

Conceptualizing Psychological Processes in Response to Globalization:  
Components, Antecedents, and Consequences of Global Orientations

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## Abstract

The influences of globalization have permeated various aspects of life in contemporary society, from technical innovations, economic development, and lifestyles, to communication patterns. The present research proposed a construct termed *global orientation* to denote individual differences in the psychological processes of acculturating to the globalizing world. It encompasses *multicultural acquisition* as a proactive response and *ethnic protection* as a defensive response to globalization. Ten studies examined the applicability of global orientations among majority and minority groups, including immigrants and sojourners, in multicultural and relatively monocultural contexts, and across Eastern and Western cultures. Multicultural acquisition is positively correlated with both independent and interdependent self-construals, bilingual proficiency and usage, and dual cultural identifications. Multicultural acquisition is promotion-focused, while ethnic protection is prevention-focused and related to acculturative stress. Global orientations affect individuating and modest behavior over and above multicultural ideology, predict overlap with outgroups over and above political orientation, and predict psychological adaptation, sociocultural competence, tolerance, and attitudes toward ethnocultural groups over and above acculturation expectations/strategies. Global orientations also predict English and Chinese oral presentation performance in multilevel analyses and the frequency and pleasantness of intercultural contact in cross-lagged panel models. We discuss how the psychological study of global orientations contributes to theory and research on acculturation, cultural identity, and intergroup relations.

*Keywords:* global orientations, globalization, multiculturalism, acculturation, cultural identity

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With the advent of globalization, societies and cultures have become increasingly connected through communication, transportation, and trade. Globalization is a process of promoting world-wide integration and interdependence across national borders, exerting economic, political, sociological, technological, and environmental influences (e.g., Arnett, 2002; Berger & Huntington, 2002; Chiu, Gries, Torelli, & Cheng, 2011; Gelfand, Lyons, & Lun, 2011; Kashima, 2007). The growth of information technology, the speed of geographic mobility, and the expansion of international corporations have exposed many people to two or more cultures and facilitated intercultural contact. Inevitably, globalization and multiculturalism not only shape economic, political, and cultural activities and resources at the societal level (e.g., Berger & Huntington, 2002), but also affect people's feelings, thoughts, and behaviors at the individual level. Theories on the psychology of globalization and studies of its psychological impact on individual functioning, therefore, have become an imperative research agenda. The present research takes an individual difference approach to examining psychological responses to globalization in the process of multicultural exposure and contact, as well as their antecedents and consequences in diverse cultural and intergroup contexts.

The influences of globalization on individuals, groups, and societies are complex, dynamic, and multifaceted (Torelli, Chiu, Tam, Au, & Keh, 2011; Yang et al., 2011). Increasing exposure to foreign countries, enhanced information technologies, and accelerating communications and interactions shorten perceptual and perhaps actual distance between nations. A "global village" seems to have emerged, arising from diffusion of cultural values, beliefs, and practices (Appadurai, 1990; McLuhan & Powers, 1989). This process encourages uniformity and reduces diversity, as the global culture is characterized by

consumerism, individualism, competition, and efficiency (Fu & Chiu, 2007; Kashima, 2007). It is also affected by social dominance, as economically advanced countries exert political power and impose Western values on underdeveloped regions. However, laypeople from Eastern and Western cultures can differentiate globalization from modernization, Westernization, and Americanization (Yang et al., 2011). Modernization is a transitional process of developing from a traditional to modern society, with changes in social structures and adoption of new technologies. Westernization refers to adopting Western culture in various domains, such as industry, technology, politics, value, and lifestyle, while Americanization focuses on the impact of American culture on other cultures.

Other than the spread of Western culture through multinational corporations and the popularization of consumerism through advertisements and mass media, cultural homogeneity is evident in the increase of interconnectedness among cultures worldwide and the growth of individualism in many collectivistic cultures such as Japan (Hamamura, 2012; Heine, 2012). These phenomena co-occur with transnationalism, that is, activities (especially economic) which break the geographical border; nevertheless, multinational corporations still adapt their products and services to let global and local cultural elements coexist, as in glocalization (e.g., Roudometof, 2005).

On the other hand, international exposure and interactions facilitate the recognition of cultural differences, and multicultural knowledge and resources should enhance the appreciation of cultural distinctiveness. From the perspective of Universal Darwinism (Dawkins, 1983), just as variation, inheritance and selection are basic processes of human evolution, variability of cultural traits is essential to cultural evolution, so that adaptive features can be selected and transmitted (Kashima, 2007). In this sense, diversity and transmission are adaptive structures and processes of cultural change.

At the individual level, people react to globalization in idiosyncratic ways. Arnett (2002)

raised the questions of how to measure exposure to globalization and effects of globalization on individual functioning. Adopting a social cognitive approach, Chiu and colleagues (Chiu et al., 2011; Chiu & Cheng, 2007) initiated a research program to investigate exclusionary and integrative reactions to global culture. Integrative reactions are described as goal-oriented responses geared toward problem solving, whereas exclusionary reactions are described as emotional reactions to fear of cultural contamination/erosion. For instance, they found that simultaneous exposure to images and symbols from two cultures increased ingroup attributions of culture-typical characteristics and perceptions of dissimilarities and incompatibility between two cultures, but this bicultural exposure effect could be attenuated by thoughtful elaboration about cultural complexities to overcome the fear of cultural contamination (Chiu, Mallorie, Keth, & Law, 2009; Torelli et al., 2011). Thus, exclusionary reactions are spontaneous and reflexive, but integrative reactions are deliberate and effortful.

Other researchers have examined different psychosocial effects of the globalization process, such as the cognitive processes evoked by foreign environments and symbols (Alter & Kwan, 2009), cultural associations with consumption symbols (Aaker, Benet-Martínez, & Garolera, 2001), lay perceptions of global culture and societal change (Kashima et al., 2011; Yang et al., 2011), attitudes toward foreign-born and domestic instructors in global education (de Oliveira, Braun, Carlson, & de Oliveira, 2009), coping with increased uncertainty related to social change (Pinquart & Sibereisen, 2008), and discourse and global identity (Fung, 2008). The present research attempts to adopt an individual difference approach to the study of globalization influence, and identify psychological outcomes and behavioral manifestations in response to globalization among various acculturating groups and in different cultural contexts.

