

Getting the Most Out of Living Abroad: Biculturalism and Integrative Complexity as Key Drivers of Creative and Professional Success

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The current research investigated how patterns of home and host cultural identification can explain which individuals who have lived abroad achieve the greatest creative and professional success. We hypothesized that individuals who identified with both their home and host cultures (i.e., biculturals) would show enhanced creativity and professional success compared with individuals who identified with only a single culture (i.e., assimilated and separated individuals). Further, we expected that these effects would be driven by biculturals' greater levels of integrative complexity, an information processing capacity that involves considering and combining multiple perspectives. Two studies demonstrated that biculturals exhibited more fluency, flexibility, and novelty on a creative uses task (Study 1) and produced more innovations at work (Study 2) than did assimilated or separated individuals. Study 3 extended these findings to general professional outcomes: Bicultural professionals achieved higher promotion rates and more positive reputations compared with assimilated or separated individuals. Importantly, in all 3 studies, integrative complexity mediated the relationship between home/host identification and performance. Overall, the current results demonstrate who is most likely to achieve professional and creative success following experiences abroad and why.

Keywords: culture, multicultural experience, creativity, integrative complexity, acculturation

In 2001, a young entrepreneur named Rohan, who had lived in Ireland, the United Kingdom, France, and South Africa, was in Mexico. While there, he came across some cacao plantations. He was fascinated by the plantations and the rather crude chocolate made right at the source. Later in France, he stumbled across a chocolate shop. Through its Aztec-themed decorations, Rohan made the connection between the pre-Hispanic roots of cacao and the chocolate products we consume today. This idea stuck in his head and after finishing his master of business administration (MBA) and with only \$30,000 in capital, he developed the idea into a chain of Mayan-themed chocolate stores that now has

several million dollars in annual revenue. He noted that opening the stores required

Practical creativity beyond anyone's wildest dreams. I ended up doing graphic design, the mechanical design of our first chocolate box (still in use today), making chocolates, doing electrical installations, designing shops, being a staff manager, designing operational systems, etcetera. We basically used our labor and creativity as a substitute for the capital we didn't have. (R. Barnett, personal communication, June 15, 2009)

This example highlights how experiences abroad and exposure to new cultures can stimulate new ideas (Leung & Chiu, 2010; Leung, Maddux, Galinsky, & Chiu, 2008; Maddux, Adam, & Galinsky, 2010; Maddux & Galinsky, 2009; Tadmor, Satterstrom, Jang, & Polzer, 2012). Indeed, Maddux and Galinsky (2009) found that the length of time that individuals had lived abroad predicted their general creative ability. However, despite evidence for the creative advantages of living abroad, other research has found that a significant proportion of individuals who go abroad fail to achieve prosperity in their new cultures (Mendenhall & Oddou, 1985; Wederspahn, 1992). Although some have argued that these failures may be due to lack of adjustment or the psychological comfort experienced while living in a foreign culture (e.g., Bhaskar-Shrinivas, Harrison, Shaffer, & Luk, 2005; Maddux & Galinsky, 2009), the evidence for the relationship between adjustment and performance has been equivocal (Thomas, 1998; Thomas & Lazarova, 2006). Indeed, it is notable that the Maddux and Galinsky (2009) findings were driven as much by the lesser creativity of those in the sample who had not lived abroad as the

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heightened creativity for those who had lived abroad. Thus, it is still unclear what are the critical experiences, beyond simply living in a foreign country, that individuals need to have to enhance subsequent success.

We sought to shed light on these inconsistent findings by examining the question of who is most likely to benefit from living abroad experiences and why. Specifically, we sought to make three significant contributions. Our first goal was to explain which types of psychological approaches to living abroad are most likely to translate into greater professional and creative success. In particular, we suggest that one overlooked factor has to do with patterns of cultural identification that emerge during living abroad experiences, what some researchers refer to as acculturation strategies (e.g., Benet-Martínez, Lee, & Leu, 2006; Berry, 1997; Bourhis, Moise, Perreault, & Senecal, 1997; Ward & Kennedy, 1994).¹ Whereas previous research has focused almost exclusively on the importance of experiences in one's *host culture*, researchers have largely ignored the potential importance of the flip side of this experience—simultaneously maintaining a connection to *one's own cultural heritage* as well (Kohonen, 2008). This omission is somewhat surprising given that one of the major challenges confronting new entrants to a country is to learn how to manage their original cultural identity in the face of values, norms, and behavioral expectations that are often inconsistent with those of their home culture (e.g., LaFromboise, Coleman, & Gerton, 1993; Phinney, 2003; Ward, 2001).

We propose that both home and host country experiences are critical. This hypothesis is grounded in the fact that mere exposure to a new culture is insufficient to bring about creative benefits; rather, it is the simultaneous exposure to and juxtaposition of new and old cultures which appear to be the main catalyst to enhanced creativity (Leung & Chiu, 2010; Leung et al., 2008). This finding indeed suggests that although individuals who have extensively lived abroad will be afforded potential access to a broader array of ideas, knowledge, and concepts (Hong, Wan, No, & Chiu, 2007; Maddux & Galinsky, 2009; Tadmor, Hong, Chiu, & No, 2010), not all such individuals will be equally successful in deriving a positive benefit from such experiences. Instead, we suggest that the benefits of living abroad should be most apparent for those who retain psychological connections to both home and host cultures, not just the host culture. Thus, the first contribution of the current research is to show how acculturation strategies—or the differential pattern of identification with both home and host cultures—can better predict performance differences than only focusing on experiences and connections with one's host culture.

Second, research has yet to investigate how acculturation strategies affect performance beyond standard, domain-general paper-and-pencil creativity tasks. In particular, it is unclear whether such experiences might affect what Simonton (1994) has termed "Big C" types of creativity—real world creativity that can transform groups, organizations, or societies (Rich, 2009; see Maddux, Leung, Chiu, & Galinsky, 2009, for a response)—or whether they may have implications for other important abilities like leadership ability and managerial effectiveness (e.g., Bhawuk & Brislin, 1992; Caligiuri, 2006; Eagly & Chin, 2010). Thus, we also sought to provide the first evidence that acculturation strategies not only impact in-lab domain-general creativity but also produce real-world innovations and general professional achievement.

Finally, it is unknown whether a common mediating mechanism might underlie each of these different types of effects. One overlooked candidate is integrative complexity, a general information *processing* tendency that has been suggested to develop as a result of second-culture exposure (e.g., Benet-Martínez et al., 2006; Tadmor & Tetlock, 2006; Tadmor, Tetlock, & Peng 2009). Indeed, although Benet-Martínez et al. (2006) have established that relative to monocultural individuals who have not lived abroad, bicultural individuals—those who are simultaneously oriented towards both home and host culture—are significantly more cognitively complex in the cultural domain, research has tended to focus on the knowledge shifts or changes in cognitive *content* that follow multicultural experiences as key explanations for subsequent creative products such as Lay's Peking Duck Flavored Potato Chips or Starbucks' caramel macchiato moon cake (e.g., Caligiuri, 2006; Leung & Chiu, 2010; Leung et al., 2008; Toh & DeNisi, 2003). However, changes in cultural content cannot explain how living abroad could lead to better performance on general psychological tasks not dependent on specific culturally relevant knowledge (Maddux & Galinsky, 2009). Thus, we posit that during their time abroad, biculturals will achieve greater integrative complexity and that it is this capacity to consider and combine multiple perspectives, rather than simply access to culture-specific content, which will explain the link between biculturalism and increased creative and professional performance.

In sum, then, the current research examined whether different patterns of identification with home and host cultures can help explain differential levels of creative and professional success among those who have lived abroad, while also examining the common mediating role of integrative complexity.

Patterns of Acculturation: Host and Home Culture Identification

To understand how patterns of dual home–host cultural identification impact creative and professional success, we build off bidimensional models of acculturation (Berry, 1997; LaFromboise et al., 1993; Ryder, Alden, & Paulhus, 2000). Such models explicitly recognize that one of the major challenges confronting new entrants to a country is to learn how to manage their cultural identity as they make sense of the different values, beliefs, and norms that often exist between their home and host cultures (e.g., Chirkov, 2009; LaFromboise et al., 1993; Phinney, 2003; Schwartz, Unger, Zamboanga, & Szapocznik, 2010; Ward, 2001). In particular, as individuals enter a new country, they are faced with a fundamental dilemma of whether and to what degree they should (a) maintain their home cultural identity and (b) adopt the new host cultural identity (e.g., Berry, 1997; Bourhis et al., 1997; Ward & Kennedy, 1994).

These orthogonal dimensions of home and host identification produce four different types of cultural identification patterns: separation, assimilation, marginalization, and integration (Berry, 1997; Bourhis et

¹ Notably, acculturation involves other constructs in addition to identification, including cultural practices, behaviors, and values (e.g., Schwartz et al., 2010). Nonetheless, as a useful shorthand and in order to remain consistent with prior research, we follow Benet-Martínez, Lee, and Leu (2006) and Ward and Kennedy (1994) in referring to the two dimensions of acculturation strategies as *identification* with home and host cultures.

al., 1997). Following, Benet-Martínez et al. (2006), *separation* involves maintaining only identification with one's home culture and rejecting the host culture; *assimilation* involves relinquishing one's cultural heritage and identifying only with the new cultural identity; *marginalization* involves low identification with both the old and new cultures; and finally, *integration* entails simultaneously maintaining identification with one's cultural heritage while also identifying with the new cultural identity. These four outcomes are collectively referred to as acculturation strategies (Berry, 1997) and have been examined in a wide variety of samples, including long-term immigrants to new cultures and "sojourners" whose residence in a new culture is viewed as both fixed and finite (see, e.g., Berry, 1997; Berry, Kim, Minde, & Mok, 1987; Ward & Kennedy, 1994; for a review see Sam & Berry, 2006).²

Although all four strategies refer to individuals who have been exposed to a second culture, only "integration" refers to individuals who identify with both cultures; according to recent theorizing, only such individuals would be considered bicultural (e.g., Benet-Martínez & Haritatos, 2005; Benet-Martínez, Lee, & Leu, 2006; Benet-Martínez, Leu, Lee, & Morris, 2002; Friedman & Liu, 2009; Nguyen & Benet-Martínez, 2007). Indeed, as Nguyen and Benet-Martínez (2007) noted, "biculturalism [is] *one* [emphasis added] of four ways to acculturate" (p. 102). Thus, consistent with contemporary research, we use the terms integration and biculturalism synonymously.³

Research within this bidimensional tradition has typically focused on how acculturation strategies can affect adjustment to new cultures (e.g., Berry, 1997; Berry et al., 1987; LaFromboise et al., 1993; Ryder et al., 2000; Ward, 2001; Ward & Kennedy, 1994). However, less is known about acculturation strategies' actual effects on creative and professional success. One exception is a study by Cheng, Sanchez-Burks, and Lee (2008) that explored the link between creativity and bicultural identity integration (BII), defined as the degree to which *biculturals* perceive their two cultural identities to be largely integrated and compatible (high BII) versus dissociated and difficult to integrate (low BII; e.g., Benet-Martínez & Haritatos, 2005; Benet-Martínez et al., 2002). Cheng et al.'s study found that among Asian Americans, high BII predicted higher levels of creative performance on a culturally specific task. However, the current research goes beyond this work in two important ways. First, Cheng et al. did not assess the relationship between all possible cultural identification patterns and creativity as we do in the current research; rather, BII describes how individuals who are already identified with both cultural identities—that is, biculturals—go about integrating their dual identities. As a result, it is unclear how biculturals compare to other types of acculturation strategies. Second, and most importantly, their participant samples had not all lived abroad, and their findings were limited to tasks that drew on identity-relevant knowledge domains; thus, they hypothesized that BII relates to creativity due to expansion in cultural *knowledge*. This explanation leaves open the question of how to explain greater creativity and success in areas outside the cultural domain (e.g., Maddux & Galinsky, 2009).

Biculturalism and Integratively Complex Cognition: The Importance of Process Versus Content

In the current research, we propose that the effects of home-host identification on general creative and professional outcomes depend less on specific cultural *content* and more on differences in

general cognitive *processing* that can lead to advantages outside of culture-specific domains. As noted above, because the creative advantages of exposure to multiple perspectives come to fruition only when both new and old cultures are considered and compared simultaneously (Leung & Chiu, 2010), it appears there is something crucial about *how* the information is cognitively represented that can offer an explanation for who is most likely to capitalize on the domain-general benefits of having had multicultural experiences. Importantly, because simultaneous identification with two cultures can lead individuals to develop more complex information processing styles than individuals who identify with only a single culture (e.g., Benet-Martínez et al., 2006; Tadmor et al., 2009), we argue that the domain-general capability of "integrative complexity" may provide the link from biculturalism to domain-general performance benefits.

