition rate could have limited the generalizability of the results of these experiments to some degree. Even with precautions taken to reduce the likelihood of participants contributing invalid responses, such as adding cautionary notes regarding consequences for such contributions, over 100 participants were ultimately eliminated for lack of full participation in Experiment Three, for example. In the future, including a study in a lab setting with researcher oversight is recommended to determine whether the results of these experiments are maintained.

Finally, even while the normality of the distributions for the survey responses obtained for most measures was adequate, analysis of the proportion of responses indicated that participants contributed the first potential answer choice more frequently than other choices for most survey items in all three studies. This suggests a need for the item responses to be varied in administration, such as by randomizing the order of presentation of survey item answers choices

in future studies of this kind. This technique could offset some participant fatigue and/or distraction, should this have been a factor in these studies. It could also be beneficial to require a certain minimum amount of time to complete the initial surveys or survey items in future studies of this kind.

Conclusion

The three experiments reviewed herein were designed to assess multiple influential qualities associated with developing multiculturalism in individuals to provide new understandings about how these qualities associate with creativity. Particularly, this work aimed to provide valuable information about how acute cultural adaptability mindsets and underlying personal characteristics associate with developing both multiculturalism and creative thinking.

This project has provided a better understanding of how deculturation, acculturation, and joint deculturation and acculturation mindsets influence various performance dimensions of creativity. The findings included in these three experiments indicate that creative idea novelty, and at times fluency, flexibility, and originality, can associate with mindsets related to suppressing a familiar culture during a cross-cultural adaptation experience. These experiments also determined that characteristics associated with cultural adaptation can enhance creativity. Furthermore, certain acculturation strategy emphasis can impede creativity.

Future research can continue to expand the understanding of how dominant cultural concept suppression can influence creative thinking. It could be useful to include novel experimental paradigms, such as a virtual reality implement. It could also be helpful to assess the role of deculturation mindsets on long-term creative ability in a longitudinal follow-up. It could be additionally beneficial to assess how deculturation influences additional dependent measures

of creativity, such as elaboration and innovation. It could also be helpful to establish whether other manners of thinking about cultural adaptation experiences relate to dimensions of convergent or divergent creative thinking and whether certain other characteristics, such as personality factors, can explain the influence of deculturation mindsets on creativity.

Future contributors to this area of research are encouraged to create new theoretical and empirical contributions to add to the understanding of how specific mindset adoptions during interactions with other cultures can support creative ability and success. This area of study can continue to expand the understanding of how certain qualities of thought can promote adaptability, creative expression, and creative problem-solving. Research of this kind has the potential to promote positive cross-cultural affiliations, educational and occupational success, and personal wellness and enhanced quality of life.

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APPENDIX A

Demographics Questionnaire

Please read these important notes before you proceed: In this survey, “culture” refers to the cultures of countries. For example, Italian culture, and French culture. Please choose one culture as your primary/dominant culture, even if you are bicultural or multicultural. In this survey, “foreign or different culture” means any culture other than the primary culture you chose.

What is your gender?

1. Male
2. Female
3. Transgendered
4. Other/prefer not to say

How many languages do you speak fluently?

1. 1
2. 2
3. 3
4. 4
5. 5 or more

What is your current age in years?

Aside from the country you now reside in, how many countries have you visited in your lifetime?

1. 0
2. 1
3. 2
4. 3
5. 4
6. 5
7. 6
8. 7
9. 8
10. 9 or more

Which category below best describes your ethnic identity?

1. American Indian or Alaska Native—For example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community
2. Asian—For example, Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese
3. Hispanic, Latino or Spanish Origin—For example, Mexican or Mexican American, Puerto Rican, Cuban, Salvadoran, Dominican, Columbian
4. Middle Eastern or North African—For example, Lebanese, Iranian, Egyptian, Syrian, Moroccan, Algerian
5. Black or African American—For example, Jamaican, Haitian, Nigerian, Ethiopian, Somalian
6. Native Hawaiian or Other Pacific Islander—For example, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese
7. White—For example, German, Irish, English, Italian, Polish, French

Approximately how many weeks have you spent traveling, rather than residing, in countries outside of your current

resident country in your lifetime?

Approximately how many weeks have you spent living, rather than traveling, in countries outside of your current resident country in your lifetime?

In which country do you currently reside?

In which country were you born?

Which statement below best describes your cultural identity status?

1. I was born and raised in the country I currently reside in and have spent no time outside of this country.
2. I was born and raised in the country I currently reside in and have spent some time outside of this country.
3. I was born in the country I currently reside in and raised by one or more individuals who are natives of other countries.
4. I was born and raised in the country I currently reside in and have also lived in one other country.
5. I was born in a different country than the one I currently reside in and have spent more time in my native country.
6. I was born in a different country than the one I currently reside in and have spent more time in the country I currently reside in.
7. I was born in a different country than the one I currently reside in and have also lived in a country other than my birth or current resident country for an extended period.
8. I was born in the country I currently reside in and have also lived in two other countries.
9. I have lived in four different countries or more for extended periods.

I consider myself

1. Monocultural
2. Bicultural
3. Multicultural

APPENDIX B**Adapted Bicultural Identity Integration Scale (BIIS-II)**

I find it easy to harmonize the cultures I have experience with

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I rarely feel conflicted about being bi/multicultural

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I find it easy to balance the cultures I have experience with.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I do not feel trapped between the cultures I have experience with

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I feel torn between the cultures I have experience with.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

Being bi/multicultural means having different cultural forces pulling on me at the same time.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I feel that the cultures I have experience with are incompatible.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree

5. strongly agree

I feel conflicted between the ways of doing things of all the cultures I have experience with.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I feel like someone moving between cultures.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I feel caught between the cultures I have experience with.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I cannot ignore the cultural sides of me.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I feel identified with two or more cultures I have experience with at the same time.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I relate better to a combination of cultures more than one culture alone.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I feel bi/multicultural.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I feel part of a combined culture.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I do not blend the cultures I have experience with.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I keep the cultures I have experience with separate.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

APPENDIX C**Short Acculturation Strategy Index (SASI)**

For the next set of questions, please select responses to indicate how you view your cultural identity

I identify with my native culture and do *not* identify with any other culture

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I do *not* identify with my native culture and *do* identify with one or more different cultures.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I identify with two or more cultures, including my native culture.

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

I do *not* identify with either my native culture or with any other culture

1. strongly disagree
2. somewhat disagree
3. neither disagree nor agree
4. somewhat agree
5. strongly agree

APPENDIX D**Cultural Intelligence Questionnaire (CSQ)**

For each item in this last set of background questions, please indicate how much you agree or disagree with the statement by selecting one of the seven responses that you think is most appropriate.

I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I am conscious of the cultural knowledge I apply to cross-cultural interactions.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I check the accuracy of my cultural knowledge as I interact with people from different cultures.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I know the legal and economic systems of other cultures.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I know the rules (e.g., vocabulary, grammar) of other languages.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I know the cultural values and religious beliefs of other cultures.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I know the marriage systems of other cultures.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I know the arts and crafts of other cultures.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I know the rules for expressing non-verbal behaviors in other cultures.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I enjoy interacting with people from different cultures.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree

7. Strongly agree

I am confident that I can socialize with locals in a culture that is unfamiliar to me.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I am sure I can deal with the stresses of adjusting to a culture that is new to me.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I enjoy living in cultures that are unfamiliar to me.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I am confident that I can get accustomed to the shopping conditions in a different culture.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I use pause and silence differently to suit different cross-cultural situations.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral

5. Slightly agree
6. Agree
7. Strongly agree

I vary the rate of my speaking when a cross-cultural situation requires it.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I change my non-verbal behavior when a cross-cultural interaction requires it

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

I alter my facial expressions when a cross-cultural interaction requires it.

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neutral
5. Slightly agree
6. Agree
7. Strongly agree

APPENDIX E**Multicultural Experiences Assessment (MExA)**

In this survey, “culture” refers to the cultures of countries. For example, Italian culture. Please choose one culture as your primary/dominant culture, even if you are bicultural or multicultural. In this survey, “foreign” and “different” culture means any culture other than the primary culture you chose.