### **Immigration-Based vs. Globalization-Based Acculturation**

Globalization can be understood as a form of acculturation to foreign, non-local cultures

(Chen, Benet-Martínez, & Bond, 2008). In this process, people come into contact with individuals, groups, and practices from other cultures and are acculturated to values, beliefs, and behaviors of other cultures (Gibson, 2001; Schwartz, Unger, Zamboanga, & Szapocznik, 2010; Sussman, 2010). Previous studies on acculturation have primarily sampled immigrants and sojourners, especially in Western countries where these groups relocate (e.g., for a review, see Schwartz et al., 2010; Zane & Mak, 2003). This type of immigration-based acculturation focuses on the overarching issues of maintaining one's ethnic culture and learning the host culture, as well as implications for psychological adjustment and sociocultural adaptation. Based on this bi-dimensional conceptualization, Berry and colleagues (e.g., Berry, 1980; Berry, Kim, Power, Young, & Bujaki, 1989; Berry, Poortinga, Segall, & Dasen, 1992) developed a taxonomy to depict four acculturation strategies, viz., integration, assimilation, separation, and marginalization. These strategies categorize acculturating individuals' differential attitudes toward ethnic and host cultures and capture their various degrees of participation in the two cultures. By and large, the integration strategy (positive views toward both cultures) predicts better adjustment outcomes and lower acculturative stress as compared with other strategies (e.g., Berry, Bourhis, & Kalin, 1999; Rivera-Sinclair, 1997; Yamada & Singelis, 1999).

Ward and colleagues (Searle & Ward, 1990; Ward, Bochner, & Furnham, 2001) further distinguished psychological adaptation as the affective aspects of adjustment manifested in well-being and self-esteem, and sociocultural adaptation as the behavioral aspects of adjustment required for effective functioning in the new society. Sojourners, such as international students, experience similar life changes and acculturative stressors while settling in a foreign country, and also display acculturation trajectories over time (e.g., Rasmi, Safdar, & Lewis, 2009; Smith & Khawaja, 2011). Thus, as summarized by Ward and colleagues (2001), the investigation of the psychological acculturation process taps into

affective, behavioral, and cognitive responses to acculturation.

The acculturating process of modifying or adopting beliefs and behaviors occurs not only among immigrants and sojourners as a result of moving to another country permanently or temporarily, but also to majority group members who reside in their home society and yet encounter other cultural influences as a result of globalization, i.e., globalization-based acculturation (Chen et al., 2008). Theorizing about how globalization should affect psychological functioning, Arnett (2002) focused on identity issues, discussing four particular patterns of identity formation and identity change during globalization. First, many people develop a bicultural or hybrid identity that interfaces between their local culture and global culture. Second, young people in non-Western societies may experience identity confusion. Third, some people choose to form self-selected cultures with others sharing the same identity and detaching themselves from global culture and its values. Fourth, adolescents may extend their process of identity exploration and postpone their transition into adult roles. The emphasis on identity issues has inspired subsequent empirical research.

Adopting the framework of Bicultural Identity Integration (BII; Benet-Martínez & Haritatos, 2005; Benet-Martínez, Leu, Lee, & Morris, 2002), Chen and colleagues (2008) assessed the identity patterns of immigrants and sojourners experiencing immigration-based acculturation and majority group members experiencing globalization-based acculturation. BII denotes the extent to which acculturating individuals perceive their two cultural identities as compatible and integrated vs. oppositional and difficult to integrate. In immigration-based acculturation, individuals migrate to or study/work in another culture, and acquire the necessary components of language, customs, and values of their new cultural environment. Managing one's identification with host and ethnic cultures is required for survival and functioning in the receiving society (Chen, Benet-Martínez, Wu, Lam, & Bond, 2013). In globalization-based acculturation, on the other hand, individuals interface with other cultures

in their home environment, and develop a bicultural identity from both direct and mediated intercultural exchange. They may voluntarily incorporate selective elements from other cultures into their self-identity, integrating a local identity rooted in their heritage culture with a global identity belonging to the international culture. For non-Western acculturating groups, an individual's local identity may be embedded in indigenous traditions and norms, whereas a global identity may be influenced in large measure by Western values, beliefs, and practices.

Conceiving of globalization as a process that requires a form of acculturation suggests implications for psychological well-being. It has been found that in the process of acculturation, psychological adjustment arises from the interplay of individual differences in bicultural *identity* (e.g., BII, dual cultural identification) and bicultural *competencies* (e.g., bilingual proficiency) among individuals exposed to and/or influenced by two cultures in a variety of acculturating contexts (Chen et al., 2008; Chen et al., 2013). Therefore, subjective perceptions of one's dual cultural identities as integrated and compatible are an important antecedent of beneficial psychological outcomes. A recent meta-analysis conducted by Nguyen and Benet-Martinez (2013) has confirmed the positive linkage between biculturalism and acculturation outcomes in psychological and sociocultural adjustment.

### **Global Orientation and Its Components**

In today's globalizing world, the dynamics and complexities of multicultural exposure have provided affordances beyond bicultural identities. As Benet-Martínez (2012) pointed out, acculturation theory and research should investigate the possibility of being oriented to an *emergent third culture*, which may have more applicability and important implications for later-generation individuals and those who identify with a *global international culture*. People may identify with several elements of different cultures, essentially forming a relationship to a cultural hybrid. Among bicultural persons, this fusion can be derived from but different from their original and second cultures, considered as a third culture relative to



their dual cultures. More broadly, with the diminishing time and space constraints on contact between countries and increasing economic, cultural, and political interactions across the globe, the world is forming an integrated whole. Individuals who identify with this global international culture may develop a global identity relative to their local identity.