Integrative complexity refers to the capacity and willingness to acknowledge the legitimacy of competing perspectives on the same issue (differentiation) and to forge conceptual links among these perspectives (integration; Suedfeld, Tetlock, & Streufert, 1992). A dimension of information processing, integrative complexity is assessed not by the content of one's thought but rather by the structure or style of one's thinking. The ability to think in integratively complex ways has been shown to affect performance in wide range of domains, including social perception, attitudes, decision quality, and even the peaceful resolution of crises (for reviews see Streufert & Nogami,

² We retain the word "strategy" here because of its wide use in the literature. We do acknowledge that the approaches are not necessarily conscious and deliberate tactics for navigating experiences abroad. In addition, it is worth noting that because historically, the acculturation literature was originally dominated by a belief in a unidimensional model, where acculturating individuals were viewed as necessarily relinquishing their identification with their culture of origin when adopting that of the host society, some researchers have used the terms acculturation, assimilation, and adjustment interchangeably. However, this model has since been discredited and been replaced by bidimensional models of acculturation. These models propose that these concepts are distinct psychological constructs, with acculturation and assimilation referring to cultural identity and adjustment referring to the emotional comfort experienced while living abroad (Nguyen & Benet-Martínez, 2007; Sam & Berry, 2006).

³ Until recently, research has often been inconsistent in terms of offering guidance for who should be considered bicultural (e.g., based on demographic characteristics such as generation status or based on cultural identification levels), and this has created confusion and inaccuracies in the field (Nguyen & Benet-Martínez, 2007). However, over the past decade, research has begun to push for a more unified and strict definition of who should be considered as a true bicultural (e.g., Benet-Martínez & Haritatos, 2005; Benet-Martínez et al., 2006; Benet-Martínez et al., 2002; Friedman & Liu, 2009; Haritatos & Benet-Martínez, 2002; Nguyen & Benet-Martínez, 2007). This research has suggested that mere exposure to other cultures does not automatically produce biculturalism. Rather, it proposes that of Berry's (1997) four acculturation strategies, only individuals who identify with both cultures—those who follow the integration acculturation strategy—could be labeled "bicultural." By equating Berry's concept of integration with that of biculturalism, Benet-Martínez and her colleagues have provided a critical foundation from which researchers could begin to explore and distinguish biculturalism from the other types of acculturation strategies as well as between the different types of biculturals. Notably, Berry's integration strategy should not be confused with Birman's (1994) concept of integration which he defines as a type of bicultural who is behaviorally oriented to both cultures but identified with only the ethnic culture.

1989; Tadmor & Tetlock, 2007). Although early work on integrative complexity, inspired by Kelly's (1955) personal construct theory, treated the concept as a relatively stable trait, later researchers discovered that integrative complexity is sensitive to environmental cues such as stress, value conflict, and accountability pressures (e.g., Tetlock, Peterson, & Lerner, 1996).

More recently, researchers have discovered that two additional determinants of levels of integrative complexity are second-culture exposure and the type of acculturation strategy people adopt (e.g., Benet-Martínez et al., 2006; Crisp & Turner, 2011; Roccas & Brewer, 2002; Tadmor & Tetlock, 2006; Tadmor et al., 2009). In terms of second-culture exposure, Benet-Martínez et al. (2006) have argued that unlike individuals who have not been exposed to a second culture, biculturals' frequent use of cultural frame-switching increases complexity of thought as these individuals develop increasingly multidimensional cultural schemas and engage in more effortful processing of cues. In support of this theoretical argument, Benet-Martínez et al. (2006) found that Chinese-American biculturals' free descriptions of both American and Chinese cultures are more complex than those of Anglo-American monoculturals. Along these lines, Fee, Lu, and Gray (2010) provided causal support for the argument showing that compared to a monocultural control group who did not live abroad, people living abroad developed significantly greater levels of general integrative complexity during a 12-month study period. These findings are also consistent with work on bilingualism which demonstrates that bilinguals' effortful management of two languages and the need to switch among them strengthens their executive control capabilities leading them to display an enhanced ability to deal with dualities not only in the domain of language but also in other areas more generally (Bialystok, Craik, Green, & Gollan, 2009).

Using a more fine-grained comparison, researchers have also begun to compare how acculturation strategies impact integrative complexity levels among individuals who have all had second-culture exposure experiences. Unlike patterns of cultural identification in which individuals endorse only one culture (i.e., assimilation or separation) and consequently bolster the cognitions of that cultural group, bicultural identification requires individuals to take into account and combine the perspectives of both old and new cultures (Crisp & Turner, 2011; Roccas & Brewer, 2002; Tadmor & Tetlock, 2006). The resulting increase in integrative complexity experienced by biculturals but not assimilated or separated individuals has been suggested to result from at least two different mechanisms. First, Tadmor and colleagues (e.g., Tadmor & Tetlock, 2006; Tadmor et al., 2009) suggested it is a response to mixed accountability pressure facing biculturating individuals that requires them to engage in preemptive self-criticism, carefully weighing the merits of the alternative perspectives and forming connections and reasonable trade-offs among the inconsistent cognitions of the two cultural groups. Second, Crisp and Turner (2011) suggested that the increased complexity is due to the automated inhibition of existing stereotypical information in favor of a more generative divergent thought process. However, regardless of the precise reasons for the link between biculturals and integrative complexity, these theories converge in their expectation that biculturals' greater use of complex information processing will transcend the cultural sphere to become a habitual tool for making sense of the world.

Consistent with these predictions, Tadmor, Tetlock, and Peng (2009) found that compared to assimilated and separated individ-

uals, Asian American biculturals expressed more integratively complex thoughts about both cultural-related topics and about non-cultural-related topics. These researchers further provided direct support for the hypothesized causal effects of acculturation strategies on general information processing capabilities by demonstrating that Asian Americans primed with bicultural thoughts showed a preference for a more generalized complex thinking style than did Asian Americans primed with assimilated or separated mindsets (Tadmor et al., 2009, Study 3).⁴

From Integrative Complexity to Creative and Professional Success

In the current research, we propose that biculturals' greater levels of integrative complexity will lead them to have greater success in both creative and professional domains. Specifically, because the act or process of producing something creative has been suggested to involve a number of different mechanisms including the generation of novel ideas, the flexible framing of the same problem in multiple ways, and the recombining of different existing ideas to make novel connections between concepts (e.g., Guilford, 1950; Hargadon & Sutton, 1997; Ward, Smith, & Finke, 1999), it is likely that most if not all of these creative processes depend on people's ability to view things from multiple perspectives and integrate them into a coherent whole (e.g., Charlton & Bakan, 1989; Feist, 1994; Simonton, 1988). Thus, we predicted that relative to either assimilated or separated individuals, biculturals' greater levels of integrative complexity would lead to enhanced general creative abilities both when creativity is measured in the lab and when it is measured in terms of real-world innovations; that is, we hypothesized that the effects of biculturalism on creativity will be mediated by integrative complexity.⁵

In addition, because the process of resolving the tension between home and host cultural identities subsequently produces a more integratively complex approach to the world in general, this might not only produce changes in creativity and real-world innovations but also impact professional success. Specifically, many organizational environments are filled with ambiguity, complexity, uncertainty, and change, and as a result, it is often critical for employees to take into account and combine disparate pieces of information from different organizational domains and to flexibly approach problems from numerous and often contradictory perspectives (Denison, Hooijberg, & Quinn, 1995; Hambrick, 1989; Streufert & Swezey, 1986; Wang & Chan, 1995). Moreover,

⁴ Interestingly, comparing among different kinds of biculturals, Benet-Martínez et al. (2006) found that low BIIs are more culturally complex than high BIIs and attributed this to the greater cultural conflict experienced by low-BII individuals. Notably, however, in the current article we focus on comparing the bicultural group as a whole to other types of acculturating individuals rather than comparing among different types of biculturals.

⁵ In line with past research on multicultural experiences that has highlighted the importance of simultaneous juxtaposition of old and new cultures (e.g., Leung & Chiu, 2010; Tadmor et al., 2009), in the current article we focus on comparing individuals who identify with both home and host cultures (i.e., biculturals) with individuals who identify with either old or new culture but not both (i.e., separated or assimilated individuals). Consequently, we refrain from making specific predictions about marginal individuals who are characterized by low levels of identification with both cultures.

research has shown that integrative complexity has important performance implications for a variety of cognitive and interpersonal tasks that are necessary to achieve professional success, including more effective information search, greater tolerance for ambiguous information, and less susceptibility to information overload (e.g., for a review see, Streufert & Nogami, 1989). Consequently, we predicted that biculturals would achieve higher rates of professional success than assimilated or separated individuals, with this relationship also mediated by integrative complexity.

Overview

We conducted three studies to explore whether patterns of home and host cultural identification and integrative complexity would be key drivers of creative and professional success for individuals who have lived abroad. Study 1 used the novel uses paradigm (Guilford, 1950) to examine the creative abilities of a highly diverse sample of MBA students at a European business school who represented 26 nationalities and had lived abroad in 31 different countries. This study allowed us to examine how acculturation strategies, irrespective of the features of the home and host cultures, predict general creative performance. Study 2 also involved a culturally diverse sample at a U.S. business school and explored whether biculturals' creative advantage extends to larger scale Big C creative endeavors such as innovations at work. Study 3 investigated 100 Israeli professionals working in the United States and tested whether biculturals achieve higher levels of professional success compared to assimilated and separated individuals. We predicted that integrative complexity would mediate the relationship between acculturation strategies and measures of success in each of the three studies.

Study 1: Creative Performance

Study 1 explored creative generation with the novel uses paradigm (Guilford, 1950) that allows the simultaneous assessment of three distinct but interrelated components of creativity: fluency (i.e., number of ideas generated), flexibility (i.e., number of different categories generated), and overall creativity or novelty of the ideas generated. We predicted that relative to assimilated and separated individuals, biculturals would generate greater fluency, flexibility and novelty in their creative output and that integrative complexity would mediate this effect. Notably, we also measured acculturation strategies, creativity, and integrative complexity at three different points in time to solve common method variance problems and to establish the robust relationships between these variables.

Method

Participants and procedure. Seventy-eight MBA students (55 male, 23 female; age: $M = 29.06$ years, $SD = 2.21$) at a large business school in Europe participated in exchange for two coupons for a free coffee. To be eligible for the study, participants were required to have lived abroad in a country that was different from their country of origin ($M = 4.10$ years, $SD = 3.83$). Participants represented 26 different nationalities that had lived abroad in 31 different countries.⁶

All materials were completed in English, which is the exclusive language of instruction at the school, and which all participants

were fluent in. Participants completed a survey assessing their previous international experience, a creativity task, and several written assignments.

Acculturation strategies. Participants were first asked to complete an online survey measuring their international experiences. They were asked to indicate what their nationality was and in what country they had lived abroad. They then moved to items assessing acculturation strategies, which were measured using a three-item version of Ward and Kennedy's (1994) acculturation index (AI).⁷ Specifically, participants were asked to indicate how similar they are to people from their home country and how similar they are to people from their host country in terms of their (a) *identity*, (b) *worldview*, and (c) *values*. Response options were on 5-point unipolar scales, with options ranging from 1 (*not at all*) to 5 (*very much*). The acculturation index, which has both high reliability and strong predictive validity as a measure of acculturation strategies, produces two separate measures: home cultural identification and host cultural identification. The three items about identification with home cultural members were averaged and were used to create the home-cultural identification scale. The three items about identification with host cultural members were averaged and were used to create the host-cultural identification scale. For the present study, internal reliabilities for the home cultural identification ($\alpha = .74$, $M = 3.36$, $SD = 0.75$) and the host cultural identification ($\alpha = .71$, $M = 3.12$, $SD = 0.72$) scales were acceptable. As expected, the scales were orthogonal ($r = .07$, $p = .57$).

Classification and analysis of acculturation strategies were conducted using multiple regression techniques (Tadmor et al., 2009; Ward & Rana-Deuba, 1999). In this approach, the effects of the four acculturation strategies are represented by the cross-product interaction term for home and host cultural identifications. Differences between the four acculturation strategies (i.e., biculturalism, assimilation, separation, and marginalization) are determined using simple slope analysis, calculated at 1 standard deviation above

⁶ Four participants had lived abroad for less than .5 years. Removal of these participants did not change the significant pattern of results. Specifically, acculturation strategy remained a significant predictor of fluency ($\beta = .26$, $p = .04$), flexibility ($\beta = .24$, $p = .05$), and overall creativity ($\beta = .25$, $p = .05$). Moreover, integrative complexity still mediated the link between acculturation and the three creativity measures (Fluency: $z = 2.14$, $p = .032$; Flexibility: $z = 2.80$, $p = .005$; Novelty: $z = 2.66$, $p = .008$). Since these participants identified themselves as having lived abroad, we retained the full sample for all analyses.