Which choice best describes your frequency of the following: Watching movies that take place in different cultures

1. never
2. once a year or less frequently
3. 2–11 times a year
4. 1–3 times a month
5. 1–6 days a week
6. every day or multiple times a day

Reading books about foreign people

1. never
2. once a year or less frequently
3. 2–11 times a year
4. 1–3 times a month
5. 1–6 days a week
6. every day or multiple times a day

Seeing art (e.g., plays, opera, architecture, sculpture, paintings) of foreign cultures

1. never
2. once a year or less frequently
3. 2–11 times a year
4. 1–3 times a month
5. 1–6 days a week
6. every day or multiple times a day

Listening to music of foreign cultures

1. never
2. once a year or less frequently
3. 2–11 times a year
4. 1–3 times a month
5. 1–6 days a week
6. every day or multiple times a day

Watching foreign TV channels

1. never
2. once a year or less frequently
3. 2–11 times a year
4. 1–3 times a month
5. 1–6 days a week
6. every day or multiple times a day

Watching different cultures’ celebrations (e.g., festivals, parades) on TV

1. never
2. once a year or less frequently
3. 2–11 times a year
4. 1–3 times a month
5. 1–6 days a week
6. every day or multiple times a day

All of the above activities are examples of exposure to different cultures. Please try to think back and remember: When was the first time you were exposed to different cultures via these types of activities?

1. 0–1 year ago
2. 1–2 years ago
3. 2–5 years ago
4. 5–10 years ago
5. 10 years ago or more
6. I have NOT been exposed to different cultures via these types of activities

Which choice best describes your frequency of the following: Talking to people from different cultures

1. never
2. once a year or less frequently
3. 2–11 times a year
4. 1–3 times a month
5. 1–6 days a week
6. every day or multiple times a day

Socializing with people from different cultures

1. never
2. once a year or less frequently
3. 2–11 times a year
4. 1–3 times a month
5. 1–6 days a week
6. every day or multiple times a day

Sharing feelings with people from different cultures

1. never
2. once a year or less frequently
3. 2–11 times a year
4. 1–3 times a month
5. 1–6 days a week
6. every day or multiple times a day

Communicating via writing (e.g., emails, text messages, instant messaging) with people from different cultures

1. never
2. once a year or less frequently
3. 2–11 times a year
4. 1–3 times a month
5. 1–6 days a week
6. every day or multiple times a day

All of the above activities are examples of interactions with different cultures. Please try to think back and remember: When was the first time you interacted with different cultures via these types of activities?"

1. 0–1 year ago
2. 1–2 years ago
3. 2–5 years ago

4. 5–10 years ago
5. 10 years ago or more
6. I have NOT interacted with different cultures via these types of activities

APPENDIX F**Cognitive Flexibility Inventory (CFI)**

For each item, please indicate how much you agree or disagree with the statement by selecting one of the seven responses that you think is most appropriate.

I have a hard time making decisions when faced with difficult situations.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I am good at “sizing up” situations.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I consider multiple options before making a decision.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

When I encounter difficult situations, I feel like I am losing control.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I like to look at difficult situations from many different angles

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I seek additional information not immediately available before attributing causes to behavior.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

When encountering difficult situations, I become so stressed that I can not think of resolutions.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I try to think about things from another person's point of view.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I find it troublesome that there are so many different ways to deal with difficulties.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I am good at putting myself in others' shoes.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

When I encounter difficult situations, I just don't know what to do.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

It is important to look at difficult situations from many angles.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

When in difficult situations, I consider multiple options before deciding how to behave.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I often look at a situation from different viewpoints.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I am capable of overcoming the difficulties in life that I face.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I consider all the available facts and information when attributing causes to behavior.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I feel I have no power to change things in difficult situations.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree

6. mostly agree
7. strongly agree

When I encounter difficult situations, I stop and try to think of several ways to resolve it.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I can think of more than one way to resolve a difficult situation I'm confronted with.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I consider multiple options before responding to difficult situations.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

APPENDIX G**Lumpers and Splitters Questionnaire (LSQ)**

For each item, please indicate how much you agree or disagree with the statement by selecting one of the seven responses that you think is most appropriate.

I see core similarities that unite all people or all things

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I see fundamental differences that distinguish types of people or types of things.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I recognize that things that were previously distinct should be grouped together as examples of a broader category

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I recognize that an existing category should be split into specific kinds or types.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I see that seemingly unrelated ideas, people, or things can be integrated into a single, unified system

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I see that a set of ideas, people, or things that are usually treated alike can be divided into distinct parts, types, or roles

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I recognize how the separate parts of a group or system may be unified by a shared purpose or principle.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I recognize how a group or system may be divided into parts that serve distinct, specialized roles.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I focus on similarities and analogies between things.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I focus on differences and contrasts between things.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

I draw conclusions about general patterns, while others are distracted by exceptions.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree

7. strongly agree

I draw nuanced conclusions, while others overgeneralize.

1. strongly disagree
2. mostly disagree
3. slightly disagree
4. neither disagree nor agree
5. slightly agree
6. mostly agree
7. strongly agree

APPENDIX H

Convergent Thinking Tasks

Remote Associates Test (RAT) Items

Please write in the fourth word that you believe connects the following three words: cross/rain/tie

Timer: minimum 30 seconds, maximum 60 seconds

Please write in the fourth word that you believe connects the following three words: age/mile/sand

Timer: minimum 30 seconds, maximum 60 seconds

Please write in the fourth word that you believe connects the following three words: tail/water/flood

Timer: minimum 30 seconds, maximum 60 seconds

Verbal Insight Task Items Derived from Dow and Mayer (2004)

Please write in the solution to the following anagram (rearranged word): Flymia

Timer: minimum 30 seconds, maximum 60 seconds

Please write in the solution to the following anagram (rearranged word): Rungly

Timer: minimum 30 seconds, maximum 60 seconds

Please write in the solution to the following anagram (rearranged word): Mulcica

Timer: minimum 30 seconds, maximum 60 seconds

APPENDIX I

General Creativity Task- *Rubber Tire*, Alternative Uses Task (AUT)

Please generate a unique response for each line and write in as many ideas as possible. Please write down as many different, unusual, and creative uses for a rubber tire as you can think of.

Timer (2:00 minutes)

Please write in your favorite creative idea from the ideas you generated in the uses for a rubber tire task.

Untimed

Please write in your second favorite creative idea from those you generated in the uses for a rubber tire task.

Untimed

Please write in your third favorite creative idea from those you generated in the uses for a rubber tire task.

Untimed

APPENDIX J

Culture-Specific Creativity Task- *Tourist Problem*

Please generate a unique response for each line and write in as many ideas as possible. Write down as many different, unusual, and creative ways to attract tourists to your current resident country as you can think of
Timer (2:00 minutes)

Please write in your favorite creative idea from those you generated in the tourist task.

Untimed

Please write in your second favorite creative idea from those you generated in the tourist task.

Untimed

Please write in your third favorite creative idea from those you generated in the tourist task.

Untimed

APPENDIX K

Experiment 1 Participant Condition Prompts

Deculturation Condition

Imagine you are at a holiday meal with your significant other's family. They belong to an obscure foreign culture and the event you are attending celebrates a holiday you are unfamiliar with. They are discussing their unique culture and rituals. Their house is decorated in fruits and vegetables. Some of these family members start creating beautiful music by beating on drums in the adjacent living room. Someone in the family asks you to join them in a dance routine to celebrate with them. You want to make a good impression. You realize it will be important to distance yourself from your predominant cultural identity and to suppress thoughts of your familiar culture to fit in. Please write a paragraph about what this experience could feel like, what you might think about, and how you might behave as a result:

Acculturation Condition

Imagine you are at a holiday meal with your significant other's family. They belong to an obscure foreign culture and the event you are attending celebrates a holiday you not unfamiliar with. They are discussing their unique culture and rituals. Their house is decorated in fruits and vegetables. Some of these family members start creating beautiful music by beating on drums in the adjacent living room. Someone in the family asks you to join them in a dance routine to celebrate with them. You want to make a good impression. You realize it will be important to embrace elements of both your own culture and the culture of your significant other's family in order to fit in. Please write a paragraph about what this experience could feel like, what you might think about, and how you might behave as a result. Please write a paragraph about what this experience could feel like, what you might think about, and how you might behave as a result.