We thereby propose a theoretical construct termed *Global Orientation* to capture individual differences in the process of globalization-based acculturation. It denotes individual-level psychological processes in response to globalization, comprising affective, behavioral, and cognitive responses of acculturating individuals. These individuals may be exposed to the influences of globalization as majority or minority groups in their society, residing in their own culture or relocated to another culture, and situated in monocultural or multicultural contexts. Global orientations involve a proactive component that focuses on the acquisition of new cultures, such as learning and using languages other than one's mother tongue, obtaining cultural knowledge and multicultural experiences, learning the customs, traditions, and norms of other cultures, appreciating cultural diversity, recognizing cultural differences, and making social contact with cultural others. But as in acculturation, globalization often goes hand in hand with retention of one's local culture. Global orientations thus also contain a defensive component of affirming one's heritage culture in the face of outside influences, such as sticking to one's cultural norms and practices regardless of the cultural context, holding fixed beliefs about cultural groups, believing in the superiority of one's own culture, and feeling uneasy about cultural interactions.

Drawing on the regulatory focus theory that captures goal-directed orientations to the social environment (Higgins, 1996, 1998), we postulate that the proactive response is regulated by *promotion* orientation, utilizing *approach* strategies to attain goals and maximize gains from intercultural contact, whereas the defensive response is regulated by *prevention* orientation, using *avoidance* strategies to cope with diversity and minimize losses. Global

orientations are hypothesized to be associated with an array of psychological variables in attitudinal, linguistic, cultural, dispositional, cognitive, identity, and strategic domains. In the following section, we explicate the relationships of proactive and defensive responses to globalization with a few key constructs in these domains.

### **Correlates and Predictors of Global Orientations**

Conceptually, global orientations are related to multicultural ideology, bilingual competence, bicultural orientations (individualistic and collectivistic), openness to experience, holistic thinking, BII, and political orientation (liberal vs. conservative). Below, we describe the expected relationships and conceptual distinctions between these constructs and global orientations.

**Multicultural ideology.** Globalization brings about multiculturalism and cultural diversity (Crisp & Meleady, 2012; Kashima, 2007). Multiculturalism may describe the existence of different ethnic, cultural, racial, linguistic, religious and economic groups in a society. It also represents attitudes or policies to promote the equal status of diverse groups and respect the advocacy of ethnic cultures. As multicultural ideology recognizes, appreciates, and accepts the maintenance and development of cultural diversity in one's community (Berry & Kalin, 1995), we expect a positive correlation with the proactive component of global orientations, and conversely, a negative correlation with the defensive component. But while multiculturalism refers to social ideologies or policies to promote cultural diversity in one's community and society, global orientations are specifically focused on the experience of globalization. We thus seek to capture individuals' subjective experience of being exposed to the influences of other cultures and interacting with members of other cultures in the process of globalization.

**Language proficiency and usage.** The globalized communication infrastructure necessitates language competency. As LaFromboise, Coleman, and Gerton (1993) put it,

language ability may be a major building block of bicultural competence. The growth of cross-cultural exchange and transnational circulation of thoughts and ideas promote people's use of two or more languages (Chen & Bond, 2010). In the world population today, bilingual or multilingual speakers outnumber monolingual speakers (Tucker, 1999). Specifically, English has become a *lingua franca*, a shared language of communication between people whose first languages are different. People adopting the proactive approach to globalization may attempt to develop bilingual proficiency and seek opportunities to use their second language, whereas a defensive approach to globalization should not be positively related to second language proficiency and usage.

**Cultural orientations.** One of the driving forces behind globalization is the transmission of cultural values (Arnett, 2002; Berger, 2002). Integrating local economics into the global market may lead to the adoption of elements of foreign cultures and yet this may occur in tandem with the preservation of traditional values (Fu & Chiu, 2007). One manifestation of globalization in the cultural domain is that the increase in interactions between mainstream cultures facilitates their integration and potentially homogenization (e.g., Hopper, 2007; Wise, 2008). Cross-border communication enables people to understand and learn from other cultures. For example, not only the expansion of Western culture to other regions but also the spread of Eastern culture to the West affect people's lifestyles and their values. Cross-cultural psychology distinguishes individualistic vs. collectivistic cultures (Hofstede, 1980; Triandis, 1995) and independent vs. interdependent self-construals (Markus & Kitayama, 1991). Learning new cultures is likely to facilitate the adoption of individualistic and collectivistic cultural values. People with a proactive approach may endorse both cultural orientations, so that the proactive component of global orientations may be positively related to both independent and interdependent self-construals.

**Personality traits.** Among the personality factors, openness to experience is expected to

be a positive predictor of the proactive approach to globalization. Openness to experience encompasses imagination, creativity, knowledge, and intellect; people who are high on this trait prefer variety in life and pursue intellectual curiosity (Goldberg, 1993; McCrae & John, 1992). As a result, their political and social attitudes tend to be liberal and tolerant of cultural diversity; on the contrary, those who are closed to experience tend to possess conventional views, endorse ethnocentrism, and hold prejudice against culturally different groups (McCrae, 1996; Sibley & Duckitt, 2000).

**Thinking style.** The cognitive structure characterized by a positive global mindset is complex and inclusionary. Perceiving the world as a global culture may derive from holistic thinking (Nisbett, 2003; Nisbett, Peng, Choi, & Norenzayan, 2001), with an orientation to the whole and attention to the relations among the parts, as well as between the parts and the whole. It focuses on relationships and contexts rather than objects and attributes. Holistic thinking emphasizes interconnectedness, and thus could be related to perceiving different peoples and cultures of the world as part of an emerging global village. As people's interactions are less constrained by regional boundaries than they used to be, culture-separating gaps have been shrinking under globalization. Holistic thinkers may be likely to embrace this inclination to bridge the distance between cultures by actively seeking opportunities to approach other cultures. As a predictor, this associative cognition may underpin the proactive approach to globalization, facilitating people to view the world from multiple perspectives, see the connections and interdependence of local and global cultures, and incorporate them into meaningful coherence.