⁷ This scale was modeled on work by Berry and colleagues but solves several methodological criticisms. Specifically, although Berry's (1997) original conceptualization of acculturation strategies referred primarily to the endorsement of cultural practices and behaviors, recent multidimensional conceptualizations of acculturation maintain that it also refers to the endorsement of values and identities (Schwartz et al., 2010). In addition, Berry's classic measurement of acculturation which uses four separate scales has been criticized on both conceptual and psychometric grounds (for discussion, see Rudmin & Vali, 2001; Ward & Rana-Deuba, 1999). The Acculturation Index resolves both of these concerns.

and below the means for identification with host and home cultures (Aiken & West, 1991).⁸

Individual difference controls. Participants then filled out a measure assessing individual difference factors so as to control for factors previously shown to be associated with creativity (for reviews, see Feist, 1998, 1999) and with integrative complexity (for a review, see Streufert & Nogami, 1989). By measuring and subsequently controlling for such variables, we sought to demonstrate the predicted effect of biculturalism held independent of these other individual difference variables. We measured the Big Five (Extroversion, Neuroticism, Openness to Experience, Conscientiousness, and Agreeableness; 10 items on a 5-point scale; Gosling, Rentfrow, & Swann, 2003; α s ranged from .71 to .54) as well as years lived abroad, gender, and age.⁹ We also controlled for tolerance for ambiguity (two items on a 5-point scale; Tegano, 1990; $\alpha = .73$) because creativity involves solving problems which have ill-defined elements and unclear solutions, and past research has shown that individuals who are better able to tolerate ambiguity are more creative (e.g., Tegano, 1990; Zenasni, Besancon, & Lubart, 2008).

Creativity task. Two weeks after the online survey, participants took part in a short study on problem solving. They were shown a picture of a brick on a large screen in the room and were given exactly 2 min to write down as many creative uses for a brick as they could think of. At the end of 2 min, participants were told to stop writing and hand the papers in to the experimenter. Participants were then orally debriefed and were given vouchers for coffee.

Three coders blind to the experimental hypothesis independently coded participants' uses for a brick in three ways. First, coders counted the total number of uses participants listed, which is considered a measure of fluency or ease with which participants could generate answers (overall $M = 6.03$, $SD = 2.25$). Second, we had coders calculate the flexibility of responses. Coders began with the 19 categories created by Markman, Lindberg, Kray, and Galinsky (2007). Each of these two coders created their own categories and then, along with a new coder, they finalized a list of 27 categories. In the current coding, a use was only put into a category if at least two of the three coders placed it in that category. Flexibility scores represented the total number of categories used (overall $M = 4.5$, $SD = 1.67$; Cohen's kappa = .80). Third, three coders judged the overall creativity of each participant's uses on a scale from 1 (*not creative at all*) to 5 (*highly creative*). Interjudge reliabilities for creativity ratings were acceptable (intraclass correlation coefficient = .78, overall $M = 2.93$, $SD = 0.70$).

Integrative complexity. Integrative complexity was measured prior to the online study using the traditional method of content-analyzing participants' open-ended responses. Participants responded to six essay questions as part of a preclass assignment (e.g., "Describe a situation taken from school, business, civil, or military life, where you did not meet your personal objectives, and discuss briefly the effect"). For each question, participants were given a strict word limit, ranging from 200 to 500 words. All participants used the full word count, and so, there was no variance on this variable.

The coding entailed an assessment of the extent to which two structural dimensions are present in the text: differentiation and integration. Take the example of abortion, which was used by

Baker-Brown et al. (1992). Evidence for differentiation consists of references to more than one dimension of a problem or more than one perspective on an issue. Low differentiation is reflected by a tendency to focus on only one theme in the analysis and to rely without qualification on simple, one-dimensional rules for interpreting events or making choices (e.g., "Abortion is cold-blooded murder"). In contrast, higher levels of differentiation are reflected by the recognition and acceptance of alternative perspectives or different dimensions on an issue as legitimate and valid (e.g., "Some people view abortion as a civil liberties issue—a woman's right to choose. Others view abortion as the murder of helpless infants"). When differentiated elements are linked conceptually, evidence of integration is inferred (e.g., "Which perspective one takes on abortion, whether it is a civil liberties issue or murder, depends on one's view about when the developing organism becomes a human being").

The assessment of integrative complexity is done using a 7-point scale in which 1 reflects the absence of both differentiation and integration, 3 indicates the presence of differentiation but the absence of integration, 5 reflects the presence of both differentiation and integration, and 7 indicates differentiation as well as the specification of higher order integrative principles. Even numbers (i.e., 2, 4, and 6) are assigned as transitional scores when a response implies the next high level of complexity but does not explicitly meet the scoring criteria for that level (For additional details, see Baker-Brown et al., 1992).

Two trained coders independently assessed the integrative complexity of responses to each of the six open-ended questions. Interjudge agreement was high ($\alpha = .83$) and internal reliabilities across the essays were acceptable ($\alpha = .67$).

Results

Analyses overview. We first conducted multiple regressions to test whether acculturation strategies, measured in terms of the cross-product interaction term for home and host cultural identification, significantly predicted the dependent variables of (a) fluency, (b) flexibility, and (c) novelty, over and above separate

⁸ Although some may argue that indicating high levels of agreement with each identification scale may inherently indicate some level of cognitive differentiation (i.e., looking at an issue from at least two sides), it is important to point out that past research has shown that biculturals—as measured by the AI scale—are not only more likely to differentiate but also more likely to integrate among the differing perspectives, a dimension of integrative complexity that is clearly not captured by the AI scale (Tadmor et al., 2009). Moreover, Tadmor et al. (2009) further demonstrated that biculturals' greater level of integrative complexity was observed in samples where all participants indicated above-median levels of identification with each culture. Participants' different levels of integrative complexity were the result of the relative gap in the strength of identification with each culture. Finally, it is noteworthy that given the structural nature of the integrative complexity coding, neither the differentiation score nor the integration score is affected by the number of perspectives mentioned or by the intensity with which they are held (Baker-Brown et al., 1992).

⁹ Although other individual differences besides the Big Five have been associated with creativity in the past, research has shown that most individual differences can be subsumed within the Big Five framework (Johnson & Ostendorf, 1993). For example, risk-taking, which is positively related to creativity, is subsumed by openness to experience.

levels of identification with each culture and the control variables. We then used hierarchical regressions to explore whether integrative complexity mediated this relationship (Baron & Kenny, 1986). In order to provide stronger support for the model implied in the present research, we also sought to demonstrate that the alternate mediation model in which acculturation strategy mediates the relationship between integrative complexity and creativity is less plausible. Correlations between the study variables are displayed in Table 1.

Creativity. Across our three dependent measures, we found robust support for the predicted relationship between acculturation strategies and creativity (see Table 2). Specifically, acculturation strategy was a significant predictor of the total number of brick uses participants generated ($\beta = .26, p = .04$), the number of different categories used ($\beta = .25, p = .03$), and creativity ratings ($\beta = .25, p = .04$). As expected, simple slope analyses revealed that for individuals strongly identified with their host culture, home culture identification positively predicted fluency ($\beta = .36, p = .03$; see Figure 1, Panel a) and flexibility ($\beta = .41, p = .009$; see Figure 1, Panel b) and showed a marginally significant relationship to novelty ($\beta = .29, p = .09$; see Figure 1, panel c). Conversely, for individuals strongly identified with their home culture, stronger identification with the host culture was associated with greater fluency ($\beta = .35, p = .05$), flexibility ($\beta = .37, p = .02$), and novelty ($\beta = .33, p = .05$). Thus, as predicted, relative to both assimilated and separated individuals, biculturals achieved greater creativity across all three measures.

Interestingly, simple slope analysis also demonstrated nonsignificant trends such that for individuals weakly identified with their host culture, home cultural identification negatively predicted fluency, flexibility, and rated creativity ($\beta = -.14, p = .42$; $\beta = -.06, p = .69$; $\beta = -.20, p = .24$, respectively; see Figure 1). Conversely, for individuals weakly identified with their home culture, the stronger their host cultural identification, the lower their fluency, flexibility, and rated creativity ($\beta = -.15, p = .39$; $\beta = -.10, p = .52$; $\beta = -.15, p = .38$, respectively). In other words, there was a nonsignificant trend for marginals—those low in identification with both home and host cultures—to be more creative relative to both separated and assimilated individuals.

Integrative complexity as a mediator. As expected, acculturation strategy was a significant predictor of integrative complexity ($\beta = .56, p = .0001$). Simple slope analysis revealed that for individuals strongly identified with their host culture, home culture identification showed a significant relationship to integrative complexity ($\beta = .55, p = .0001$). Conversely, for individuals strongly identified with their home culture, host culture identification significantly predicted complexity levels ($\beta = .61, p = .0001$). Thus, biculturals were significantly more integratively complex than either assimilated or separated individuals. Interestingly, marginals also emerged as more integratively complex than either assimilated ($\beta = -.45, p = .002$) or separated individuals ($\beta = -.51, p = .0001$).

We then tested whether integrative complexity mediated the effect of acculturation strategy on fluency. On the first step of the regression, we predicted fluency from home cultural identification, host cultural identification, controls, and acculturation strategy. On the second step, integrative complexity was also included in the analysis. In line with expectations, integrative complexity emerged as a significant predictor of fluency in this analysis ($\beta = .46, p = .002$), but the effect of acculturation strategy became nonsignifi-

cant ($\beta = .01, p = .97$), demonstrating that integrative complexity did in fact mediate the effect between acculturation strategy and creativity. The positive beta weight for integrative complexity suggests that the greater individuals' level of integrative complexity, the greater the number of ideas participants generated. A Sobel test provided further support for the existence of a mediation effect ($z = 2.80, p = .005$; see Figure 2, Panel a). Importantly, analyses for flexibility (Sobel test $z = 2.14, p = .032$) and novelty (Sobel test $z = 2.66, p = .008$) revealed a similar mediating role for integrative complexity (for details, see Figure 2, Panels b and c).¹⁰

Testing the alternative model. We then tested the alternative mediation model with acculturation as a mediator and integrative complexity as the independent measure. As expected, integrative complexity was a significant predictor of fluency ($\beta = .46, p = .0001$), flexibility ($\beta = .35, p = .002$), and creativity ratings ($\beta = .44, p = .0001$) as well as of acculturation strategy ($\beta = .58, p = .0001$). However, once acculturation strategy was included in the analyses, integrative complexity continued to predict creativity (fluency: $\beta = .46, p = .002$; flexibility: $\beta = .31, p = .02$; creativity ratings: $\beta = .43, p = .003$), and acculturation strategy was not significant (fluency: $\beta = .01, p = .97$; flexibility: $\beta = .07, p = .57$; creativity ratings: $\beta = .01, p = .92$). Sobel tests provided further support suggesting that the model with acculturation as a potential mediator did not explain our results (fluency: $z = 0.04, p = .97$; flexibility: $z = .56, p = .58$; novelty: $z = .10, p = .92$).

Thus, overall, the evidence from Study 1 confirmed our predictions that among a sample of individuals who had lived abroad, biculturals would be more creative on a task not related to their previous cultural experiences compared to individuals who identified with only a single culture. The current study is thus the first to demonstrate how the full spectrum of host and home culture identification predict general creative output unrelated to the cultural identities. Even more importantly, we also found that the enhanced creativity of biculturals was mediated by integrative complexity, the first time this effect has been demonstrated. Thus, Study 1 establishes that individuals identified with both their home and host cultures were more integratively complex in their thinking, and this drove their greater creativity.

¹⁰ Years abroad were not a significant predictor of any of the creativity variables. This finding was expected given that all participants had lived abroad and, therefore, they were all exposed to new cultural knowledge. Thus unlike previous work by Maddux and Galinsky (2009), years abroad was not expected to add any unique explanatory power among individuals who have all had extensive living abroad experiences. In addition, adding a control for adaptation did not change the significant pattern of mediation results across the three creativity measures of fluency ($z = 2.69, p = .007$), flexibility ($z = 1.93, p = .05$), and novelty ($z = 2.57, p = .01$) and in itself was not a significant predictor of creativity. Importantly, mediation tests in which none of the control variables were included in the analyses (i.e., when only acculturation and the two main effects of home and host cultural identification were included) produced the same pattern of results. Specifically, acculturation still significantly predicted fluency ($\beta = .26, p = .02$), flexibility ($\beta = .23, p = .04$), and novelty ($\beta = .23, p = .05$) as well as integrative complexity ($\beta = .58, p = .0001$). Sobel tests further demonstrated that integrative complexity significantly mediated the relationship between acculturation and creativity for each of our three measures (fluency: $z = 3.11, p = .002$; flexibility: $z = 2.11, p = .035$; novelty: $z = 2.65, p = .008$).