Home Culture Condition

Imagine you are at a holiday meal with your significant other's family. They are currently celebrating a holiday that you also celebrate. They are discussing the importance of the holiday with you. You engage with the typical rituals of the holiday together. As you do so, you realize it will be important to embrace elements of your own culture in order to fit in. Please write a paragraph about what this experience could feel like, what you might think about, and how you might behave as a result.

APPENDIX L

Experiment 2 Participant Condition Prompts

Cultural Video Exposure Prompt

Please watch the full video before answering the next question. Now that the video has concluded, please imagine the Sami culture and write a few sentences about what members of this culture are like and what they practice.

Have you ever been introduced to this culture before?

(Attention Check)

How would you describe the structure of the homes of the Sami culture?

Deculturation Condition Prompt

Imagine you are at a holiday meal with your significant other's family. They belong to an obscure foreign culture and the event you are attending celebrates a holiday you are unfamiliar with. The family is discussing their unique culture and rituals. You are enjoying yourself. Their house is decorated with fruits and vegetables. Some of these family members start creating beautiful music by beating on drums in the adjacent living room. Someone in the family asks you to join them in a dance routine to celebrate with them. You like this experience and want to make a good impression. You realize it will be important to suppress ideas of your own culture in order to fit in. Please write a few lines to describe how distancing yourself from your own culture during this experience might feel like, what you would think about, and how you might behave as a result.

APPENDIX M

Experiment 3 Participant Condition Prompts

Deculturation Condition

Imagine you are at a holiday meal with your significant other's family. They belong to an obscure foreign culture and the event you are attending celebrates a holiday with which you are unfamiliar. The family is discussing their unique culture and rituals. You are enjoying yourself. Their house is decorated with fruits and vegetables. Some of these family members start creating beautiful music by beating on drums in the adjacent living room. Someone in the family asks you to join them in a dance routine to celebrate with them. You like this experience and want to make a good impression. You realize it will be important to suppress ideas of your own culture and cultural identity to fit in. Please write a few lines describing how distancing yourself from your own culture during this experience would feel like, what you would think about, and how you would behave as a result.

Acculturation Condition

Imagine you are at a holiday meal with your significant other's family. They belong to an obscure foreign culture and the event you are attending celebrates a holiday with which you are unfamiliar. The family is discussing their unique culture and rituals. You are enjoying yourself. Their house is decorated with fruits and vegetables. Some of these family members start creating beautiful music by beating on drums in the adjacent living room. Someone in the family asks you to join them in a dance routine to celebrate with them. You like this experience and want to make a good impression. You realize it will be important to embrace elements of both your native culture and the culture of your significant other's family to fit in. Please write a few lines describing what merging these cultures during this experience could feel like, what you might think about it, and how you might behave as a result.

Joint Deculturation and Acculturation Condition

Imagine you are at a holiday meal with your significant other's family. They belong to an obscure foreign culture and the event you are attending celebrates a holiday with which you are unfamiliar. The family is discussing their unique culture and rituals. You are enjoying yourself. Their house is decorated with fruits and vegetables. Some of these family members start creating beautiful music by beating on drums in the adjacent living room. Someone in the family asks you to join them in a dance routine to celebrate with them. You like this experience and want to make a good impression. You realize it will be important to suppress ideas of your own culture and to also merge ideas of your own culture with this new culture in order to fit in. Please write a few lines describing how distancing yourself from your own culture and combining elements of both cultures during this experience could feel like, what you would think about, and how you might behave as a result.

APPENDIX N

Tables

Table 1

Experiment One: Group Assignment Pairwise Comparisons

| Divergent Thinking Measure | Group Assignment | | | | | | | | | | | |
|----------------------------|--------------------|--------------|---------|--------------------|--------------|---------|--------------------|---------------|---------|--------------------|---------------|--------------|
| | Deculturation | | | Acculturation | | | Home-Culture | | | Control | | |
| | Mean Difference to | | | Mean Difference to | | | Mean Difference to | | | Mean Difference to | | |
| | Acculturation | Home-Culture | Control | Deculturation | Home-Culture | Control | Deculturation | Acculturation | Control | Deculturation | Acculturation | Home-Culture |
| General Fluency | 0.06 | -0.50 | -0.36 | -0.06 | -0.56 | -0.42 | 0.50 | 0.56 | 0.14 | 0.36 | 0.42 | -0.14 |
| General Flexibility | 0.03 | -0.58 | -0.52 | -0.03 | -.606* | -0.55 | 0.58 | .606* | 0.06 | 0.52 | 0.55 | -0.06 |
| General Novelty, 1st Idea | 0.01 | -0.34 | -.760* | -0.01 | -0.35 | -.773* | 0.34 | 0.35 | -0.42 | .760* | .773* | 0.42 |
| General Novelty, 2nd Idea | -0.20 | -0.12 | -0.53 | 0.20 | 0.08 | -0.33 | 0.12 | -0.08 | -0.41 | 0.53 | 0.33 | 0.41 |
| General Novelty, 3rd Idea | 0.13 | -0.20 | -0.38 | -0.13 | -0.33 | -0.52 | 0.20 | 0.33 | -0.19 | 0.38 | 0.52 | 0.19 |
| General Originality | 0.30 | 0.19 | -0.08 | -0.30 | -0.11 | -0.38 | -0.19 | 0.11 | -0.27 | 0.08 | 0.38 | 0.27 |
| Cultural Fluency | -0.29 | -0.43 | -0.44 | 0.29 | -0.15 | -0.16 | 0.43 | 0.15 | -0.01 | 0.44 | 0.16 | 0.01 |
| Cultural Flexibility | -0.34 | -0.38 | -0.43 | 0.34 | -0.03 | -0.09 | 0.38 | 0.03 | -0.05 | 0.43 | 0.09 | 0.05 |
| Cultural Novelty, 1st Idea | -.857* | -.859* | -.774* | .857* | 0.00 | 0.08 | .859* | 0.00 | 0.08 | .774* | -0.08 | -0.08 |
| Cultural Novelty, 2nd Idea | -0.60 | -.973* | -.892* | 0.60 | -0.37 | -0.29 | .973* | 0.37 | 0.08 | .892* | 0.29 | -0.08 |
| Cultural Novelty, 3rd Idea | -0.44 | -0.64 | -0.55 | 0.44 | -0.21 | -0.12 | 0.64 | 0.21 | 0.09 | 0.55 | 0.12 | -0.09 |
| Cultural Originality | -0.29 | -0.19 | -0.23 | 0.29 | 0.10 | 0.06 | 0.19 | -0.10 | -0.04 | 0.23 | -0.06 | 0.04 |

* The mean difference is significant at the .05 level.