**Bicultural identity integration.** Given the conceptual relevance of BII reviewed above, BII should also be a positive predictor of the proactive component of global orientations, along with openness to experience and holistic thinking, and a negative predictor of the defensive component.

**Political orientation.** Since global orientations have implications for intergroup relations, it may be related to political orientation, which denotes an integrated set of ideologies and beliefs explaining and influencing political attitudes and behavior (e.g., Jost, 2006). Political orientation is often classified as liberal, representing left-wing attitudes, or conservative, representing right-wing attitudes, especially in the American context. These differences primarily focus on opposing views about inequality and social change versus tradition. Conservatism emphasizes tradition, order, and stability, is correlated with authoritarianism (e.g., Altemeyer, 1996), and is also related to hostility and prejudice toward ethnic minorities (e.g., Sidanius, Pratto, & Bobo, 1996). The defensive component of global orientations reflects resistance to social change and negative attitudes toward outgroups, and is expected to be positively correlated with conservatism. On the other hand, liberalism is characterized by valuing equality, tolerance, and social reform, and is expected to be positively correlated with the proactive component of global orientations, as they share open-minded, accepting attitudes toward change and other groups. Despite the similarities, liberalism and conservatism mainly function as ideologies to affect attitudes and behaviors in the political domain, whereas global orientations consist of feelings, thoughts, and behaviors under the influence of globalization in the cultural domain. The correlations between political orientation and global orientations are expected to be significant but not strong.

### **Implications and Consequences of Global Orientations**

Global orientations not only affect individual functioning, but also have implications for intergroup phenomena. We suggest that global orientations will predict outcomes in well-being, behavioral, cultural and intergroup domains.

**Well-being and adaptation.** Crisp and Meleady (2012) maintained that human society has evolved from localized, monocultural ancestral environments to globalized, multicultural modern environments. The preference for homogeneity, stability, simplicity, and structure

underlying resistance to social diversity is adaptive to ancestral environments, but not to modern environments where intercultural contact facilitates coalition building and successful adaptation. Equipped with linguistic and cultural competence to participate in global culture, people adopting the proactive approach to globalization can utilize these resources in various life domains resulting in better adjustment (such as higher self-esteem, self-efficacy, and life satisfaction). Conversely, the defensive approach to globalization will be related to poorer adaptation (such as higher depression, anxiety, and stress), possibly deriving from stressful experiences due to lack of competence while interacting with people, information, and ideas from different cultures. Using Ward and colleagues' (2001) differentiation of psychological and sociocultural adjustment, we hypothesize that the proactive approach will predict psychological adaptation, as well as sociocultural competence that is relevant to immigrants and sojourners, whereas those adopting the defensive approach will be prone to acculturative stress.

**Behavioral styles and outcomes.** Leung and colleagues (Leung & Chiu, 2010; Leung, Maddux, Galinsky, & Chiu, 2008) have shown that multicultural experiences enhance performance in creativity tasks, as exposure to foreign cultures increases cognitive elements available for processing novel ideas. We further propose that actively learning from other cultures expands the range of behavioral repertoire. Globalization in the cultural domain promotes the spread of cultural values, which may be shared and respected by people who appreciate the culture. Cultural values provide norms and standards to guide individual behavior in specific situations. For example, endorsing the cultural orientations of independence and interdependence can be manifested in behavioral styles, such as individuation and modesty, respectively.

In this research, we investigated the impact of global orientations on an individualistic behavioral style, i.e. individuating behavior (Maslach, 1974), and a collectivistic behavioral

style, i.e. modest behavior (Chen, Bond, Chan, Tang, & Buchtel, 2009). Individuating behavior is an agentic attempt to differentiate oneself from others in public, encompassing behavioral components of taking the lead and seeking attention (e.g., Kwan, Bond, Boucher, Maslach, & Gan, 2002; Maslach, 1974; Maslach, Stapp, & Santee, 1985; Whitney, Sagrestano, & Maslach, 1994). Modest behavior refers to downplaying one's positive attributes and accomplishments or shielding oneself from public attention to reduce the social risk of offending others, and encompasses the behavioral components of self-effacement, other-enhancement, and avoidance of attention-seeking (e.g., Bond, Leung, & Wan, 1982; Chen et al., 2009; Cialdini & DeNicholas, 1989). People adopting the proactive approach to globalization should incorporate diverse cultural practices and behavioral ideals in social interactions, and thus possess behavioral styles characteristic of both individualistic and collectivistic cultures, endorsing both individuating and modest behavior.

**Intergroup attitudes and intercultural contact.** Other than intrapersonal functioning, global orientations have implications for intergroup attitudes and outcomes. In the emergent globalizing world, people with a proactive approach should hold positive attitudes toward other ethnocultural groups and engage in cooperative interactions with them. They will respect other cultures and acquire appropriate culturally sensitive interpersonal skills, and thus are more likely to enjoy acculturating experiences, which are conducive to the pleasantness and frequency of intercultural contact. If using this approach, members of majority groups in society will be more tolerant of immigrants and ethnic minorities, and members of minority groups may perceive less discrimination, compared with the defensive approach.

Based on the above conceptualizations, we hypothesize that the proactive component of global orientations will predict bicultural behavioral styles, psychological adaptation, sociocultural competence, positive intergroup attitudes, and intercultural contact, while the

defensive component will negatively predict these outcomes.

### **The Present Research**

The present research consists of ten empirical studies to investigate individuals' psychological outcomes and behavioral manifestations in response to globalization, with three objectives. First, we proposed the theoretical construct of global orientation to conceptualize proactive and defensive responses to globalization. Second, we developed a Global Orientations Scale (GOS) to measure affective, behavioral, and cognitive aspects of global orientations, and tested its factor structure, nomological network, discriminant validity, and predictive validity. Third, we examined the components, antecedents, and consequences of global orientations among various acculturating groups (i.e., majority groups in the society, as well as sojourners and immigrants) and in different cultural contexts (relatively homogenous and multicultural environments).