Table 1
Correlations for Study 1

Measure	Correlations																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1. Home cultural identification	—																
2. Host cultural identification	.07	—															
3. Acculturation Strategy (home–host identification interaction)	.03	-.06	—														
4. Integrative Complexity	.06	-.02	.58**	—													
5. Fluency	.15	.06	.26*	.46**	—												
6. Flexibility	.22	.12	.23*	.34**	.78**	—											
7. Novelty	.09	.07	.22*	.39**	.63**	.51**	—										
8. Gender (1 = female)	-.07	.11	-.13	-.19	-.05	-.01	-.15	—									
9. Age	.11	-.16	-.11	-.09	.02	.02	.17	-.22*	—								
10. Years abroad	-.10	.24*	-.06	-.09	-.06	-.05	.06	-.09	.15	—							
11. Extroversion	.07	.05	.10	.11	.05	-.05	.09	-.01	-.22	.05	—						
12. Agreeableness	.12	-.15	.21	.10	.10	.19	-.03	-.00	.04	.03	-.10	—					
13. Conscientiousness	.07	-.17	.01	.19	.04	-.02	-.03	-.18	.01	-.04	-.15	.17	—				
14. Emotional stability	.03	-.02	.09	.10	-.03	-.11	.09	-.07	.02	.15	-.03	.03	.32**	—			
15. Openness	-.05	-.10	.11	.21	.06	-.10	-.05	.02	-.11	-.05	.26*	-.08	.10	.07	—		
16. Tolerance for ambiguity	.06	-.07	.08	.23*	.21	.30**	.14	-.29**	.09	.07	.11	.15	.21	.22	.29*	—	

* $p < .05$. ** $p < .01$.

Study 2: Innovations

Although Study 1 provided support for the prediction that biculturals’ greater levels of integrative complexity led to greater creative capacity, the study focused on a laboratory-based paper-and-pencil creativity task. Thus, it is still unclear whether the results would generalize to other types of creative outcomes outside the lab. Moreover, as noted above, some researchers have criticized the multicultural experience and creativity research because it focuses only on this type of little c creativity, that is, tasks completed within one sitting in the lab. As a result, there has been a call for more investigations of how multicultural experiences drive Big C creativity, larger scale creativity outside the lab (Rich, 2009). In Study 2, we explore how acculturation strategies affect

real-world innovations, measuring the number of businesses, products, and processes participants had created during their careers. We predicted that consistent with the results from Study 1, biculturals would produce more innovations than assimilated or separated individuals. We further expected that this relationship would again be mediated by integrative complexity.

Method

Participants and procedure. Fifty-four MBA students (37 male, 17 female) at a large business school in the Midwestern United States participated in the study as part of a course requirement. To be eligible for the study, participants were required to have lived abroad in a country that was different from their country

Table 2
Multiple Regressions for Fluency, Flexibility, and Novelty, Study 1

Predictor	(a) Fluency			(b) Flexibility			(c) Novelty		
	B	SE	β	B	SE	β	B	SE	β
Age	0.06	.13	.05	0.00	.09	.01	0.07	.04	.20
Gender (1 = female)	0.28	.63	.06	0.45	.42	.12	-0.06	.19	-.04
Years abroad	-0.04	.07	-.07	-0.02	.05	-.05	0.00	.02	.00
Extroversion	0.02	.18	.01	-0.09	.12	-.08	0.05	.06	.11
Agreeableness	0.02	.32	.01	0.11	.22	.06	-0.08	.10	-.10
Conscientiousness	0.09	.26	.04	-0.03	.17	-.02	-0.02	.08	-.03
Emotional stability	-0.18	.21	-.11	-0.24	.14	-.20	0.03	.07	.05
Openness	-0.04	.29	-.02	-0.32	.20	-.19	-0.08	.09	-.12
Tolerance for ambiguity	0.37	.22	.23	0.51	.15	.42**	0.06	.07	.13
Home cultural identification	0.26	.27	.11	0.29	.18	.17	0.03	.08	.04
Host cultural identification	0.23	.28	.10	0.22	.19	.13	0.06	.09	.09
Acculturation strategy (home–host identification interaction)	0.56	.26	.26*	0.39	.18	.25*	0.17	.08	.25*
R ²	.15			.29			.15		

Note. B = unstandardized coefficient; SE = standard error; β = standardized coefficient.
* $p < .05$. ** $p < .01$.

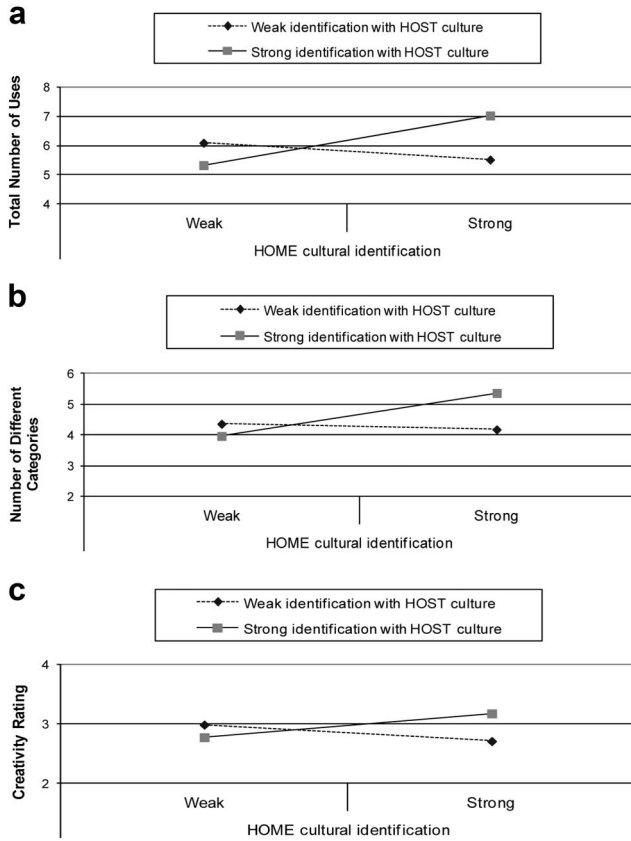


Figure 1. Predicted mean values of (a) fluency: total number of uses, (b) flexibility: number of different categories, and (c) novelty: creativity ratings as a function of home and host cultural identifications, at 1 standard deviation above and below the means, in Study 1.

of origin ($M = 5.20$ years, $SD = 4.86$). Participants represented 18 different nationalities that had lived abroad in 22 different countries. All participants had lived abroad for at least 1 year. Participants completed an online survey assessing their previous international experience, their innovative activities, and several individual difference variables and wrote an essay. These materials appeared as part of a larger survey, thereby disguising the connection between the segments.

Acculturation strategies. Acculturation strategies were measured using the same three-item Ward and Kennedy (1994) acculturation index we used in Study 1. For the present study, internal reliabilities for the home cultural identification ($\alpha = .59$, $M = 3.50$, $SD = 0.71$) and the host cultural identification ($\alpha = .77$, $M = 3.01$, $SD = 0.81$) scales were acceptable, especially in light of the small number of items included. As expected, the scales were orthogonal ($r = .02$, $p = .87$). Differences between the four acculturation strategies were again determined using the same method as Study 1.

Innovations. We measured innovations using the following three questions: (a) How many new businesses (not a business where identical or close product/service substitutes were already in the market) have you started or co-founded as a corporate entrepreneur based on your own original (novel, unique) idea? (b) How many novel new products or services (not a product or service

where identical or close product/service substitutes were already in the market) have you invented that have been offered for sale based on your own original (novel, unique) idea? (c) How many breakthrough process innovations have you created or co-created based on your own original idea that were successfully implemented in your company/organization? Because the internal reliabilities across the three items were acceptable ($\alpha = .73$), they were summed to create a single measure of innovations (overall $M = 1.00$, $SD = 2.05$).

Integrative complexity. To measure integrative complexity, participants were asked to write an essay in response to the question, “Should the U.S. maintain profitable trade relations with countries that deny basic civil liberties to their citizens?” As in Study 1, integrative complexity was coded using the traditional method of content analyzing the open-ended response by two trained coders, blind to the hypotheses. Interrater agreement was high ($\alpha = .93$).

Individual difference controls. Controls included gender, years lived abroad, the Big Five personality variables (Gosling et al., 2003; α s ranged from .66 to .51), and the number of words in the complexity essay. We also controlled for perspective taking ability (three items; Davis, 1980; $\alpha = .62$) because research has shown that it not only provides people with access to viewpoints that provide new information but it also allows people to develop more useful ideas that address other people’s needs (e.g., Galinsky, Maddux, Gilin, & White, 2008; Grant & Berry, 2011). In addition, given that the size of the cultural difference between home and host cultures has been suggested to potentially affect both creativity and integrative complexity (e.g., Leung et al., 2008; Tadmor et al., 2009), we also controlled for how much participants perceived the two cultures to be different on a scale from 1 (*not different at*

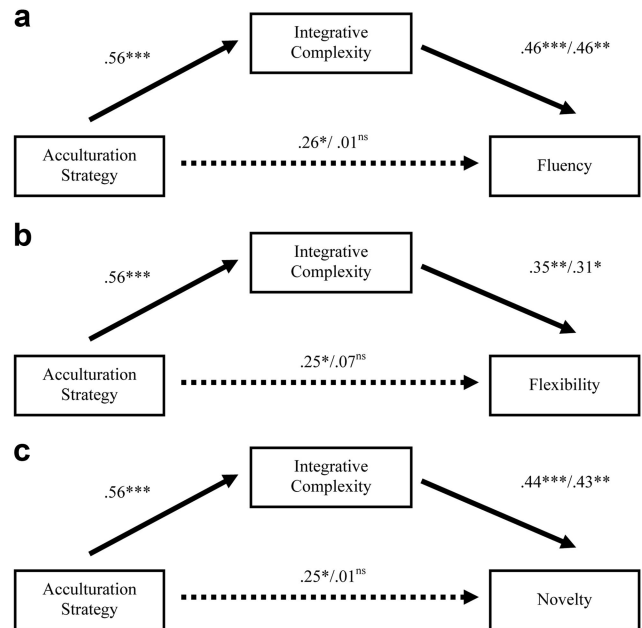


Figure 2. Mediation analyses for (a) fluency: total number of uses, (b) flexibility: number of different categories, and (c) novelty: creativity ratings, in Study 1. Numbers represent standardized regression coefficients. ns = not significant. * $p < .05$. ** $p < .01$. *** $p < .001$.

all) to 5 (*extremely different*). Finally, given that people who are more agentic may be more likely to get their innovations implemented, we also included perceived sense of power as a covariate, measured using a scale from Anderson and Galinsky's (2006) eight-item scale (sample item: I think I had a great deal of power in my last organization; $\alpha = .78$). Correlations between the study variables are displayed in Table 3.

Results

Innovations. As predicted, acculturation strategy was a significant predictor of innovations ($\beta = .34, p = .038$; see Table 4). Simple slope analysis revealed that for individuals strongly identified with their host culture, home culture identification positively though marginally predicted the number of innovations participants had created ($\beta = .41, p = .095$; see Figure 3). Conversely, for individuals strongly identified with their home culture, stronger identification with the host culture was associated with greater innovation ($\beta = .51, p = .02$). Thus in line with expectations, biculturals were marginally more innovative than assimilated individuals and significantly more innovative than separated individuals. Interestingly, simple slope analysis also demonstrated that for individuals weakly identified with their host culture, home cultural identification negatively predicted innovations ($\beta = -.41, p = .009$; see Figure 3). Conversely, for individuals weakly identified with their home culture, the stronger their host cultural identification, the lower their innovative tendencies, though not significantly so ($\beta = -.30, p = .11$). In other words, relative to both separated and assimilated individuals, marginals showed a trend toward greater innovation.

Integrative complexity as a mediator. As expected, acculturation strategy was a significant predictor of integrative complexity ($\beta = .45, p = .008$). Simple slope analysis revealed that for individuals strongly identified with their host culture, home culture identification showed a significant relationship to integrative complexity ($\beta = .64, p = .013$). Conversely, for individuals strongly identified with their home culture, host culture identification predicted complexity levels ($\beta = .41, p = .055$). Thus, consistent with Study 1, biculturals were significantly more integratively complex than either assimilated or separated individuals. Interestingly, marginals also emerged as more integratively complex than assimilated individuals ($\beta = -.49, p = .013$) and marginally more complex than separated individuals ($\beta = -.27, p = .089$).

Acculturation strategies along with home cultural identification, host cultural identification, and the controls were then entered in the first step of the mediational analysis predicting innovations. In the second step, integrative complexity was also included. In line with expectations, when integrative complexity levels were taken into account, acculturation strategy no longer predicted innovations ($\beta = .18, p = .29$), but integrative complexity emerged as a significant predictor of innovations ($\beta = .36, p = .023$). A Sobel test provided additional support for the existence of a mediation effect ($z = 1.82, p = .069$; see Figure 4).¹¹

Testing the alternative model. To rule out the alternative model with acculturation strategy as mediator, we first demonstrated that integrative complexity significantly predicted innovations ($\beta = .43, p = .004$) and acculturation strategy ($\beta = .38, p = .008$). Nonetheless, once acculturation strategy was included in the analyses, integrative complexity continued to predict innovations

($\beta = .36, p = .02$) and, in line with our prediction, acculturation strategy was not significant ($\beta = .18, p = .29$). A Sobel test corroborated the lack of mediation effect ($z = 1.01, p = .31$), providing further evidence that acculturation is not a plausible mediator.