Note. Based on estimated marginal means. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Table 2*Experiment One Pearson Correlations: Adapted BIIS Harmony and Integration Pre-Test Scores and Cultural Adaptability Total and Subscale Scores*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------------------|---------|---------|---------|--------|---------|--------|---------|
| 1. BIIS Harmony (Time 1 | 1 | -.428** | -.300** | -0.178 | -.509** | 0.013 | -.330** |
| 2. BIIS Blendedness (Time 1) | -.428** | 1 | .481** | .460** | .461** | 0.156 | .397** |
| 3. Total Cultural Adaptability | -.300** | .481** | 1 | .710** | .848** | .756** | .808** |
| 4. Metacognition | -0.178 | .460** | .710** | 1 | .461** | .467** | .644** |
| 5. Knowledge | -.509** | .461** | .848** | .461** | 1 | .527** | .557** |
| 6. Motivation | 0.013 | 0.156 | .756** | .467** | .527** | 1 | .512** |
| 7. Behavior | -.330** | .397** | .808** | .644** | .557** | .512** | 1 |

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3*Experiment One Correlations: Bicultural Identity Integration Scale-II and Short Acculturation Strategy Index at Pre- and Post-Manipulation Timepoints*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------------------------------|---------|---------|--------|---------|---------|---------|---------|--------|-------|--------|--------|----|
| 1. BIIS Harmony (Time 1) | 1 | | | | | | | | | | | |
| 2. BIIS Blendedness (Time 1) | -.428** | 1 | | | | | | | | | | |
| 3. SASI Separation (Time 1) | .124 | .011 | 1 | | | | | | | | | |
| 4. SASI Assimilation (Time 1) | -.623** | .472** | -.211 | 1 | | | | | | | | |
| 5. SASI Integration (Time 1) | -.503** | .619** | -.162 | .674** | 1 | | | | | | | |
| 6. SASI Marginalization (Time 1) | -.532** | .280* | -.193 | .730** | .551** | 1 | | | | | | |
| 7. BIIS Harmony (Time 2) | .896** | -.419** | .117 | -.578** | -.463** | -.489** | 1 | | | | | |
| 8. BIIS Blendedness (Time 2) | -.405** | .791** | -.060 | .379** | .567** | .259* | -.422** | 1 | | | | |
| 9. SASI Separation (Time 2) | .005 | .016 | .623** | -.067 | -.077 | -.067 | -.054 | -.074 | 1 | | | |
| 10. SASI Assimilation (Time 2) | -.664** | .443** | -.201 | .805** | .612** | .691** | -.629** | .372** | -.087 | 1 | | |
| 11. SASI Integration (Time 2) | -.519** | .505** | -.142 | .568** | .732** | .433** | -.467** | .549** | -.196 | .504** | 1 | |
| 12. SASI Marginalization (Time 2) | -.541** | .278* | -.193 | .522** | .414** | .679** | -.498** | 0.192 | -.141 | .699** | .315** | 1 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4*Experiment One Pearson Correlations: Acculturation Strategy and Divergent Thinking Measures*

| | Acculturation Strategy (Time One) | | | |
|----------------------------|-----------------------------------|--------------|-------------|-----------------|
| | Separation | Assimilation | Integration | Marginalization |
| General Novelty, 1st Idea | 0.076 | -.331** | -.305** | -.308** |
| General Novelty, 2nd Idea | 0.027 | -.320** | -.256* | -.300** |
| General Novelty, 3rd Idea | 0.104 | -.388** | -.316** | -.275* |
| General Fluency | -0.045 | -.398** | -.226* | -.318** |
| General Flexibility | 0.021 | -.475** | -.383** | -.371** |
| General Originality | -.225* | 0.150 | 0.135 | 0.088 |
| Cultural Novelty, 1st Idea | 0.010 | -.339** | -.344** | -.365** |
| Cultural Novelty, 2nd Idea | 0.111 | -.361** | -.367** | -.326** |
| Cultural Novelty, 1st Idea | 0.003 | -.373** | -.334** | -.313** |
| Cultural Fluency | 0.021 | -.353** | -.267* | -.317** |
| Cultural Flexibility | 0.115 | -.484** | -.331** | -.456** |
| Cultural Originality | -0.017 | -.387** | -.356** | -.415** |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Note: Scores are z-transformed

Table 5

Experiment One Pearson Correlations: BIIS-II Harmony and Integration Scores and Divergent Thinking Measures at Pre- and Post-Manipulation Timepoints

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|--------------------------------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|
| 1. BIIS Harmony (Time 1) | 1 | | | | | | | | | | | | | | | |
| 2. BIIS Harmony (Time 2) | .896** | 1 | | | | | | | | | | | | | | |
| 3. BIIS Blendedness (Time 1) | -.428** | -.419** | 1 | | | | | | | | | | | | | |
| 4. BIIS Blendedness (Time 2) | -.405** | -.422** | .791** | 1 | | | | | | | | | | | | |
| 5. General Novelty, 1st Idea | .428** | .347** | -0.166 | -0.155 | 1 | | | | | | | | | | | |
| 6. General Novelty, 2nd Idea | .471** | .382** | -0.169 | -0.073 | .609** | 1 | | | | | | | | | | |
| 7. General Novelty, 3rd Idea | .508** | .442** | -.328** | -.320** | .617** | .706** | 1 | | | | | | | | | |
| 8. General Fluency | .488** | .438** | -0.175 | -0.162 | .455** | .551** | .535** | 1 | | | | | | | | |
| 9. General Flexibility | .611** | .564** | -.287** | -.273* | .582** | .604** | .655** | .854** | 1 | | | | | | | |
| 10. General Originality | -0.132 | -0.148 | -0.002 | 0.012 | 0.106 | 0.111 | 0.131 | 0.168 | 0.079 | 1 | | | | | | |
| 11. Cultural Novelty, 1st Idea | .624** | .532** | -0.113 | -0.107 | .555** | .479** | .494** | .414** | .517** | -0.103 | 1 | | | | | |
| 12. Cultural Novelty, 2nd Idea | .553** | .486** | -.225* | -.252* | .597** | .418** | .508** | .409** | .571** | -0.063 | .873** | 1 | | | | |
| 13. Cultural Novelty, 3rd Idea | .518** | .467** | -0.151 | -0.131 | .501** | .391** | .494** | .405** | .521** | 0.016 | .791** | .776** | 1 | | | |
| 14. Cultural Fluency | .354** | .318** | -0.083 | -0.010 | .323** | .486** | .265* | .571** | .567** | 0.064 | .379** | .366** | .356** | 1 | | |
| 15. Cultural Flexibility | .461** | .388** | -0.129 | -0.110 | .360** | .508** | .322** | .613** | .595** | -0.008 | .418** | .405** | .416** | .886** | 1 | |
| 16. Cultural Originality | .467** | .372** | -.222* | -0.178 | .353** | .426** | .342** | .364** | .379** | .300** | .488** | .459** | .494** | .342** | .385** | 1 |

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 6

Experiment One Pearson Correlations: Cultural Adaptability (CSQ) Scores and Divergent Thinking Dimension Scores

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|--------------------------------|---------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|
| 1. Total Cultural Adaptability | 1 | | | | | | | | | | | | | | | | |
| 2. Metacognition | .710** | 1 | | | | | | | | | | | | | | | |
| 3. Knowledge | .848** | .461** | 1 | | | | | | | | | | | | | | |
| 4. Motivation | .756** | .467** | .527** | 1 | | | | | | | | | | | | | |
| 5. Behavior | .808** | .644** | .557** | .512** | 1 | | | | | | | | | | | | |
| 6. General Fluency | -0.104 | 0.016 | -.251* | 0.015 | -0.052 | 1 | | | | | | | | | | | |
| 7. General Flexibility | -0.163 | -0.033 | -.331** | 0.010 | -0.101 | .854** | 1 | | | | | | | | | | |
| 8. General Novelty, 1st Idea | -.273* | -0.132 | -.409** | -0.188 | -0.128 | .455** | .582** | 1 | | | | | | | | | |
| 9. General Novelty, 2nd Idea | -0.143 | -0.025 | -.265* | -0.028 | -0.112 | .551** | .604** | .609** | 1 | | | | | | | | |
| 10. General Novelty, 3rd Idea | -.373** | -.271* | -.431** | -0.179 | -.339** | .535** | .655** | .617** | .706** | 1 | | | | | | | |
| 11. General Originality | -0.034 | -0.035 | -0.027 | -0.137 | 0.083 | 0.168 | 0.079 | 0.106 | 0.111 | 0.131 | 1 | | | | | | |
| 12. Cultural Fluency | -0.047 | 0.042 | -0.202 | 0.051 | 0.000 | .571** | .567** | .323** | .486** | .265* | 0.064 | 1 | | | | | |
| 13. Cultural Flexibility | -0.052 | 0.066 | -.219* | 0.081 | -0.024 | .613** | .595** | .360** | .508** | .322** | -0.008 | .886** | 1 | | | | |
| 14. Cultural Novelty, 1st Idea | -.398** | -0.211 | -.536** | -0.142 | -.341** | .414** | .517** | .555** | .479** | .494** | -0.103 | .379** | .418** | 1 | | | |
| 15. Cultural Novelty, 2nd Idea | -.407** | -0.194 | -.523** | -.224* | -.331** | .409** | .571** | .597** | .418** | .508** | -0.063 | .366** | .405** | .873** | 1 | | |
| 16. Cultural Novelty, 3rd Idea | -.406** | -0.201 | -.528** | -.232* | -.308** | .405** | .521** | .501** | .391** | .494** | 0.016 | .356** | .416** | .791** | .776** | 1 | |
| 17. Cultural Originality | -.364** | -0.182 | -.418** | -.242* | -.307** | .364** | .379** | .353** | .426** | .342** | .300** | .342** | .385** | .488** | .459** | .494** | 1 |