The first three studies aimed at establishing the construct validity of global orientations and identifying its components. In Study 1, we developed the GOS and explored its factor structure among university students ( $n = 129$ ) in Hong Kong, which is regarded as one of the most globalized cities in Asia (Yang et al., 2011). We also examined the correlates of global orientations with language proficiency and usage, self-construals, multicultural ideology, and personality traits. Study 2a validated the factor structure of the GOS using another sample of university students ( $n = 160$ ) in Hong Kong, and tested its relations with regulatory focus, self-esteem, self-efficacy, and cross-cultural efficacy. To extend the construct to a globalized city in the West, we conducted Study 2b among university students ( $n = 204$ ) in Vancouver, Canada, and examined global orientations and their relations with self-construals, multicultural ideology, an individualistic behavioral style (individuating behavior), and a collectivistic behavior style (modest behavior).

After validating the construct, Studies 2c-2g aimed at identifying the predictors of global



orientations from closely related concepts in personality traits, cognitive styles, and cultural identities, and showing the utility of global orientations in the prediction of well-being and intergroup outcomes. In Study 2c, we examined the relationships of global orientations with openness to experience, holistic thinking, and BII among university students ( $n = 234$ ) in Hong Kong. In Study 2d, we recruited 3,025 students from all eight institutions in Hong Kong, and evaluated the incremental validity of global orientations in predicting the pleasantness of contact with Mainlanders and foreigners in college and in the community, as well as acculturative stress. Study 2e validated the factor structure of the GOS among sojourners, and compared the patterns of global orientations and intercultural contact between Mainland Chinese students who studied in another city ( $n = 643$  non-local students in Beijing) and in another culture ( $n = 487$  Mainland students in Hong Kong). As Mainland China is regarded as a major recipient of global influence (Yang et al., 2011), we could infer the extent of cultural learning by comparing Mainland Chinese who moved to another city in the same culture (Beijing) vs. another culture (Hong Kong). To extend the investigation of global orientations to community adults, in Study 2f we interviewed Hong Kong locals ( $n = 202$ ) and Mainland immigrants in Hong Kong ( $n = 200$ ) and examined the effects of global orientations on intrapersonal functioning, i.e., psychological adaptation and sociocultural competence, and on intergroup outcomes, i.e., tolerance and attitude toward ethnocultural groups. Then, Study 2g sampled Caucasian Americans ( $n = 133$ ) to ascertain the relationships of global orientations with political orientation, multicultural exposure, and social desirability, and to predict their perceptions of overlap with outgroup members in Western context.

To examine the behavioral manifestations of global orientations, Study 3 tested the effects of global orientations on individuating behavior and modest behavior, as well as behavioral outcomes (English and Chinese oral presentation performance), among secondary school students ( $n = 713$ ) in Hong Kong. Finally, using a cross-lagged panel design in Study

4, we conducted a 3-wave longitudinal study lasting for about one year, and inferred the directional influences of global orientations on the pleasantness and frequency of intercultural contact among local students in Hong Kong ( $n = 589$ ) and Mainland students studying in Hong Kong ( $n = 188$ ).

The analytic strategies varied across the ten studies. We used correlation analysis to test the construct validity of global orientations and hierarchical regression analysis to show its incremental predictive validity (e.g., Studies 1, 2a, 2b, 2d, 2f, and 2g). Depending on the nature of the data, we adopted hierarchical linear modeling when analyzing multilevel data in Study 3, and cross-lagged panel analysis for the longitudinal design in Study 4.

### **Study 1**

In Study 1, we first developed the GOS and identified its factor structure. The construct validity of different global orientations was also tested by examining their correlates with multicultural ideology, personality traits, and self-construals, as well as first and second language proficiency and usage. We included these variables in the first study as the construct of multicultural ideology is conceptually closely related to global orientations, and other variables are basic individual differences related to the self and culture. This study was conducted among fluent Chinese-English bilinguals in Hong Kong, with good exposure to the English language and Western culture and thus experiencing globalization-based acculturation.

### **Method**

#### **Participants and Procedure**

The sample consisted of 129 Hong Kong Chinese participants (79 females;  $M_{\text{age}} = 20.54$ ,  $SD = 1.63$ ) from the Chinese University of Hong Kong. We recruited Chinese-English bilinguals who obtained C or above on both the Hong Kong Certificate of Education Examination and the Advanced Level Examination in both Chinese and English, a selection

criterion used in Hui and Cheng's (1987) study to ensure bilingual competence. After giving informed consent, they completed the following instruments, and were instructed to report demographic information, such as age, year and major of study, and GPA. In all studies reported in this paper, informed consent was obtained, and confidentiality was ensured.

### **Measures**

The following instruments were administered in participants' native language, Chinese. For all the scales reported in this paper, standard translation and back-translation (Brislin, 1986) were conducted if an extant Chinese version was not available.

**Global Orientations.** Using a theory-driven approach, the GOS items were developed based on literature review, content analysis, and conceptualizations of globalization and multiculturalism, and supplemented by conducting a pilot study to generate items describing psychological processes in response to globalization. Nine participants (seven females; age ranged 18-46) were asked to list feelings, thoughts, and behaviors related to contact with other cultures under the influence of globalization. As a result, 30 items were generated in both Chinese and English. Sample items include, "I am proud of being able to speak more than one language" (affective), "I have a set of beliefs about certain cultural groups that I use to help me predict behaviors of their members" (cognitive), and "I learn customs and traditions of other cultures" (behavioral). Responses were anchored on 7-point Likert scales ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

**Language proficiency and usage.** Adapted from Benet-Martínez and Haritatos (2005), participants were asked to report on both their first and second languages (i.e., Chinese and English) in the following domains: (a) language ability (e.g., "Rate your overall Chinese/English language ability"), (b) past and present language usage (e.g., "How much do you use/have used Chinese/English to speak with your parents?"), and (c) media exposure (e.g., "How often do you watch TV shows/movies in Chinese/English?"). The two scales

consist of 14 items on 6-point Likert scales, with the language ability items ranging from 1 (*very little ability*) to 6 (*very high ability*) and the rest from 1 (*almost never*) to 6 (*very often*) ( $\alpha = .72$  and  $.74$  for Chinese and English proficiency and usage, respectively). Though this is a self-report measure, previous studies have found convergence of self-reported and observed language ability (see e.g., Tran, 1994).