Taken together, the findings from Study 2 conceptually replicate and extend those reported in Study 1 by demonstrating that the relationship between acculturation strategies and creativity is not limited to lab-based creativity tasks but also extends to real world, Big C innovations. Interestingly, the finding that bicultural individuals innovated more than either assimilated or separated individuals dovetails nicely with recent research on the global pharmaceutical industry, which found that breakthrough products were more likely to emerge from *joint* ventures or alliances (Dunlap-Hinkler, Kotabe, & Mudambi, 2010). Those researchers suggested that their result "highlights the benefits associated with exploiting knowledge from foreign centres of excellence" (p. 106). The combination of these different research findings suggests that innovations result from the juxtaposition and synthesis of divergent experiences and perspectives at both the psychological and organizational levels.

Study 3: Promotion Rate and Managerial Reputation

Study 3 was designed to make significant advances over Studies 1 and 2 in three important ways. First, rather than looking at creativity, we sought to provide the first demonstration that biculturalism predicts meaningful career outcomes in a field sample of working professionals. Although past research has hypothesized that living abroad experiences are vital for professional success, empirical research is scant. Moreover, it is clear that not all individuals living abroad achieve equal levels of career success in their new cultures (Mendenhall & Oddou, 1985; Wederspahn, 1992). Thus, we sought to provide direct empirical evidence that acculturation strategies from living abroad can differentially predict professional advancement. Second, we used a multi-item measure of integrative complexity to test whether this information processing capability can indeed be construed as the underlying mechanism responsible for the effects of acculturation on real-world outcomes.

Finally, we wished to demonstrate that our effects of biculturalism predict professional success over and above measures that only assess host country adaptation or adjustment. As noted above,

¹¹ The addition of adaptation as a control (Maddux & Galinsky, 2009) did not change the pattern of mediation results ($z = 1.89, p = .059$) and in itself was not a significant predictor of innovations. We also tested the mediation without controls. As expected, regression analyses revealed that once the controls were excluded, the direct effect of acculturation strategy on innovations remained positive and significant ($\beta = .32, p = .038$). Similarly, acculturation continued to predict integrative complexity ($\beta = .37, p = .018$). Notably, however, as shown in Table 3, the zero-order correlation between integrative complexity and innovations was positive but not significant. Moreover, a Sobel test demonstrated that without the controls, integrative complexity no longer mediated the acculturation-innovations link ($z = 0.51, p = .61$). These findings are not surprising given that innovation is a multifaceted construct and that complexity was measured with only a single item, but they do suggest that mediation analyses must be heeded with caution.

Table 3
Correlations for Study 2

Measure	Correlations															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Home cultural identification	—															
2. Host cultural identification	.02	—														
3. Acculturation strategy (home–host identification interaction)	-.46**	-.08	—													
4. Integrative complexity	-.00	.07	.29*	—												
5. Innovations	-.22	-.08	.36**	.15	—											
6. Gender (1 = male)	-.20	.00	.13	-.11	.10	—										
7. Years abroad	-.05	.21	-.12	-.24	.08	-.09	—									
8. Extroversion	.17	-.09	-.11	.15	.00	-.12	-.05	—								
9. Agreeableness	.15	-.15	-.22	-.13	.00	-.10	.33*	.03	—							
10. Conscientiousness	.23	.02	-.24	-.06	-.15	.12	-.17	-.07	-.12	—						
11. Emotional stability	.19	.09	-.03	-.11	-.24	.24	-.15	-.22	.11	.29*	—					
12. Openness	.11	-.12	.06	-.03	.09	.05	.06	.25	-.07	.25	-.07	—				
13. Perspective taking	.03	-.26	.03	-.38**	.09	.13	.06	-.03	.30*	-.04	.15	.32*	—			
14. Sense of power	-.06	-.14	.05	-.18	.41**	.23	-.18	-.04	-.25	.17	.04	-.01	-.10	—		
15. Perceived cultural difference (home and host cultures)	-.07	-.13	-.30*	-.03	-.15	-.09	-.09	-.07	.29*	-.08	-.07	-.07	.14	-.09	—	
16. Number of words complexity	.05	.10	-.12	.36**	-.26	-.17	-.05	.10	.13	-.02	-.13	-.24	-.24	.43**	.05	—

* $p < .05$. ** $p < .01$.

there is inconsistent support for the idea that those who adjust to foreign cultures show the best performance (Thomas, 1998; Thomas & Lazarova, 2006). We propose that one reason for lack of consistent results may be that adjustment measures conflate assimilated and bicultural individuals on one side and separated and marginal individuals on the other. Because biculturalism and assimilation both involve identification with the host culture, they are both associated with higher adjustment levels (e.g., Berry et al., 1987; Ryder et al., 2000), and thus previous research would not have been able to distinguish between the two. By directly measuring people’s identification with *both cultures* and controlling for psychological adjustment, we can begin to disentangle these concepts and show that it is the underlying

cultural identification patterns and the resulting information processing tendencies that provide better traction in predicting professional success.

For our measures of professional success, we relied on two common indicators: promotion rate and reputation. First, because past research suggests that individuals who perform well are more likely to be promoted (e.g., Heisler & Gemmill, 1978), promotion rate (i.e., rate of managerial advancement) has been used as one critical indicator of professional success (e.g., Arthur, Khapova, & Wilderom, 2005; Gattiker & Larwood, 1988; Tharenou, Latimer, & Conroy, 1994). The advantage of promotion rate as a measure of success lies in the objectivity of its measurement (Arthur et al., 2005). However, it is possible that individuals who achieve a high

Table 4
Multiple Regression for Innovations, Study 2

Predictor	B	SE	β
Gender (1 = male)	0.05	.59	.01
Years abroad	0.02	.06	.05
Extroversion	0.01	.22	.01
Agreeableness	0.41	.28	.24
Conscientiousness	-.02	.25	-.01
Emotional stability	-.52	.23	-.34*
Openness	-.06	.31	-.03
Perspective taking	0.31	.30	.15
Sense of power	1.15	.35	.49**
Perceived cultural difference (home and host cultures)	-.017	.28	-.09
Number of words complexity	-.00	.00	-.06
Home cultural identification	0.05	.32	.02
Host cultural identification	0.23	.29	.11
Acculturation strategy (home–host identification interaction)	0.79	.37	.34*
R^2	.44		

Note. B = unstandardized coefficient; SE = standard error; β = standardized coefficient.
* $p < .05$. ** $p < .01$.

level of hierarchical success may not be perceived to be successful by their peers. Therefore, we used perceived managerial success or reputation as a second indicator of professional success (Arthur et al., 2005; Gattiker & Larwood, 1988).

To test whether acculturation strategy predicts professional success, we used a sample of Israelis working in the United States. We predicted that biculturals, those who simultaneously identified with both their home country of Israel and their host country of the United States, would be promoted at higher rates and would have more positive reputations regarding their managerial performance than assimilated and separated individuals. As in Studies 1 and 2, we further predicted that integrative complexity would mediate these relationships.

Method

Participants and procedure. One hundred Israeli professionals (76 male, 24 female; age: $M = 42.61$ years, $SD = 8.85$) working primarily in the Silicon Valley voluntarily participated in the study. Eighty-one percent of participants worked in the high-tech industry; the remainder of the participants worked in a variety of domains including services, finance, and consulting. Participants were employed by 69 different companies. They had lived an average of 8.92 years in the United States ($SD = 7.96$), worked an average of 15.05 years ($SD = 8.35$) in their profession, and had an average of 5.83 ($SD = 6.52$) years of experience with their current company.

Participant recruitment. To recruit participants, seven Israeli professionals who occupied high-level positions (e.g., CEO) in several large high-tech companies in Silicon Valley were contacted and asked if they would be willing to participate in a study concerning the personal experiences of working in Israeli and American cultures. All agreed to participate. Once interviewed, following Kusic, Kruglanski, Pierro, and Mannetti (2004), each participant was asked to contact other Israelis who fit the study criteria (i.e., Israelis working in the United States) and ask them to participate. The overall response rate was 85%.

Initial surveys and interviews. Initial surveys with participants included a variety of written questionnaires, including demographic information and an acculturation strategy questionnaire. Although questionnaires were offered in both Hebrew and English, the overwhelming majority of participants (98%) opted for Hebrew. The questionnaires were translated into Hebrew by an

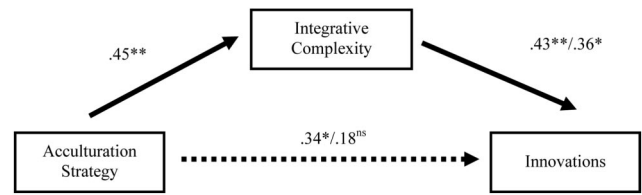


Figure 4. Mediation analyses for innovations in Study 2. Numbers represent standardized regression coefficients. ns = not significant. * $p < .05$. ** $p < .01$.

Israeli–American bilingual and then retranslated into English by another bilingual individual. The few inconsistencies found in the translation were resolved through discussion between the bilinguals.

Acculturation strategies. Acculturation strategies were measured using the full 20-item-version of Ward and Kennedy’s (1994) acculturation index (AI).¹² Participants were asked to consider how similar they were to Israelis and Americans with reference to 20 cognitive and behavioral items (e.g., identification, values, worldview, recreational activities, language, and social customs; for full list of items, see Ward & Rana-Deuba, 1999). Response options were given on 7-point unipolar scales, with higher scores indicating higher levels of identification. For the present study, internal reliabilities for Israeli identification ($\alpha = .91$, $M = 5.26$, $SD = 0.83$) and American identification ($\alpha = .93$, $M = 4.21$, $SD = 0.99$) scales were acceptable. As in Studies 1 and 2, the scales were orthogonal ($r = -.02$, $p = .84$).

To test the convergent validity of Ward and Kennedy’s (1999) Acculturation Index, we included Benet-Martínez et al.’s (2006) two single-item measures of overall identification with American and Israeli cultures. As expected, there were substantial positive correlations between (a) the single-item measure of identification with American culture and AI’s measure of American cultural identification ($r = .57$, $p = .0001$) and (b) the single item of identification with culture of origin and AI’s measure of identification with Israeli culture ($r = .46$, $p = .0001$).

Promotion rate. Promotion rate was calculated in a two-step process. First, promotion was measured as the number of organizational levels participants had been promoted since joining their U.S.-based firms. Specifically, participants were asked to indicate their current job title as well as the job title they had when they first entered the United States. Following Tharenou et al. (1994), level in the managerial hierarchy was coded on a scale from 1 (*nonmanagerial*) to 4 (*top management*) based on participants’ reported job titles. The difference between a person’s current job title and his or her entry job title was defined as his or her promotion level (Tharenou, 2001). As a second step, given that the greater an individual’s tenure in the United States, the greater the probability of promotion, promotion level was then divided by the amount of time the individual had lived in the United States.

Two indicators provided support for the validity of using job titles as measures of hierarchical level. First, our measure of current managerial level based on job title was highly correlated

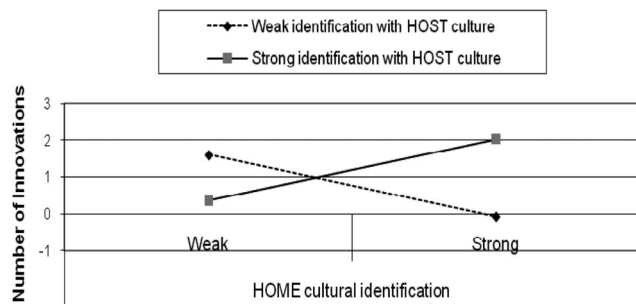


Figure 3. Predicted mean values of innovations as a function of home and host cultural identifications, at 1 standard deviation above and below the means, in Study 2.

¹² The only item we omitted from the full 21-item measure was related to religious beliefs. This item was removed in advance.

with participants' self-reported current managerial level, which was measured on a 4-point scale ($r = .82, p = .0001$).¹³ Second, promotion rate was also significantly correlated with participants' self-ratings of managerial performance (single item; $r = .38, p = .0001$).

Managerial-performance reputation. The interviewer returned to 11 key individuals from the sample and asked them to rate the managerial reputation of the study peers with whom they had a close working relationship. These individuals were selected based on the number of interviewees to whom they referred the author (i.e., six or more). In addition, the interviewer identified five additional raters who were Israelis working in Silicon Valley and who, although they did not participate in the study, were in supervisory positions that enabled them to rate participants from the sample. The fact that the 16 selected raters belonged to the same cultural and industrial groups as the ratees makes them particularly well suited to accurately assess the performance of their compatriots due to their greater understanding of both the cultural and the business environments (Arthur et al., 2005; Gregersen, Black, & Hite, 1995).