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Note. Scores are Z-Transformed

Table 7*Experiment Two Descriptive Statistics (Number, Mean, Standard Error, and Confidence Intervals) by Condition*

| | | N | Mean | Std. Error | 95% Confidence Interval for Mean | |
|------------------------------|------------------------|-------|------|---------------|----------------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| General Novelty Mean | Deculturation | 37.00 | 2.17 | 0.12 | 1.93 | 2.41 |
| | Mere Cultural Exposure | 21.00 | 2.38 | 0.14 | 2.08 | 2.67 |
| | Control | 32.00 | 2.33 | 0.12 | 2.08 | 2.57 |
| | Total | 90.00 | 2.27 | 0.07 | 2.13 | 2.42 |
| Cultural Novelty Mean | Deculturation | 37.00 | 2.34 | 0.11 | 2.11 | 2.57 |
| | Mere Cultural Exposure | 21.00 | 2.01 | 0.13 | 1.74 | 2.27 |
| | Control | 32.00 | 1.85 | 0.12 | 1.61 | 2.10 |
| | Total | 90.00 | 2.09 | 0.07 | 1.94 | 2.23 |
| General Novelty, 1st Idea | Deculturation | 37.00 | 2.24 | 0.13 | 1.98 | 2.51 |
| | Mere Cultural Exposure | 21.00 | 2.52 | 0.19 | 2.12 | 2.93 |
| | Control | 32.00 | 2.23 | 0.17 | 1.89 | 2.57 |
| | Total | 90.00 | 2.30 | 0.09 | 2.12 | 2.49 |
| General Novelty 2nd Idea | Deculturation | 37.00 | 2.09 | 0.16 | 1.76 | 2.42 |
| | Mere Cultural Exposure | 21.00 | 2.13 | 0.20 | 1.71 | 2.55 |
| | Control | 32.00 | 2.38 | 0.16 | 2.04 | 2.71 |
| | Total | 90.00 | 2.20 | 0.10 | 2.00 | 2.40 |
| General Novelty 3rd Idea | Deculturation | 37.00 | 2.17 | 0.14 | 1.89 | 2.45 |
| | Mere Cultural Exposure | 21.00 | 2.48 | 0.16 | 2.15 | 2.81 |
| | Control | 32.00 | 2.38 | 0.15 | 2.07 | 2.68 |
| | Total | 90.00 | 2.31 | 0.09 | 2.14 | 2.49 |
| General Fluency | Deculturation | 37.00 | 4.70 | 0.47 | 3.75 | 5.66 |
| | Mere Cultural Exposure | 21.00 | 4.10 | 0.46 | 3.14 | 5.05 |
| | Control | 32.00 | 3.23 | 0.39 | 2.44 | 4.03 |
| | Total | 90.00 | 4.04 | 0.27 | 3.51 | 4.57 |
| General Flexibility | Deculturation | 37.00 | 3.59 | 0.32 | 2.95 | 4.24 |
| | Mere Cultural Exposure | 21.00 | 3.29 | 0.38 | 2.50 | 4.07 |
| | Control | 32.00 | 2.47 | 0.30 | 1.85 | 3.09 |
| | Total | 90.00 | 3.12 | 0.20 | 2.73 | 3.51 |
| General Originality | Deculturation | 37.00 | 3.97 | 0.21 | 3.54 | 4.41 |
| | Mere Cultural Exposure | 21.00 | 3.86 | 0.27 | 3.29 | 4.42 |
| | Control | 32.00 | 4.34 | 0.22 | 3.89 | 4.80 |

| | | | | | |
|-------|-------|------|------|------|------|
| Total | 90.00 | 4.08 | 0.13 | 3.81 | 4.34 |
|-------|-------|------|------|------|------|

Table 7 Cont.*Experiment Two Descriptive Statistics (Number, Mean, Standard Error, and Confidence Intervals) by Condition*

| | | N | Mean | Std. Error | 95% Confidence Interval for Mean | |
|--------------------------------|------------------------|----|------|---------------|----------------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| Cultural Novelty, 1st Idea | Deculturation | 37 | 2.55 | 0.14 | 2.27 | 2.83 |
| | Mere Cultural Exposure | 21 | 2.10 | 0.14 | 1.81 | 2.38 |
| | Control | 32 | 1.97 | 0.13 | 1.70 | 2.24 |
| | Total | 90 | 2.24 | 0.08 | 2.07 | 2.40 |
| Cultural Novelty 2nd Idea | Deculturation | 37 | 2.31 | 0.14 | 2.02 | 2.60 |
| | Mere Cultural Exposure | 21 | 2.00 | 0.15 | 1.68 | 2.32 |
| | Control | 32 | 1.94 | 0.16 | 1.61 | 2.26 |
| | Total | 90 | 2.10 | 0.09 | 1.92 | 2.28 |
| Cultural Novelty 3rd Idea | Deculturation | 37 | 2.15 | 0.16 | 1.83 | 2.47 |
| | Mere Cultural Exposure | 21 | 1.92 | 0.18 | 1.55 | 2.30 |
| | Control | 32 | 1.65 | 0.12 | 1.40 | 1.89 |
| | Total | 90 | 1.92 | 0.09 | 1.74 | 2.10 |
| Cultural Fluency | Deculturation | 37 | 4.93 | 0.42 | 4.07 | 5.78 |
| | Mere Cultural Exposure | 21 | 3.40 | 0.61 | 2.13 | 4.67 |
| | Control | 32 | 2.56 | 0.37 | 1.80 | 3.31 |
| | Total | 90 | 3.73 | 0.28 | 3.18 | 4.29 |
| Cultural Flexibility | Deculturation | 37 | 2.41 | 0.25 | 1.90 | 2.91 |
| | Mere Cultural Exposure | 21 | 2.31 | 0.41 | 1.45 | 3.17 |
| | Control | 32 | 1.70 | 0.23 | 1.24 | 2.17 |
| | Total | 90 | 2.13 | 0.16 | 1.81 | 2.46 |
| Cultural Originality | Deculturation | 36 | 4.39 | 0.24 | 3.90 | 4.88 |
| | Mere Cultural Exposure | 21 | 3.76 | 0.37 | 2.99 | 4.54 |
| | Control | 32 | 3.47 | 0.33 | 2.80 | 4.14 |
| | Total | 89 | 3.91 | 0.18 | 3.55 | 4.27 |
| Convergent Task Performance | Deculturation | 37 | 3.43 | 0.30 | 2.82 | 4.04 |
| | Mere Cultural Exposure | 21 | 3.81 | 0.38 | 3.03 | 4.59 |
| | Control | 32 | 2.59 | 0.35 | 1.89 | 3.30 |
| | Total | 90 | 3.22 | 0.20 | 2.82 | 3.62 |