**Personality traits.** The *Sino-American Person Perception Scale* (SAPPS; Yik & Bond, 1993) is a personality instrument based on the Western Five Factor Model (Norman, 1963; McCrae & Costa, 1985, 1987) and indigenous Chinese adjective checklists (Lew, 1985; Yang & Bond, 1990). The scale consists of 32 bi-polar adjectives on 7-point scales measuring eight dimensions, namely Emotional Stability, Extraversion, Application, Openness to Experience, Assertiveness, Restraint, Helpfulness, and Intellect ( $\alpha = .80, .82, .73, .84, .67, .69, .64,$  and  $.62$ , respectively).

**Self-Construals.** Designed by Gudykunst and colleagues (1996), the *Self-Construal Scale* assesses independent and interdependent views of the self. Following a derived-etic analysis across five cultural groups, they identified 14 items measuring independence in culturally equivalent ways (e.g., “I try not to depend on others”) and 15 items likewise identifying interdependence (e.g., “I consult with others before making important decisions”). Responses for both subscales were indicated on 7-point scales from 1 (*strongly disagree*) to 7 (*strongly agree*) in this study ( $\alpha = .68$  and  $.73$  for independence and interdependence, respectively).

**Multicultural Ideology.** The *Multicultural Ideology Scale* was developed by Berry and Kalin (1995) to measure support for cultural diversity and multicultural society (e.g., “A society that has a variety of ethnic and cultural groups is more able to tackle new problems as they occur”). It consists of 10 items on 5-point scales, with high scores indicating stronger support for cultural diversity and appreciation of maintenance of different cultural groups ( $\alpha$

= .69).

### Results and Discussion

To examine the factor structure of the GOS, principal component analysis was conducted on the 30 items, with Cattell's Scree Test suggesting two to three factors. Oblique rotation was used to compare the two- and three-factor models. As the three-factor model yielded more double-loadings greater than .30 on the factors and the two-factor model was more interpretable, the latter was chosen as the final solution. Five items were dropped because they had either double-loadings or did not load on either factor. As a result, 25 items were retained (see Table 1).

Thirteen items loaded highest on the first factor (eigenvalue = 5.02), accounting for 20.07% of the total variance. The items loading on this factor tapped feelings, thoughts, and behaviors concerning recognizing the importance of cultural diversity, making efforts to learn about other languages and cultures, and experiencing positive feelings about culture learning, and could be labeled *Multicultural Acquisition*. The second factor was composed of 12 items (eigenvalue = 3.42), accounting for 13.67% of the variance. The items for this factor involved believing in the superiority of one's own culture, sticking to one's own cultural practices, and feeling stressed about interacting with culturally different others, thereby labeled *Ethnic Protection*. The Cronbach's alphas for the two factors were .85 and .75, respectively, with all item-total correlations being positive.

Descriptive statistics and bivariate correlations of the measures are presented in Table 2. The correlation between multicultural acquisition and ethnic protection was not significant,  $r = -.11, p > .05$ , indicating the distinctiveness of these two factors. Their correlations with age and GPA were not significant,  $ps > .05$ . Multicultural acquisition was positively correlated with gender,  $r = .20, p < .05$ , with females scoring higher than males, whereas the correlation between ethnic protection and gender was not significant,  $p > .05$ . The gender difference in

multicultural acquisition is consistent with previous findings that females exhibited slightly higher levels of support for multiculturalism than males (van de Vijver, Breugelmans, & Schalk-Soekar, 2008).

Multicultural acquisition was positively correlated with multicultural ideology, extraversion, openness to experience, restraint, and intellect. It was also positively related to both Chinese and English language proficiency and usage, and both independent and interdependent self-construal. Ethnic protection was negatively correlated with multicultural ideology, extraversion, openness to experience, intellect, and English language proficiency and usage. Its correlations with Chinese language proficiency and usage, independent self-construal, and interdependent self-construal were not significant.

Consistent with our hypotheses, multicultural acquisition captures a proactive response to globalization, correlated with multicultural attitudes and open-minded traits, encompassing individualistic and collectivistic cultural orientations, and connected to mastering and using first and second languages. Since it represents vigilant efforts to inhibit one's ethnocentric tendencies and pursuit of intellectual curiosity, its positive correlations with both restraint and intellect are sensible, though not hypothesized. Moreover, extraversion bears a positive relation to multicultural acquisition, as extraverts tend to enjoy social interactions and may actively seek intercultural contact. In marked contrast, ethnic protection represents a defensive response to globalization, with negative views toward multiculturalism and a second language. These results lend initial support to the construct validity of global orientations and the distinctiveness of its two factors.

### **Study 2a**

After scale development, Study 2a aimed at validating the factor structure of global orientations and explored its nomological network among local students in Hong Kong, who are majority group members in a multicultural society. Specifically, we examined the

correlates of multicultural acquisition and ethnic protection with regulatory focus, self-esteem, and self-efficacy. These variables center around the self, tapping into one's motivations and evaluation of oneself in relation to goal pursuit. As one's global orientations should be driven by the motivation to achieve goals in cultural contexts, we studied their correlations with these variables and how they predicted cross-cultural efficacy, which denotes one's expectancy of competence and positive experiences in cross-cultural interactions (Li & Gasser, 2005).