Each of the 16 raters was asked to provide his or her perception of the managerial performance of people with whom they were professionally familiar from the list of participant names. Specifically, raters were asked "How would you rate [ratee's name] job performance from a managerial perspective? (e.g., How well does s/he lead tasks? How well does s/he make decisions?)" This single-item was rated on a scale ranging from 1 (*very poor*) to 10 (*very good*).

Overall, 82 participants were rated on managerial performance, with each participant rated by one rater. Eight participants were dropped from the reputation analysis because they did not have direct work-related contact with their rater. All remaining individuals had close work-related relations with their raters, and these remaining individuals were identified by the raters as business partners, coworkers, supervisors, or supervisees of the individuals they rated. As such, raters were in a good position to judge the managerial performance of their peers. Nonetheless, to further reduce the risk that raters would base their evaluations of managerial performance on only superficial information, raters were asked to indicate how well they knew the person they rated on a scale from 1 (*not at all familiar*) to 10 (*extremely familiar*). This was included as an additional control in the reputation analyses. As expected, mean familiarity was high ($M = 7.14, SD = 2.37$). Raters were asked to provide a single-item assessment of managerial reputation.

In line with past research, promotion rate and reputation were positively correlated ($r = .40, p = .0001$). The moderate level of correlation further suggests that the two measures are related yet distinct constructs (Arthur et al., 2005; Gattiker & Larwood, 1988). In addition, reputation was also significantly correlated with participants' self-ratings of managerial performance ($r = .29, p = .01$), providing some support for the validity of the measure.

Integrative complexity. We utilized existing data to measure integrative complexity. Tadmor et al. (2009) conducted semistructured interviews involving 12 questions that cut across cultural and work domains with the same sample population of Israeli professionals used here (for sample questions, see Tadmor et al., 2009). All interviews were conducted by the first author. Two trained coders, blind to the hypotheses, independently assessed the inte-

grative complexity of responses to each of the 12 open-ended questions. To form our measure of integrative complexity, we collapsed across all 12 questions that participants answered. Internal reliabilities for complexity items were acceptable ($\alpha = .89$), with high levels of interjudge agreement ($\alpha = .92$). We used these existing codings to test our mediation hypothesis.

Individual difference controls. We controlled for a variety of factors previously shown to be related to acculturation, integrative complexity, and managerial performance-related success (e.g., Berry, 1997; Caligiuri, 2000; Mendenhall, Kuhlmann, Stahl, & Osland, 2002): adjustment and local language ability (e.g., Shaffer, Harrison, Gregersen, Black, & Ferzandi, 2006), the Big Five personality characteristics and self-monitoring (e.g., Barrick & Mount, 1991; Caligiuri, 2000; Seibert & Kraimer, 2001; Shaffer et al., 2006), gender and organizational size (e.g., Berry, 1997; Thomas, 1998), and political orientation and number of words in complexity essays (e.g., Jost, Glaser, Kruglanski, & Sulloway, 2003; Suedfeld et al., 1992).

Cultural adjustment (as distinct from acculturation strategies) was measured with Ward and Kennedy's (1999) 20-item Socio-cultural Adaptation Scale (SCAS). Participants were asked to rate on a scale from 1 (*no difficulty*) to 5 (*extreme difficulty*) the amount of difficulty they experience in various everyday social situations encountered in America (e.g., "following rules and regulations"). Items were reverse coded. For the present study, internal reliability was high ($\alpha = .91$). The Big Five personality characteristics were measured using Benet-Martínez and John's (1998) 44-item scale (internal reliabilities ranging from .72 to .84). Self-monitoring was assessed using the revised version of the Self-Monitoring Scale (Snyder & Gangestad, 1986; $\alpha = .72$). English-language ability was measured by averaging two self-report items gauging participants' ability to read, write, and speak English on a scale of 1 (*very little knowledge*) to 7 (*perfectly fluent*). Company size was coded as a dummy variable: 1 for large companies and 0 for small, start-up type firms. Political orientation was assessed using a single-item scale asking participants to rate their political orientation on a scale ranging from 1 (*extreme left*) to 5 (*extreme right*). Finally, information regarding participants' gender, number of years in the United States, type of immigrant (sojourner vs. long term), years of job experience, years with current company, and number of words in complexity essays were also obtained. Participants' education level (44% with either bachelor degrees or below) was not significantly correlated with either promotion rate or reputation ($r = -.05, p = .60; r = .15, p = .22$, respectively) and did not affect the results. Similarly, the type of industry participants worked in (high-tech = 1; other = 0) was not significantly correlated with either promotion rate or reputation ($r = .09, p = .39; r = -.05, p = .67$, respectively) and did not affect the

¹³ The use of job title to determine hierarchical level was preferred over self-reports for two reasons. First, self-reports were less accurate. For example, a director and a CEO in the same company both indicated that they held the highest managerial position, yet during the interview, the CEO confirmed this was not the case. Second, unlike self-reported managerial levels, job titles are determined externally, thereby reducing the risk of common method bias (e.g., Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

significant pattern of results. Therefore, they were not included in the analyses reported.

Results

Analyses overview. We used multiple regressions and mediation analyses to test the hypothesis that acculturation strategy predicts promotion rate and reputation and that these relationships are mediated by integrative complexity. We also tested the reverse mediation model, which explores whether acculturation mediates the relationship between integrative complexity and performance. To ensure comparability, all multiple regression analyses controlled for the same personality, organizational, and demographic variables described above. Correlations among the variables are displayed in Table 5.¹⁴

Professional success. As predicted, the interaction between Israeli- and American-culture identification—acculturation strategy—was a significant predictor of promotion rate ($\beta = .36, p = .001$) and reputation ($\beta = .36, p = .005$; see Table 6). In line with expectations, simple slope analysis revealed that for individuals strongly identified with American culture, Israeli culture identification positively predicted promotion rate ($\beta = .28, p = .018$; see Figure 5, Panel a) and reputation ($\beta = .26, p = .051$; see Figure 5, Panel b). Conversely, for individuals strongly identified with Israeli culture, the stronger their identification with American culture, the higher their rate of promotion ($\beta = .46, p = .001$) and the more positive their managerial-performance reputations ($\beta = .47, p = .001$).¹⁵ Thus, relative to both assimilated and separated individuals, biculturals achieved higher rates of promotion and reputation.¹⁶

Interestingly, simple slope analysis also demonstrated that for individuals weakly identified with American culture, Israeli cultural identification negatively predicted promotion rate and reputation ($\beta = -.37, p = .01$; $\beta = -.48, p = .003$, respectively; see Figure 5). Conversely, for individuals weakly identified with Israeli culture, the stronger their identification with American culture, the lower their promotion rate and reputation, though this was not significant ($\beta = -.19, p = .15$; $\beta = -.24, p = .12$, respectively). In other words, marginal individuals were also more successful than were separated individuals, with a similar nonsignificant trend relative to assimilated individuals.

Psychological adjustment. Notably, although adjustment level was significantly correlated with both promotion rate and reputation ($r = .22, p = .026$; $r = .33, p = .005$, respectively), multiple regressions that excluded Israeli identification, American identification, and acculturation strategy from the analysis revealed that adjustment was only marginally associated with promotion rate ($\beta = .21, p = .09$) and was not significantly associated with reputation ($\beta = .19, p = .20$). When acculturation strategies were included in the analyses, adjustment did not reach significance as a predictor in either of the regressions. However, in line with past research (e.g., Berry et al., 1987), we found that identification with the host culture was a significant predictor of adjustment levels ($\beta = .31, p = .007$). The positive beta weight suggests that individuals who more strongly identified with American culture (meaning they were either assimilated or bicultural) had higher adjustment than did individuals less identified with American culture (i.e., more separated or marginal). Yet, biculturals achieved greater levels of professional success than did assimilated

individuals, and marginals achieved greater success than did separated individuals. These findings suggest that the full spectrum of dual-culture identification patterns—in particular the ability of our framework to distinguish between biculturals and assimilated individuals—serves as a stronger predictor of professional success than does host country adjustment.

Integrative complexity as mediator. As reported in Tadmor et al. (2009), Israeli–American biculturals (and marginals) were more integratively complex than either assimilated or separated individuals in both the cultural and the work domains.

To test whether integrative complexity served as a mediator, acculturation strategy along with Israeli cultural identification, American cultural identification, and the controls (including adjustment) were entered in the first step of the analysis. In the second step, integrative complexity was also included in the analysis. In line with expectations, when integrative complexity levels were taken into account, acculturation strategy no longer predicted promotion rate ($\beta = .13, p = .29$), but integrative complexity emerged as a significant predictor of promotion rate ($\beta = .49, p = .0001$). A Sobel test provided further support for the existence of a mediation effect ($z = 3.09, p = .002$; see Figure 6, panel a).

In a similar vein, we submitted professional reputation to a hierarchical regression with acculturation strategy, Israeli cultural identification, American cultural identification, and the controls entered in the first step of the analysis. In the second step, integrative complexity was also included in the analysis. As expected, integrative complexity positively predicted reputation ($\beta = .49, p = .003$), and rendered acculturation strategy no longer significant ($\beta = .12, p = .38$; see Figure 6, panel b). Results from the Sobel test further corroborate the mediational effect ($z = 2.64$,

¹⁴ Despite the large number of covariates included, multicollinearity assumptions were not violated, as indicated by acceptable correlations between covariates (ranging from $-.44$ to $.51$) and tolerance values well above $.01$ (Tabachnick & Fidell, 2001).

¹⁵ The addition of promotion rate as a covariate in the analysis of managerial reputation did not alter the relationships found.

¹⁶ Because of the specific sample used in Study 3 (Israeli working in Silicon Valley), we wanted to demonstrate that the relationship between acculturation and managerial success was generalizable to more diverse samples and work locations. Therefore, we conducted an investigation of 82 MBA students (51 male) at a large business school in the Midwestern United States who had all lived abroad in a country that was different from their country of origin ($M = 5.48$ years, $SD = 5.04$). Participants represented 22 different nationalities that had lived abroad in 28 different countries, and all had worked outside Silicon Valley. They were asked to fill out the same acculturation strategies measure used in Studies 1 and 2, indicate their job title in their previous organization, and fill out several of the individual difference and demographic measures that were used as controls in Study 3, including years lived abroad and the Big Five personality dimensions. Replicating Study 3, a multiple regression that included the controls as well as separate levels of identification with each culture found that acculturation strategy was a significant predictor of managerial level ($\beta = .28, p = .023$). As expected, simple slope analysis revealed that biculturals obtained higher managerial levels than did either assimilated ($\beta = .42, p = .015$) or separated individuals ($\beta = .44, p = .005$). Importantly, adding a control for adaptation (Maddux & Galinsky, 2009) did not change the significant pattern of results, with acculturation strategy continuing to predict managerial level ($\beta = .27, p = .021$).

Table 5
Correlations for Study 3

Measure	Correlations																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1. Israeli cultural identification	—																							
2. American cultural identification	-.02	—																						
3. Acculturation strategy (Israeli-American identification interaction)	.18	.03	—																					
4. Integrative complexity	.10	.25*	.48**	—																				
5. Promotion rate	.01	.17	.35**	.45**	—																			
6. Managerial performance reputation	.03	.18	.36**	.51**	.40**	—																		
7. Type of immigrant (1 = sojourner)	.12	-.40**	.04	.04	-.13	-.15	—																	
8. Years U.S.	-.21*	.54**	-.12	.06	.03	.10	-.44**	—																
9. Company size (1 = large)	.09	-.23*	.03	.00	-.19	.05	.31**	-.21*	—															
10. Gender (1 = male)	-.01	-.07	.22*	.26**	.17	-.08	.32**	-.00	.05	—														
11. Years of job experience	.08	.24*	-.08	.11	.05	-.01	-.02	.49**	.12	.24*	—													
12. Years with current company	.09	.14	.03	.18	.11	.23*	.04	.32**	.20*	.24*	.51**	—												
13. Political orientation	.03	.17	.16	.09	-.12	.03	-.13	.29**	.01	.04	.23*	.11	—											
14. Sociocultural adaptation	-.12	.51**	.17	.21*	.22*	.33**	-.14	.36**	-.08	.03	.20*	.17	.06	—										
15. English ability	-.19	.33**	.10	.29**	.13	.24*	-.16	.20*	-.12	-.03	-.07	-.18	.10	.42**	—									
16. Extroversion	.17	.07	.01	.13	.12	.19	.07	-.03	-.14	.02	-.02	.02	.13	.03	.18	—								
17. Agreeableness	-.02	.11	.10	-.06	.12	.11	-.13	.11	-.14	-.12	.10	-.05	.09	.15	.04	.14	—							
18. Conscientiousness	.10	.15	.07	.10	.04	.16	.01	.15	-.01	-.18	.22*	.23*	.04	.20*	.14	.24*	.14	—						
19. Neuroticism	.05	.01	-.24*	-.22*	-.11	-.18	-.16	-.01	-.08	-.26*	.01	-.04	-.12	-.13	-.16	-.12	-.30**	-.12	—					
20. Openness	-.07	.24*	.18	.25*	.11	.20	-.02	.17	-.16	.38**	.15	.15	.09	.27**	.12	.27**	.19	.06	-.21*	—				
21. Self monitoring	.07	.13	.08	.23*	.08	.19	.15	-.18	-.07	.20*	-.22*	-.13	-.06	.14	.22*	.46**	.03	-.01	.00	.27**	—			
22. Number of words complexity	.10	.15	-.02	.50**	.09	.21	-.07	.13	.10	.15	.28**	.23*	-.01	.09	.19	.29**	-.06	.20*	-.09	.19	.23*	—		
23. Familiarity with ratee	.02	-.06	.14	-.13	-.15	-.01	.08	.08	.05	-.07	.12	.17	-.01	-.02	.06	-.14	.30**	.10	-.03	-.01	-.14	-.16	—	

* $p < .05$. ** $p < .01$.