Table 8*Experiment Two Pearson Correlations: Acculturation Strategy and Creative Thinking Measures*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | |
|--------------------------------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|----|--|
| 1. Integration | 1 | | | | | | | | | | | | | | | | | | | |
| 2. Marginalization | .274** | 1 | | | | | | | | | | | | | | | | | | |
| 3. Assimilation | .414** | .462** | 1 | | | | | | | | | | | | | | | | | |
| 4. Separation | -.336** | -.073 | .083 | 1 | | | | | | | | | | | | | | | | |
| 5. General Novelty | -.089 | .209* | -.171 | .249* | 1 | | | | | | | | | | | | | | | |
| Mean | | | | | | | | | | | | | | | | | | | | |
| 6. Cultural Novelty | -.177 | .379** | -.214* | -.042 | 0.156 | 1 | | | | | | | | | | | | | | |
| Mean | | | | | | | | | | | | | | | | | | | | |
| 7. General Novelty, 1st Idea | -.020 | -.139 | -.092 | .106 | .749** | 0.140 | 1 | | | | | | | | | | | | | |
| 8. General Novelty, 2nd Idea | -.092 | -.191 | -.166 | .206 | .779** | 0.075 | .290** | 1 | | | | | | | | | | | | |
| 9. General Novelty, 3rd Idea | -.098 | -.161 | -.145 | .291** | .834** | 0.160 | .492** | .509** | 1 | | | | | | | | | | | |
| 10. General Fluency | -.258* | .282** | -.295** | .007 | .313** | .428** | .252* | .247* | .240* | 1 | | | | | | | | | | |
| 11. General Flexibility | -.341** | .323** | -.349** | -.090 | .251* | .518** | .256* | .155 | .183 | .869** | 1 | | | | | | | | | |
| 12. General Originality | .177 | .101 | .041 | .125 | -.132 | -.220* | -.126 | -.010 | -.189 | -0.182 | -.298** | 1 | | | | | | | | |
| 13. Cultural Novelty, 1st Idea | -.253* | .311** | -.140 | .122 | .015 | .751** | .064 | -.007 | -.022 | .318** | .385** | -.130 | 1 | | | | | | | |
| 14. Cultural Novelty, 2nd Idea | -.084 | .348** | -.210* | -.099 | .170 | .877** | .074 | .150 | .178 | .393** | .445** | -.152 | .481** | 1 | | | | | | |
| 15. Cultural Novelty, 3rd Idea | -.110 | .284** | -.179 | -.114 | .194 | .851** | .205 | .037 | .230* | .350** | .454** | -.262* | .414** | .679** | 1 | | | | | |
| 16. Cultural Fluency | -.279** | .237* | -.287** | -0.026 | .228* | .486** | .207 | .078 | .267* | .626** | .609** | -.175 | .343** | .437** | .427** | 1 | | | | |
| 17. Cultural Flexibility | -.253* | .311** | -.370** | -0.048 | .342** | .534** | .326** | .210* | .275** | .641** | .657** | -.113 | .342** | .515** | .463** | .776** | 1 | | | |
| 18. Cultural Originality | -.096 | -.207 | -.047 | .030 | .093 | .764** | .163 | -.045 | .114 | .331** | .350** | -.170 | .590** | .671** | .643** | .381** | .368** | 1 | | |
| 19. Convergent Tasks | -.278** | .303** | -.241* | .130 | .303** | .294** | .301** | .148 | .275** | .405** | .420** | -.235* | .256* | .265* | .212* | .334** | .339** | .318** | 1 | |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 9*Experiment Three Descriptive Statistics (Number, Mean, Standard Error, and Confidence Intervals) by Condition*

| | | N | Mean | Std. Error | 95% Confidence Interval for Mean | |
|----------------------------|---------------|--------|------|------------|----------------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| General Novelty, 1st Idea | Deculturation | 91.00 | 2.67 | 0.07 | 2.54 | 2.80 |
| | Acculturation | 97.00 | 2.50 | 0.08 | 2.34 | 2.66 |
| | Joint Mindset | 85.00 | 2.51 | 0.08 | 2.34 | 2.67 |
| | Control | 95.00 | 2.37 | 0.07 | 2.23 | 2.52 |
| | Total | 368.00 | 2.51 | 0.04 | 2.44 | 2.59 |
| General Novelty, 2nd Idea | Deculturation | 91.00 | 2.58 | 0.07 | 2.44 | 2.72 |
| | Acculturation | 97.00 | 2.42 | 0.07 | 2.27 | 2.56 |
| | Joint Mindset | 85.00 | 2.32 | 0.08 | 2.17 | 2.47 |
| | Control | 95.00 | 2.31 | 0.08 | 2.15 | 2.46 |
| | Total | 368.00 | 2.41 | 0.04 | 2.33 | 2.48 |
| General Novelty, 3rd Idea | Deculturation | 91.00 | 2.63 | 0.07 | 2.48 | 2.77 |
| | Acculturation | 97.00 | 2.51 | 0.08 | 2.35 | 2.67 |
| | Joint Mindset | 85.00 | 2.40 | 0.09 | 2.23 | 2.57 |
| | Control | 95.00 | 2.42 | 0.08 | 2.26 | 2.58 |
| | Total | 368.00 | 2.49 | 0.04 | 2.41 | 2.57 |
| General Fluency | Deculturation | 91.00 | 4.80 | 0.24 | 4.32 | 5.29 |
| | Acculturation | 97.00 | 4.60 | 0.28 | 4.04 | 5.16 |
| | Joint Mindset | 85.00 | 4.55 | 0.29 | 3.96 | 5.13 |
| | Control | 95.00 | 4.27 | 0.28 | 3.72 | 4.82 |
| | Total | 368.00 | 4.55 | 0.14 | 4.28 | 4.82 |
| General Flexibility | Deculturation | 91.00 | 3.83 | 0.17 | 3.49 | 4.17 |
| | Acculturation | 97.00 | 3.64 | 0.20 | 3.24 | 4.04 |
| | Joint Mindset | 85.00 | 3.59 | 0.21 | 3.17 | 4.02 |
| | Control | 95.00 | 3.47 | 0.22 | 3.04 | 3.90 |
| | Total | 368.00 | 3.63 | 0.10 | 3.43 | 3.83 |
| General Originality | Deculturation | 91.00 | 4.24 | 0.12 | 4.00 | 4.49 |
| | Acculturation | 97.00 | 4.25 | 0.13 | 3.99 | 4.51 |
| | Joint Mindset | 85.00 | 4.15 | 0.16 | 3.84 | 4.46 |
| | Control | 95.00 | 4.29 | 0.13 | 4.03 | 4.56 |
| | Total | 368.00 | 4.24 | 0.07 | 4.10 | 4.37 |
| Cultural Novelty, 1st Idea | Deculturation | 91.00 | 2.68 | 0.08 | 2.53 | 2.83 |
| | Acculturation | 97.00 | 2.63 | 0.08 | 2.47 | 2.80 |
| | Joint Mindset | 85.00 | 2.62 | 0.08 | 2.45 | 2.79 |
| | Control | 95.00 | 2.50 | 0.08 | 2.34 | 2.66 |
| | Total | 368.00 | 2.61 | 0.04 | 2.53 | 2.69 |

Table 9 cont.

| | | N | Mean | Std. Error | 95% Confidence Interval for Mean | |
|-------------------------------|---------------|--------|------|------------|----------------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| Cultural Novelty, 2nd Idea | Deculturation | 91.00 | 2.58 | 0.08 | 2.42 | 2.73 |
| | Acculturation | 97.00 | 2.52 | 0.08 | 2.35 | 2.68 |
| | Joint Mindset | 85.00 | 2.44 | 0.08 | 2.27 | 2.60 |
| | Control | 95.00 | 2.33 | 0.08 | 2.16 | 2.50 |
| | Total | 368.00 | 2.46 | 0.04 | 2.38 | 2.55 |
| Cultural Novelty, 3rd Idea | Deculturation | 91.00 | 2.34 | 0.08 | 2.17 | 2.50 |
| | Acculturation | 97.00 | 2.37 | 0.09 | 2.19 | 2.54 |
| | Joint Mindset | 85.00 | 2.21 | 0.09 | 2.03 | 2.39 |
| | Control | 95.00 | 2.24 | 0.09 | 2.07 | 2.42 |
| | Total | 368.00 | 2.29 | 0.04 | 2.20 | 2.37 |
| Cultural Fluency | Deculturation | 91.00 | 4.33 | 0.22 | 3.90 | 4.76 |
| | Acculturation | 97.00 | 4.09 | 0.23 | 3.63 | 4.54 |
| | Joint Mindset | 85.00 | 3.88 | 0.24 | 3.41 | 4.35 |
| | Control | 95.00 | 3.98 | 0.25 | 3.49 | 4.47 |
| | Total | 368.00 | 4.07 | 0.12 | 3.84 | 4.30 |
| Cultural Flexibility | Deculturation | 91.00 | 3.23 | 0.18 | 2.88 | 3.58 |
| | Acculturation | 97.00 | 3.04 | 0.16 | 2.72 | 3.37 |
| | Joint Mindset | 85.00 | 2.99 | 0.17 | 2.66 | 3.33 |
| | Control | 95.00 | 2.88 | 0.17 | 2.55 | 3.21 |
| | Total | 368.00 | 3.04 | 0.08 | 2.87 | 3.20 |
| Cultural Originality | Deculturation | 91.00 | 5.24 | 0.11 | 5.02 | 5.46 |
| | Acculturation | 97.00 | 5.17 | 0.12 | 4.94 | 5.40 |
| | Joint Mindset | 85.00 | 5.12 | 0.12 | 4.89 | 5.35 |
| | Control | 95.00 | 4.94 | 0.12 | 4.71 | 5.17 |
| | Total | 368.00 | 5.11 | 0.06 | 5.00 | 5.23 |
| Convergent Tasks | Deculturation | 91.00 | 3.70 | 0.15 | 3.40 | 4.00 |
| | Acculturation | 97.00 | 3.45 | 0.18 | 3.09 | 3.82 |
| | Joint Mindset | 85.00 | 3.59 | 0.17 | 3.26 | 3.92 |
| | Control | 95.00 | 3.42 | 0.18 | 3.06 | 3.78 |
| | Total | 368.00 | 3.54 | 0.09 | 3.37 | 3.71 |