## Method

### Participants and Procedure

The sample consisted of 160 Hong Kong Chinese participants (94 females;  $M_{age} = 21.30$ ,  $SD = 1.42$ ) from the Hong Kong Polytechnic University. Recruited on a voluntary basis, participants completed an online survey in Chinese and provided anonymous self-reports. They also reported demographic information, such as age and gender.

### Measures

**Global orientations.** The 25-item *Global Orientations Scale* developed in Study 1 was used to assess two factors, namely multicultural acquisition and ethnic protection ( $\alpha = .89$  and  $.82$ , respectively).

**Regulatory focus.** Promotion and prevention orientations were measured by the 18-item *Regulatory Focus Questionnaire* (Lockwood, Jordan, & Kunda, 2002). Participants were asked to indicate the extent to which they endorsed items relevant to promotion goals (e.g., "In general, I am focused on achieving positive outcomes in my life") and prevention goals (e.g., "I often think about the person I am afraid I might become in the future"). The responses were anchored on 5-point scales, ranging from 1 (*not at all true of me*) to 5 (*very true of me*) ( $\alpha = .84$ , and  $.78$  for promotion and prevention focus, respectively).

**Self-esteem.** The 10-item *Rosenberg Self-Esteem Scale* (RESE; Rosenberg, 1965) was employed to assess one's overall evaluation of self-worth (e.g., "I have a number of good

qualities”). It consists of 10 items with a 4-point scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The item “I wish I could have more respect for myself” had a negative item-total correlation, and had been found to be an ambiguous item among Chinese samples in previous studies (Cheng & Hamid, 1995). Thus, we dropped this item and obtained an  $\alpha$  of .90.

**Self-efficacy.** The 10-item *General Self-Efficacy Scale* (Schwarzer & Jerusalem, 1995) was used to assess one’s belief in obtaining desired outcomes (e.g., “I can always manage to solve difficult problems if I try hard enough”). The responses were anchored on 4-point scales ranging from 1 (*not at all true*) to 4 (*exactly true*) ( $\alpha = .89$ ).

**Cross-cultural efficacy.** Efficacy in cross-cultural interactions and social functions was assessed by Li and Gasser’s (2005) revised 17-item scale. Originally developed by Fan and Mak (1998), cross-cultural efficacy was measured by four subscales, namely social difficulties, social confidence, sharing interests with others, and willingness to take initiatives to establish friendships (e.g., “Handle myself well in social gatherings”), but was used as a single factor and modified to capture cross-cultural interactions (Li & Gasser, 2005). Responses were anchored on 4-point scales ranging from 1 (*not confident*) to 4 (*very confident*) ( $\alpha = .93$ ).

### Results and Discussion

First, we validated the factor structure of global orientations using confirmatory factor analysis (CFA). The 13 items measuring multicultural acquisition and 12 items measuring ethnic protection were randomly grouped into three parcels, with four to five items in each parcel (see Little, Cunningham, Shahar, & Widaman, 2002 on using item parceling in structural equation modeling). The two-factor model fit the data moderately well,  $\chi^2(8) = 13.14, p = .11, CFI = .90, RMSEA = .06, SRMR = .02$ .

Descriptive statistics and bivariate correlations of the measures are presented in Table 3. Correlation analysis showed that multicultural acquisition was positively correlated with



promotion focus, self-esteem, self-efficacy, and cross-cultural efficacy, but not with prevention focus. Ethnic protection was positively correlated with prevention focus, but negatively with self-esteem and cross-cultural efficacy, and not significantly with promotion focus and self-efficacy. In addition, multicultural acquisition and ethnic protection were only modestly negatively correlated.

Hierarchical regression analysis was conducted to predict cross-cultural efficacy. Age and gender were entered into the first block. The second block contained promotion focus, prevention focus, self-esteem, and self-efficacy. Then the two factors of global orientations were added to the third block. Regression results showed that global orientations significantly predicted cross-cultural efficacy after controlling for the effects of age and gender and taking into account regulatory focus, self-esteem, and self-efficacy,  $F(2, 150) = 8.27, p < .001$ . Multicultural acquisition was a positive predictor of cross-cultural efficacy,  $\beta = .23, p < .001$ , whereas ethnic protection was a marginal and negative predictor,  $\beta = -.12, p = .09$ .<sup>1</sup>

The CFA results confirmed the factorial validity of global orientations among majority group members in Hong Kong. The correlational results supported our conceptualizations of multicultural acquisition being linked to promotion orientation, e.g. being motivated to obtain favorable outcomes through globalization, and ethnic protection being linked to prevention orientation, e.g. aiming to avoid undesirable consequences of globalization. As multicultural acquisition reflects an agentic endeavor to achieve cultural competence while ethnic protection reflects a lack of self-confidence in cultural mastery, multicultural acquisition is conducive to the pursuit of efficacious goals in cross-cultural interactions over and above general self-regulatory mechanisms, self-worth and capabilities.

### Study 2b

As the first two studies were conducted in Hong Kong, we desired to extend the

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<sup>1</sup> Since participants were university students with similar education level, we used their parents' education levels as a proxy of socioeconomic status (SES). The significance of the predictors remained the same after controlling for participants' overseas stay and the education levels of their father and mother.

investigation of global orientations to another multicultural society (Vancouver, Canada) in Study 2b, to examine whether the construct is applicable beyond the Chinese context. In addition to measuring multicultural ideology and self-construals, we included individuating behavior (Maslach, 1974) as an individualistic behavioral style, and modest behavior (Chen et al., 2009) as a collectivistic behavioral style. If multicultural acquisition is positively related to both individualistic and collectivistic cultural orientations, positive correlations with typical behavioral styles of these cultures (i.e., individuating and modest behavior) would be expected.