Table 6
Multiple Regressions for Promotion Rate and Managerial Performance Reputation, Study 3

Predictor	(a) Promotion rate			(b) Managerial performance reputation		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Type of immigrant (1 = sojourner)	-.04	.03	-.17	-.55	.63	-.12
Years U.S.	-.00	.00	-.15	.01	.05	.02
Company size (1 = large)	-.04	.03	-.17	.25	.54	.06
Gender (1 = male)	.05	.04	.18	-1.71	.78	-.33*
Years of job experience	.00	.00	.09	-.01	.04	-.05
Years with current company	.00	.00	.14	.12	.05	.35*
Political orientation	-.05	.02	-.24*	-.31	.38	-.10
Sociocultural adaptation	.03	.03	.12	.53	.59	.13
English ability	.01	.02	.04	.44	.44	.14
Extroversion	.03	.02	.19	.15	.40	.05
Agreeableness	.02	.03	.07	.03	.52	.01
Conscientiousness	-.02	.03	-.06	-.22	.53	-.05
Neuroticism	-.00	.02	-.02	-.40	.41	-.12
Openness	-.03	.03	-.15	.37	.48	.10
Self monitoring	-.02	.03	-.06	.79	.67	.17
Number of words complexity	.00	.00	.01	.00	.00	.07
Familiarity with ratee	—	—	—	-.10	.12	-.11
Israeli cultural identification	-.01	.01	-.07	-.05	.26	-.02
American cultural identification	.01	.02	.11	-.20	.33	-.09
Acculturation strategy (Israeli–American identification interaction)	.04	.01	.36**	.72	.25	.36*
<i>R</i> ²	.31			.41		

Note. *B* = unstandardized coefficient; *SE* = standard error; β = standardized coefficient. Dashes signify that “familiarity with the ratee” was not included in the promotion rate analysis as a control but was included as a control in the managerial performance reputation analysis.
* *p* < .05. ** *p* < .01.

p = .008). Notably, level of adjustment did not significantly affect any of these relationships.¹⁷

Testing the alternative model. To test the alternative mediation model, we first found that integrative complexity was a significant predictor of promotion rate ($\beta = .57, p = .0001$), reputation ($\beta = .56, p = .0001$), and acculturation strategy ($\beta = .60, p = .0001$). However, once acculturation strategy was included in the analysis, integrative complexity continued to positively predict professional success (promotion rate: $\beta = .49, p = .0001$; reputation: $\beta = .49, p = .003$), and acculturation strategy was not significant (promotion rate: $\beta = .13, p = .29$; reputation: $\beta = .12, p = .38$). Sobel tests provided further support that acculturation is a less plausible mediator both for promotion rate ($z = 1.05, p = .29$) and for reputation ($z = .88, p = .38$).

Meta and Auxiliary Analyses

Across the three studies, our results held with the inclusion of a wide variety of control variables aimed to alleviate potential alternative explanations. Given that the ratio between the number of controls and number of participants raises a concern related to the reliability of the statistical analyses, we also conducted analyses that included *only* acculturation and the two main effects of home and host cultural identification. Across all studies, we found that acculturation continued to significantly predict the dependent variables of creativity, innovations, and professional success as well as the mediating variable of integrative complexity. Further, with the exception of results for innovations, Sobel tests provided evidence for the existence of a mediation effect without any control variables.

In line with past research (e.g., Ku, Wang, & Galinsky, 2010; Lammers, Galinsky, Gordijn, & Otten, 2008), we conducted a meta-analysis across the three studies to demonstrate that the interaction effect of acculturation was robust and consistent across studies. Using a modified version of the method described in Hedges and Olkin (1985), we first established the homogeneity of the three partial correlations (i.e., effect sizes) of acculturation for each step of the Baron-Kenny procedure. As expected, the *ps* obtained from the chi-square statistics for the homogeneity tests were *p* = .80 (Study 1), *p* = .57 (Study 2), and *p* = .69 (Study 3), demonstrating that the effect sizes were consistent across the three studies and that the meta-analysis was justified. As a next step, we pooled the results of the three studies and found that acculturation significantly predicted performance ($r = .315, p = .0001$) and integrative complexity ($r = .521, p = .0001$) but was no longer a significant predictor of performance once integrative complexity was taken into account ($r = .087, p = .249$). These analyses were based on the pooled data of *N* = 232. A retrospective power

¹⁷ Mediation tests in which none of the control variables were included in the analyses (i.e., when only acculturation and the two main effects of home and host cultural identification were included) produced the same pattern of results. As expected, acculturation strategy significantly predicted promotion rate ($\beta = .35, p = .0001$), reputation ($\beta = .36, p = .002$), and integrative complexity ($\beta = .47, p = .0001$). Moreover, Sobel tests revealed that integrative complexity continued to mediate the relationship between acculturation and professional success even with the exclusion of all controls (promotion rate: $z = 2.74, p = .006$; reputation: $z = 2.95, p = .003$).

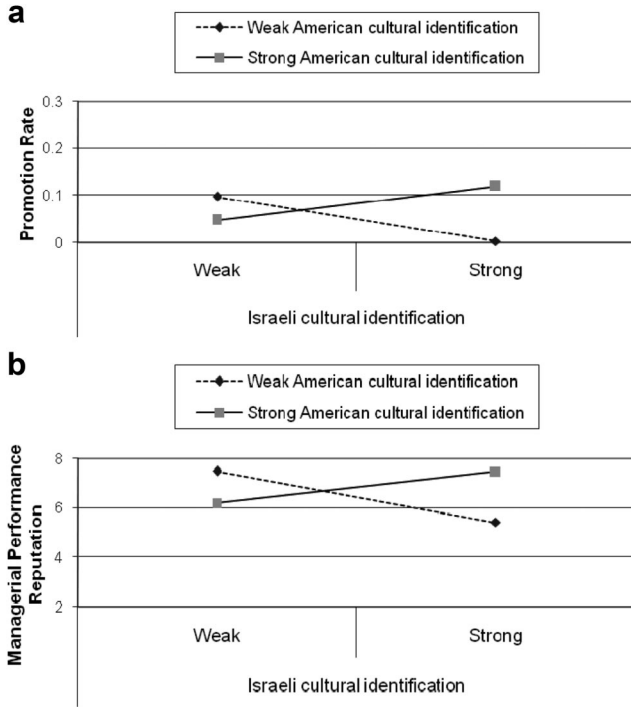


Figure 5. Predicted mean values of (a) promotion rate and (b) managerial performance reputation as a function of identification with Israeli and American cultures, at 1 standard deviation above and below the means, in Study 3.

analysis for this *N* had a very high power. It was $>.99$ for each of the first two Baron-Kenny steps. In the last step of the Baron-Kenny procedure, where the null hypothesis is accepted (i.e., acculturation no longer predicts the dependent variables once the mediator is taken into account), the retrospective probability of the correct decision (not rejecting the null) was 0.85. All these power values are above the 0.80 threshold recommended by Cohen (1988), thereby confirming that statistical power was not an issue across our analyses.

General Discussion

Using both laboratory and field methodologies, involving measures of general creativity, real-world innovations, and professional success, and examining diverse samples of MBA students and working professionals, we established that a particular approach to living abroad—identifying both with one’s home and host country—is related to creative and professional success. Across these studies, we found that biculturalism—the dual identification with both home and host cultures—was associated with enhanced creativity measured in terms of fluency, flexibility, and novelty on a creative uses task, greater levels of innovation at work, and higher levels of promotions and more positive professional reputations. We found these relationships regardless of whether the sample was composed of one specific home–host country combination (Israel–U.S., Study 3) or whether the sample was composed of individuals with a diverse set of home and host country experiences (Studies 1 and 2).

Importantly, this research also illuminates the underlying psychological mechanism—integrative complexity—driving all of these unique but related effects. Across each study, biculturals’ increased creative abilities, innovative capacity, and greater professional success were all fully mediated by greater levels of integrative complexity. These results are the first to demonstrate integrative complexity as the underlying cognitive mechanism that help explain why some individuals succeed more than others while living abroad. Thus, bicultural identification appears to be a crucial link to real-world, consequential outcomes through its relationship to basic cognitive processes. The finding that integrative complexity predicts both creative and professional success may help explain why past research has found a positive relationship between these two outcomes (e.g., Gong, Huang, & Fahr, 2009): The correlation between creativity and performance may be driven by the fact that integrative complexity independently predicts both.

Multicultural Experiences and Performance: Moving Beyond Mere Exposure

The current findings make a novel contribution to recent research on multicultural experience in several ways. In particular, multicultural research to date has been based on the assumption that exposure to new cultures provides an opportunity to acquire new cultural knowledge which in turn will lead to greater creativity; consequently, this research has focused on comparing individuals who have had multicultural experiences with those who have not (e.g., Leung & Chiu, 2010; Leung et al., 2008; Maddux & Galinsky, 2009). However, it does not address the fact that not all individuals who have lived abroad for an extensive period of time succeed at the same rate (e.g., Wederspahn, 1992). Indeed, we have seen that for this group, number of years abroad is no longer a significant predictor of performance because all such individuals have likely been similarly exposed to new knowledge.

In contrast to this past research, the current research exclusively focuses on the population of individuals who have lived abroad and demonstrates how patterns of home and host cultural identification influence creative and professional success. This is an important issue because, in line with past findings (Berry, 1997;

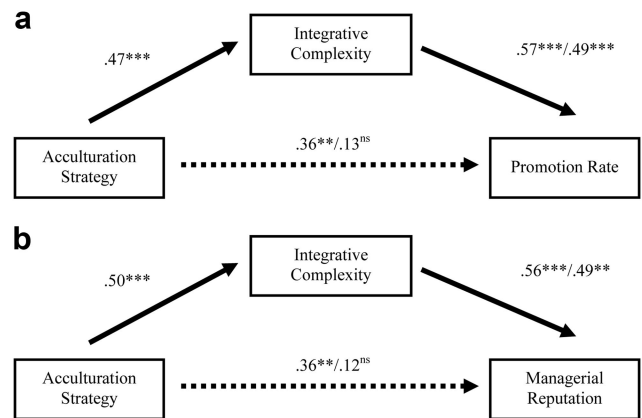


Figure 6. Mediation analyses for (a) promotion rate and (b) managerial performance reputation, in Study 3. Numbers represent standardized regression coefficients. ns = not significant. ** $p < .01$. *** $p < .001$.

Chao, Chen, Roisman, & Hong, 2007; No et al., 2008; Tadmor et al., 2009), we have shown that not all individuals exposed to a second culture will identify with their dual perspectives, and this will potentially lead them to derive very different benefits from their time abroad. The current studies show that acculturation strategies help to better establish under what circumstances the benefits of multicultural experience will be most realized. In addition, unlike the majority of past research on multicultural experience which has focused mainly on the knowledge shifts or changes in cognitive *content* that occur as a result of exposure to new cultures, the current research suggests that changes in more general cognitive *processes* may be important as well. The finding that biculturals' greater levels of integrative complexity explain the link from acculturation strategies to both domain-general creative and professional performance underscores the idea that mere exposure to a second culture and its knowledge is insufficient to bring about the cognitive benefits associated with multiculturalism. Rather, it is the simultaneous juxtaposition and synthesis of two cultural perspectives and the resulting cognitive transformation that appears to be particularly critical (see also Leung & Chui, 2010; Tadmor, Hong, Chao, Wiruchnipawan, & Wang, in press).

Integrating across the full range of research, it appears that living abroad provides the opportunity for individuals to enhance creativity and integrative complexity, but taking a bicultural approach while abroad may be the key to producing lasting cognitive changes and psychological benefits. Thus, it seems that although living abroad matters, it is how one approaches that experience which adds critical explanatory value.