Table 10*Experiment Three Pearson Correlations: Trait Level Indicators and Creativity Measures*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|--------------------------------|--------|--------|--------|--------|---------|--------|-------|--------|--------|--------|---------|---------|---------|---------|--------|-------|--------|--------|--------|----|
| 1. CFI | 1 | | | | | | | | | | | | | | | | | | | |
| 2. LSQ | .530** | 1 | | | | | | | | | | | | | | | | | | |
| 3. CSQ Total | .400** | .517** | 1 | | | | | | | | | | | | | | | | | |
| 4. CSQ Meta. | .472** | .466** | .746** | 1 | | | | | | | | | | | | | | | | |
| 5. CSQ Cognitive | .177** | .328** | .773** | .353** | 1 | | | | | | | | | | | | | | | |
| 6. CSQ Motivation | .311** | .416** | .741** | .523** | .397** | 1 | | | | | | | | | | | | | | |
| 7. CSQ Behavior | .337** | .396** | .758** | .558** | .371** | .418** | 1 | | | | | | | | | | | | | |
| 8. General Novelty, 1st Idea | -.019 | .077 | .003 | .001 | -.044 | .077 | -.002 | 1 | | | | | | | | | | | | |
| 9. General Novelty, 2nd Idea | .029 | .029 | -.027 | .101 | -.125* | .030 | -.015 | .260** | 1 | | | | | | | | | | | |
| 10. General Novelty, 3rd Idea | .000 | .111* | -.057 | .057 | -.121* | -.042 | -.016 | .257** | .334** | 1 | | | | | | | | | | |
| 11. General Fluency | .052 | .061 | .006 | .223** | -.251** | .117* | .083 | .217** | .288** | .231** | 1 | | | | | | | | | |
| 12. General Flexibility | .069 | .056 | -.006 | .227** | -.271** | .109* | .078 | .251** | .298** | .263** | .910** | 1 | | | | | | | | |
| 13. Cultural Novelty, 1st Idea | .081 | .024 | -.083 | .066 | -.218** | .051 | -.053 | .098 | .159** | .145** | .302** | .297** | 1 | | | | | | | |
| 14. Cultural Novelty, 2nd Idea | .069 | .040 | -.020 | .079 | -.186** | .113* | .031 | .099 | .130* | .104* | .340** | .321** | .590** | 1 | | | | | | |
| 15. Cultural Novelty, 3rd Idea | .036 | .043 | -.047 | .056 | -.166** | .069 | -.023 | .153** | .154** | .153** | .362** | .337** | .405** | .530** | 1 | | | | | |
| 16. Convergent Tasks | -.010 | -.069 | -.066 | -.013 | -.012 | -.089 | -.093 | .034 | .039 | .080 | .123* | .112* | .042 | -.003 | .072 | 1 | | | | |
| 17. Cultural Originality | .093 | .077 | .030 | .109* | -.101 | .107* | .048 | .056 | .119* | .095 | .284** | .276** | .376** | .550** | .607** | .012 | 1 | | | |
| 18. General Originality | -.071 | .021 | .088 | -.023 | .116* | .040 | .091 | -.036 | -.004 | .012 | -.163** | -.220** | -.167** | -.145** | -.107* | -.047 | -.096 | 1 | | |
| 19. Cultural Fluency | .007 | .001 | -.081 | .100 | -.278** | .057 | .002 | .204** | .251** | .225** | .663** | .630** | .303** | .369** | .456** | .079 | .318** | -.117* | 1 | |
| 20. Cultural Flexibility | .010 | -.043 | -.058 | .103* | -.212** | .030 | .006 | .112* | .140** | .139** | .526** | .501** | .295** | .317** | .412** | .080 | .256** | -.092 | .797** | 1 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Note: CFI = Cognitive Flexibility Inventory, LSQ = Lumpers and Splitters Questionnaire, CSQ = Cultural Intelligence Scale

Table 11

Experiment Three Pearson Correlations: Acculturation Strategy Use and Creativity Measures

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|--------------------------------|---------|---------|---------|--------|--------|--------|--------|---------|---------|---------|--------|--------|--------|--------|--------|-------|----|
| 1. Marginalized | 1 | | | | | | | | | | | | | | | | |
| 2. Assimilated | .446** | 1 | | | | | | | | | | | | | | | |
| 3. Integrated | 0.084 | .360** | 1 | | | | | | | | | | | | | | |
| 4. Separated | -0.091 | -.265** | -.413** | 1 | | | | | | | | | | | | | |
| 5. General Novelty, 1st Idea | -.118* | -0.101 | 0.003 | -0.006 | 1 | | | | | | | | | | | | |
| 6. General Novelty, 2nd Idea | -.198** | -.156** | -0.058 | 0.022 | .260** | 1 | | | | | | | | | | | |
| 7. General Novelty, 3rd Idea | -.191** | -.147** | -0.034 | 0.031 | .257** | .334** | 1 | | | | | | | | | | |
| 8. General Fluency | -.318** | -.190** | -.126* | -0.083 | .217** | .288** | .231** | 1 | | | | | | | | | |
| 9. General Flexibility | -.332** | -.219** | -.127* | -.122* | .251** | .298** | .263** | .910** | 1 | | | | | | | | |
| 10. General Originality | 0.009 | 0.049 | 0.047 | 0.083 | -0.036 | -0.004 | 0.012 | -.163** | -.220** | 1 | | | | | | | |
| 11. Cultural Novelty, 1st Idea | -.182** | -.153** | -0.083 | -0.074 | 0.098 | .159** | .145** | .302** | .297** | -.167** | 1 | | | | | | |
| 12. Cultural Novelty, 2nd Idea | -.178** | -.175** | -0.094 | -0.027 | 0.099 | .130* | .104* | .340** | .321** | -.145** | .590** | 1 | | | | | |
| 13. Cultural Novelty, 3rd Idea | -.172** | -0.083 | -0.075 | -0.028 | .153** | .154** | .153** | .362** | .337** | -.107* | .405** | .530** | 1 | | | | |
| 14. Cultural Fluency | -.240** | -.171** | -.138** | -0.026 | .204** | .251** | .225** | .663** | .630** | -.117* | .303** | .369** | .456** | 1 | | | |
| 15. Cultural Flexibility | -.156** | -.106* | -.115* | -0.051 | .112* | .140** | .139** | .526** | .501** | -0.092 | .295** | .317** | .412** | .797** | 1 | | |
| 16. Cultural Originality | -.177** | -.171** | -.117* | 0.016 | 0.056 | .119* | 0.095 | .284** | .276** | -0.096 | .376** | .550** | .607** | .318** | .256** | 1 | |
| 17. Convergent Tasks | -0.017 | -0.082 | -0.011 | -0.022 | 0.034 | 0.039 | 0.080 | .123* | .112* | -0.047 | 0.042 | -0.003 | 0.072 | 0.079 | 0.080 | 0.012 | 1 |

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Note: marginalization scores are normalized after being rank transformed

Table 12*Experiment Three Pearson Correlations: Participant Characteristics and Creativity Measures*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|--------|--------|--------|--------|--------|-----|----|
| 1. Gender (Male = 1, Fem. = 2) | 1 | | | | | | | | | | | | | | | | | | | |
| 2. Language Count | -.07 | 1 | | | | | | | | | | | | | | | | | | |
| 3. Age | .06 | -.08 | 1 | | | | | | | | | | | | | | | | | |
| 4. No. of Countries Visited | .07 | .138** | .145** | 1 | | | | | | | | | | | | | | | | |
| 5. Weeks Traveling Abroad | .06 | -.02 | .111* | .156** | 1 | | | | | | | | | | | | | | | |
| 6. Weeks Living Abroad | .08 | .05 | .124* | .176** | .936** | 1 | | | | | | | | | | | | | | |
| 7. Cult. ID: Mono = 1, Bi = 2, Multi = 3) | .05 | .243** | -.09 | .156** | .104* | .165** | 1 | | | | | | | | | | | | | |
| 8. General Novelty, 1st Idea | .00 | -.09 | .01 | -.03 | .04 | .00 | -.04 | 1 | | | | | | | | | | | | |
| 9. General Novelty, 2nd Idea | .06 | -.142** | .03 | .01 | -.03 | -.04 | -.07 | .260** | 1 | | | | | | | | | | | |
| 10. General Novelty, 3rd Idea | .02 | -.10 | .01 | .00 | .104* | .08 | -.110* | .257** | .334** | 1 | | | | | | | | | | |
| 11. General Fluency | -.05 | -.08 | -.01 | .00 | .05 | .04 | -.03 | .217** | .288** | .231** | 1 | | | | | | | | | |
| 12. General Flexibility | -.05 | -.124* | -.04 | -.01 | .04 | .03 | -.04 | .251** | .298** | .263** | .910** | 1 | | | | | | | | |
| 13. General Originality | -.06 | .123* | .04 | .00 | -.05 | -.07 | .02 | -.04 | .00 | .01 | -.163** | -.220** | 1 | | | | | | | |
| 14. Cultural Novelty, 1st Idea | .02 | -.182** | .112* | -.121* | .06 | .09 | -.08 | .10 | .159** | .145** | .302** | .297** | -.167** | 1 | | | | | | |
| 15. Cultural Novelty, 2nd Idea | -.10 | -.155** | .10 | -.05 | .04 | .03 | -.10 | .10 | .130* | .104* | .340** | .321** | -.145** | .590** | 1 | | | | | |
| 16. Cultural Novelty, 3rd Idea | -.08 | -.152** | .03 | -.05 | .05 | .04 | -.02 | .153** | .154** | .153** | .362** | .337** | -.107* | .405** | .530** | 1 | | | | |
| 17. Cultural Fluency | -.10 | -.136** | -.02 | .00 | .07 | .04 | -.09 | .204** | .251** | .225** | .663** | .630** | -.117* | .303** | .369** | .456** | 1 | | | |
| 18. Cultural Flexibility | -.07 | -.09 | -.04 | -.04 | .03 | .02 | -.05 | .112* | .140** | .139** | .526** | .501** | -.09 | .295** | .317** | .412** | .797** | 1 | | |
| 19. Cultural Originality | -.03 | -.144** | .05 | -.02 | .03 | .02 | -.07 | .06 | .119* | .09 | .284** | .276** | -.10 | .376** | .550** | .607** | .318** | .256** | 1 | |
| 20. Convergent Tasks | .00 | -.02 | -.05 | .03 | .01 | .02 | .03 | .03 | .04 | .08 | .123* | .112* | -.05 | .04 | .00 | .07 | .08 | .08 | .01 | 1 |

**. Correlation is significant at the 0.01 level (2-tailed).

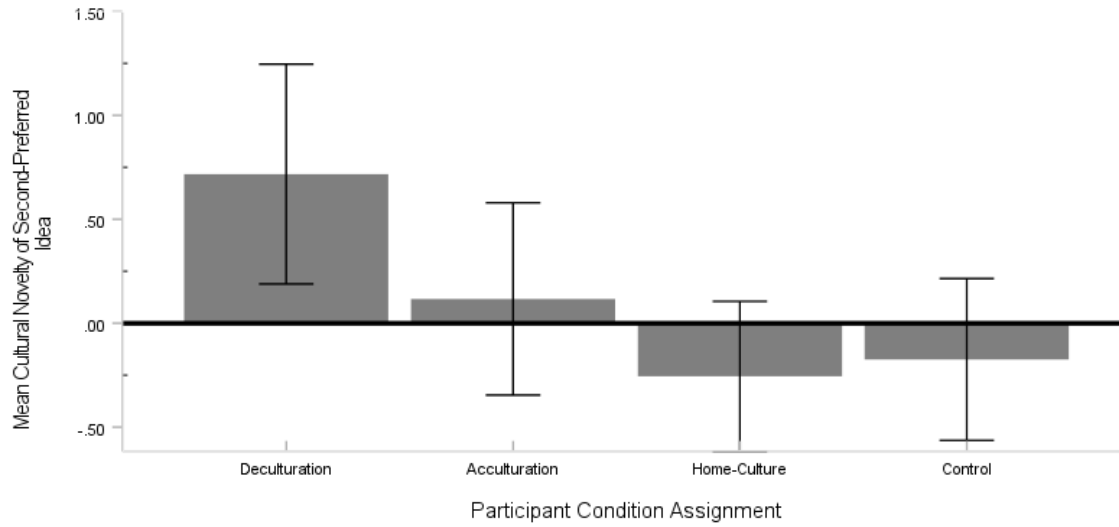
*. Correlation is significant at the 0.05 level (2-tailed).

APPENDIX O

Figures

Figure 1

Experiment One: Means for Cultural Novelty of Second-Preferred Creative Ideas by Participant Condition

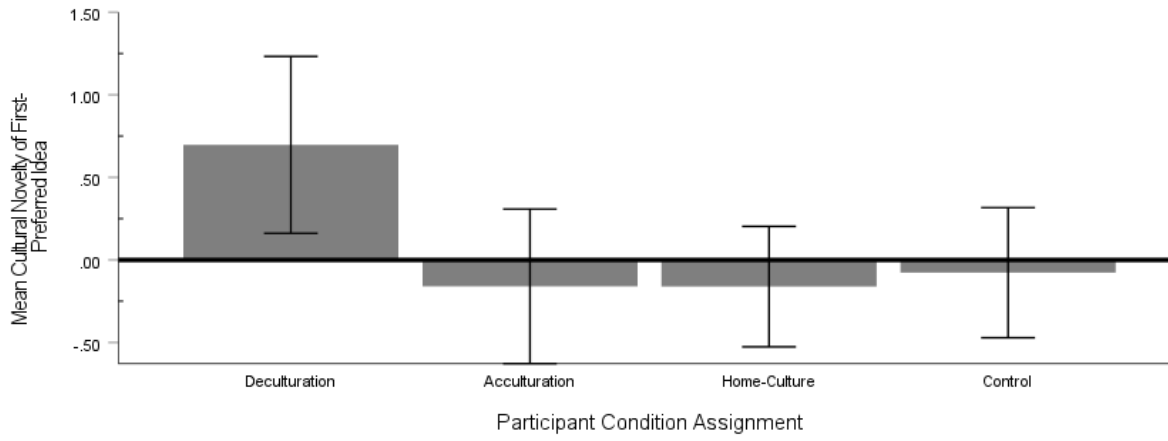


Error bars: 95% CI

Note. Scores are z-transformed

Figure 2

Experiment One: Means for Cultural Novelty of First-Preferred Creative Ideas by Participant Condition



Error bars: 95% CI

Note. Scores are z-transformed