The Curious Case of Marginals—Why They Achieve Greater Integrative Complexity, Innovation, and Professional Success Than Do Assimilated and Separated Individuals but Not as Much as Biculturals

Because the current article focused on comparing individuals who identify with two cultures with those who identify with only one culture, we refrained from making specific predictions involving marginals, those who do not identify with either their home or host country. Nonetheless, follow-up analyses revealed that this acculturation strategy of disengaging from both home and host cultures was also significantly related to promotion rate and innovations, though to a lesser extent than biculturalism. In all studies, marginals also achieved relatively higher levels of integrative complexity than either assimilated or separated individuals. These findings coincide with recent research that has demonstrated that marginals are also more interculturally effective than are assimilated or separated individuals (Lee, 2010) and call into question typical views of marginalization as the worst acculturation strategy (e.g., Berry et al., 1987).

Indeed, research has begun to question the existence and validity of the classic category of marginalization as anomic individuals who reject both cultures and consequently suffer from alienation, stress, and low self-esteem (Rudmin, 2003; Schwartz et al., 2010). In contrast, it appears that many marginals may be "individualists"—individuals who pick and choose what they deem to be appropriate from each culture rather than allowing society to dictate ascribed expectations (e.g., Barrette, Bourhis, Personnaz, & Personnaz, 2004; Bourhis et al., 1997; Tadmor et al., 2009). This process of selectively choosing elements from each culture has

been suggested to also lead to greater levels of integrative complexity (Tadmor et al., 2009). Consequently, it is not surprising that although marginal individuals show relatively low levels of identification with both cultures compared to biculturals, they also achieve performance advantages as we found in promotion rate and in innovations.

The acculturation complexity model helps account for these results (Tadmor & Tetlock, 2006). By definition, those considered assimilated and separated show a clear preference for one culture over the other. According to the model, this pattern of relative subordination of one culture to the other leads to the bolstering of the cognition of one culture and thus to lower complexity (also see Tetlock et al., 1996; Roccas & Brewer, 2002). In contrast, biculturals as well as (individualistic) marginals identify more *equally* with both cultures. As a result, these latter two groups will need to resolve the inconsistencies that exist between the two cultures in a more complex way, consequently becoming more creative and professionally successful.

The above helps explain why marginals would be expected to achieve greater cognitive and behavioral benefits than would assimilated and separated individuals. But why would marginals not be as successful as biculturals? We posit that a second factor must be taken into account: the *strength* with which the two cultural identities are equally endorsed. Although both biculturals and marginals more equally endorse both cultural identities, biculturals also have higher levels of identification with each culture (Berry, 1997). As such, according to the value pluralism model (Tetlock et al., 1996), biculturals are likely to experience the inconsistencies between the two cultures in a more powerful way than would marginals, leading to the expectation that biculturals would turn to increasingly complex strategies, consequently becoming more successful.

Across the three studies, empirical evidence provided support for this hypothesis. Because simple slope regressions do not allow us to compare biculturals to marginals, we subjected the home- and host-identification scales to median splits and used analyses of variance to compare biculturals' levels of integrative complexity with those of marginals. As expected, biculturals in Study 1, Study 2, and Study 3 ($M = 2.67, SD = 0.46$; $M = 3.07, SD = 1.24$; $M = 2.90, SD = 0.59$; respectively) were significantly more complex than were marginals ($M = 2.39, SD = 0.49, p = .047$; $M = 2.1, SD = 0.98, p = .026$; $M = 2.54, SD = 0.55, p = .016$). With the exception of innovations ($p = .97$), biculturals also tended to achieve higher levels of creative and professional success than did marginals (Study 1: fluency, $p = .05$; flexibility, $p = .008$; novelty, $p = .17$. Study 3: promotion rate, $p = .06$; reputation, $p = .05$). Taken together, we observe a progression of acculturation strategies on the integrative complexity and performance continuums with biculturals ranking highest, then marginals, and finally assimilated and separated individuals ranking lowest. These findings further suggest that future research may benefit from continuing to uncover the similarities and differences between biculturals and marginals.

Acculturation and the Adjustment-Performance Paradox

The present research also extends our understanding of acculturation research. Unlike previous research that has focused mainly

on the effect of acculturation strategies on psychological adjustment (e.g., Sam & Berry, 2006), the current work is the first to demonstrate the potentially equally important role acculturation strategies may play in predicting creative and professional success over and above the effects of adjustment. Moreover, this work is also the first to show that biculturals who have lived in a second country show general creative advantages that are not constrained by domain specificity. Thus, unlike Cheng et al.'s (2008) work, we are the first to compare the full spectrum of acculturation strategies among individuals who have all lived abroad and test its impact on performance in non-culturally specific tasks. We show that when all individuals have lived abroad and had extensive exposure to new and old cultural knowledge, biculturals outperform single identifiers and that it is biculturals' more complex general information processing capabilities that capture the domain-general creative benefits of living abroad.

Our results also help shed light on what has been termed the "adjustment-performance paradox"—the finding that the highest performing overseas employees may also be those who experience the most severe culture shock (Thomas, 1998). Specifically, replicating results found in previous acculturation research (e.g., Berry et al., 1987), analyses in Study 3 revealed that bicultural and assimilated individuals had higher levels of adjustment than did (individualistic) marginal and separated individuals. Yet, biculturals still achieved greater success than did assimilated individuals, and marginals achieved greater promotion rates than did separated individuals. Expanding previous research (e.g., Benet-Martínez et al., 2006; Tadmor & Tetlock, 2006; Tadmor et al., 2009), we demonstrated that the critical factor driving these effects was biculturals' and marginals' greater capacity for complex thinking.

Overall, it appears that long-term professional and creative success may depend more on cognitive than emotional processes. Thus, one potential reason for the mixed results that led to the adjustment-performance paradox may be that adjustment serves as only a crude proxy for host-country identification, leaving the other half of the coin—identification with home culture—unaccounted for. The current research overcomes this limitation by looking at both sides of the living abroad coin, namely, how identification with both home and host culture predicts both information processing strategies and creative and professional success irrespective of people's emotional reactions.

Implications for Diversity

Our findings also have implications for research on organizational diversity, which has suggested that culturally heterogeneous groups often outperform culturally homogenous groups (e.g., McLeod, Lobel, & Cox, 1996). Yet, empirical evidence at the group level has been inconsistent (Jackson, Joshi, & Erhardt, 2003; van Knippenberg & Schippers, 2007; Williams & O'Reilly, 1998). We believe our results can help shed light on the mixed pattern of results in two ways.

First, diversity researchers tend to rely on simplistic demographic markers such as race or ethnicity as proxies for the informational diversity thought to underlie cultural diversity (Priem, Lyon, & Dess, 1999; van Knippenberg & Schippers, 2007). Our results underscore the importance of replacing reliance on such categorical measures of surface-level diversity with the direct measurement of people's underlying cultural identifications.

Indeed, we have shown that two members of the same cultural group can differ dramatically in terms of their perspectives and their underlying complexity, depending on their levels of home and host identification.

Second, some researchers have suggested that the benefits of racial diversity are most likely to come to fruition in an atmosphere that accepts and values diversity (Ely & Thomas, 2001). Such a multicultural policy has been shown to produce more harmonious relationships among minority and majority members (e.g., Gaertner, Rust, Dovidio, Bachman, & Anastasio, 1994; Hornsey & Hogg, 2000) as well as greater work engagement among minorities (Plaut, Thomas, & Goren, 2009). Our results suggest that an additional reason why a multicultural climate is likely to be so beneficial is that it may allow acculturating individuals the freedom to adopt a bicultural strategy and, consequently, develop the requisite integrative complexity needed to become more creative and successful. If a group adopts an assimilation mindset—believing that minority members should be absorbed into mainstream culture—minority members' ability to adopt a bicultural identity will be greatly constrained (cf. Bourhis et al., 1997). As a result, such organizations will be less likely to reap the benefits associated with diversity (Peeters & Oerlemans, 2009; Tadmor et al., 2010; Van Der Zee, Atsma, & Brodbeck, 2004).

Limitations and Future Directions

It is important to acknowledge that our cross-sectional designs do not demonstrate the exact causal relationship between biculturalism and integrative complexity. Nonetheless, several lines of evidence provide guarded support for the hypothesized direction of causality. First, mediation analyses found that our proposed model, depicting acculturation as the predictor and integrative complexity as the mediator, is more plausible than the alternative model with integrative complexity as the predictor and acculturation as the mediator. Second, past experimental and longitudinal studies provide some support for the causal path that biculturalism leads to greater integrative complexity. For example, Tadmor et al. (2009) found that Asian American participants primed to think in a bicultural fashion displayed a preference for a more complex cognitive style than did participants primed to be assimilated or separated. These findings dovetail nicely with Benet-Martínez et al.'s (2006) results as well as with recent longitudinal work by Fee et al. (2010) demonstrating that relative to monocultural individuals who stayed at home, bicultural individuals became significantly more integratively complex over a 12-month study period. Yet it is certainly possible that the direction of causality is reciprocal: Complex individuals may also be more likely to become bicultural as well as more creative and successful. Similarly, more successful individuals may be more likely to adopt a bicultural strategy. In addition, although we controlled for a wide variety of variables, other variables such as self-efficacy and self-esteem should also be taken into account. Only through additional research, including much needed longitudinal investigations, can we definitively resolve these issues.

It should also be noted that not all of our measures were perfect instantiations of our underlying conceptual variables. For example, the self-rated measure of innovations used in Study 2 could represent positive self-views, and the reputation measure used in Study 3 was based on only a single-item single-person rating. It is

further noteworthy that some of the short item scales used in this research obtained moderate levels of reliability. Although this is expected given that short-item scales emphasize content validity considerations over internal consistency and as such often “provide an example of how validity can exceed reliability” (Gosling et al., 2003, p. 516), the low reliabilities must be acknowledged as a limitation. Study 2 also included only a single-item measure complexity, although this concern was obviated by the multi-item measure of complexity in Studies 1 and 3. An additional concern has to do with the fact that although the method for assembling participants for Study 3 was similar to methods previously used in the acculturation literature (e.g., Kosic et al., 2004), the nonrandom nature of the sample is inherently biased. It is, therefore, heartening that across the three studies, we found the same pattern of results regardless of whether we used self-report, other-report or objective measurements, regardless of whether we used multi-item or short-item scales, and regardless of the specific method of participant recruitment.

Although the findings in this article provide strong support for the importance of acculturation strategies and integrative complexity as predictors of creative and professional success, future research will benefit from testing the effects of acculturation on creative and professional success in other nonprofessional and less educated populations as well as on displaced populations who were forced rather than selected to immigrate. Importantly, the current research does move beyond the undergraduate student population.

Future research could also benefit from exploring the negative sides of biculturalism and integrative complexity. Indeed, evidence suggests that the process of becoming bicultural can be a highly stressful experience (e.g., Gil, Vega, & Dimas, 1994) and that a high level of integrative complexity may become a liability if it causes individuals to get bogged down in insignificant details (e.g., Tetlock & Boettger 1989). Yet, integratively complex individuals may be able to avoid these potential pitfalls, if they cultivate a meta-cognitive capacity to switch between more complex and simpler ways of reasoning, depending on what is more appropriate for a given situation (Streufert & Swezey, 1986).

Finally, integrative complexity is not, in all likelihood, the only basic cognitive outcome resulting from biculturalism, nor is it likely to be the only mediator of the acculturation-performance link. Indeed, recent research has suggested that bicultural individuals may also benefit from having larger and more diverse social networks (e.g., Chua, 2011), speaking more languages (e.g., Benet-Martínez et al., 2006), being more vigilant in the processing of situational cues (Chao, Chen, Roisman, & Hong, 2007; Fu, Chiu, Morris, & Young, 2007; Hong, Morris, Chiu, & Benet-Martínez, 2000; No, Hong, Liao, Lee, Wood, & Chao, 2008), and acting and being perceived by others as ideal cultural bridges (e.g., Benet-Martínez, 2012; Bell & Harrison, 1996; Lee, 2010; Tadmor et al., 2010; Thomas, Brannen, & Garcia, 2010). All of these advantages may contribute to their achievements, and it behooves future researchers to investigate these as well.

Conclusions

Both researchers and practitioners alike have come to recognize the potential value of multicultural exposure for enhancing personal and professional success (e.g., Caligiuri, 2006; Leung et al.,

2008; Maddux et al., 2009; Tadmor & Tetlock, 2006). In a recent statement, former Secretary of State of the United States Colin Powell has said, “It is important for American students to learn other languages, experience foreign cultures, and develop a broad understanding of global issues. . . . International education prepares our citizens to live, work, and compete in the global economy” (U.S. Department of State, 2001). The current research suggests that although having exposure to foreign countries (for example, by living abroad) is better than having no exposure at all, not all programs and all experiences will facilitate greater success in the global marketplace to the same extent. How people approach those experiences appears to be a critical element in determining creative and professional success. The ability to simultaneously identify with both one’s host and one’s home cultures and the resulting capacity for complex thinking may be a key to translating foreign experiences abroad into a tangible toolbox that bolsters one’s creative ability and professional skill set to the highest level.

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