## Method

### Participants and Procedure

Two hundred and four students from the University of British Columbia participated in this study on a voluntary basis (152 females;  $M_{\text{age}} = 20.42$ ,  $SD = 3.57$ ; 52% Caucasian, 41 % Asian, 5.9% multi-racial, and 1.5% other). To represent the central characteristics of an individualistic culture, we only recruited participants who were born in Canada. They completed the following measures in their native language, English.

### Measures

**Global orientations.** The English version of the GOS was used in this study. Both the multicultural acquisition and ethnic protection factors demonstrated adequate reliabilities in the current Canadian sample,  $\alpha = .80$  and  $.73$ , respectively.

**Multicultural ideology.** Same as Study 1 (Berry & Kalin, 1995;  $\alpha = .83$  in this study).

**Self-construals.** Same as Study 1 (Gudykunst et al., 1996;  $\alpha = .77$  and  $.82$  for independence and interdependence, respectively, in this study).

**Individuating behavior.** The 12-item Individuation Scale (Maslach, 1974) was used to assess the willingness to differentiate oneself publicly (e.g., “Give your opinion on a controversial issue, even though no one has asked for it.”). Responses were anchored on 5-point scales ranging from 1 (*not at all willing to do this*) to 5 (*very much willing to do this*)

( $\alpha = .87$ ).

**Modest behavior.** The 39-item Modest Behavior Scale (Chen et al., 2009) was used to assess self-effacing, other-enhancing, and attention-avoiding aspects of modest behavior (e.g., “Deny my own strengths in front of others.”). Responses were anchored on 5-point scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) ( $\alpha = .83$ ).

### Results and Discussion

We first validated the two-factor model of global orientations in the Canadian sample using CFA. The model was the same as tested in Study 2 with item parcels. The model fit was satisfactory:  $\chi^2(8) = 6.77, p = .56, CFI = 1.00, RMSEA = .00, SRMR = .03$ . We also tested for measurement equivalence among European Canadians ( $n = 106$ ) and Asian Canadians ( $n = 83$ ) in the sample using multiple group analysis, given that there were enough participants from these two ethnic groups. The baseline model revealed acceptable fit:  $\chi^2(16) = 28.59, p = .03, CFI = .96, RMSEA = .09, SRMR = .06$ . Then we constrained the loadings to be equal across groups,  $\chi^2(20) = 32.31, p = .04, CFI = 1.00, RMSEA = .08, SRMR = .08$ , and non-significant chi-square change was observed,  $\Delta\chi^2(4) = 3.72, p = .45$ , indicating that the factor loadings of global orientations were equivalent between European and Asian Canadians. Finally, we constrained intercepts across groups,  $\chi^2(22) = 36.90, p = .02, CFI = .95, RMSEA = .09, SRMR = .08$ , and partial scalar equivalence (constraining four out of six intercepts) was observed,  $\Delta\chi^2(2) = 4.59, p = .10$ .

Descriptive statistics and bivariate correlations of the measures are presented in Table 4. As hypothesized, multicultural acquisition was positively correlated with multicultural ideology, independent self-construal, interdependent self-construal, individuating behavior, and modest behavior. Also consistent with our predictions, ethnic protection was negatively correlated with multicultural ideology, interdependent self-construal, individuating behavior, and modest behavior. Ethnic protection was not significantly related to independent

self-construal.

As some researchers have described two factors of individuation in collectivistic cultural groups (Boucher & Maslach, 2009; Kwan et al., 2002), we also tested the correlations of global orientations with those two factors. Multicultural acquisition was positively correlated with both taking the lead,  $r = .21, p < .01$ , and seeking attention,  $r = .23, p < .001$ ; ethnic protection was negatively correlated with both taking the lead,  $r = -.28, p < .001$  and seeking attention,  $r = -.23, p < .001$ .

When multicultural ideology was parceled out, similar relationships between the two factors of global orientations and the other measures were observed, except that the correlations with interdependent self-construal were not significant,  $r = .11$  and  $-.10$ , respectively,  $ps > .05$ .

Finally, we used regression analysis to examine whether global orientations predicted individuating and modest behaviors over and above multicultural ideology. In the first block, we controlled for the effects of age and gender; then multicultural ideology was entered in the second block. The last block contained the two global orientation factors. Global orientations significantly predicted individuating behavior after taking into account the effect of multicultural ideology,  $F(2, 195) = 18.88, p < .001$ . Multicultural acquisition was a positive predictor,  $\beta = .30, p < .001$ , whereas ethnic protection was a negative predictor,  $\beta = -.29, p < .001$ . For the prediction of modest behavior, global orientations significantly explained additional variance over and above multicultural ideology,  $F(2, 195) = 6.98, p < .01$ . Multicultural acquisition was a positive predictor,  $\beta = .15, p = .06$ , while ethnic protection was a negative predictor,  $\beta = -.21, p < .01$ .<sup>2</sup>

The two-factor model and the factors' relationship to multicultural ideology and self-construals are consistent with Study 1, showing that global orientations have a similar

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<sup>2</sup> The significance of the predictors remained the same after controlling for participants' overseas stay and the education levels of their father and mother.

factor structure and nomological network in both a Chinese and Western context. This study further revealed that people high on multicultural acquisition were more likely to endorse self-views and behavioral styles of both individualistic and collectivistic cultures, whereas people high on ethnic protection were less likely to adopt these different cultural orientations. More importantly, our findings demonstrated the discriminant validity of global orientations and multicultural ideology. Although the two constructs were moderately related, global orientations still constituted unique variance with cultural self-views and behavior styles after controlling for multicultural ideology.

### **Study 2c**

Though Studies 1-2b established the construct validity of global orientations, its nomological network and discriminant validity need further testing. Conceptually, multicultural acquisition seems to be closely related to openness to experience, holistic thinking, and BII. The first study indeed showed that openness to experience was positively correlated with multicultural acquisition and negatively correlated with ethnic protection. Since the magnitude of correlations is only modest to moderate, they are still distinct constructs. In this study, we examined these related constructs in the same regression model, in which openness to experience, holistic thinking, and BII were hypothesized as predictors of global orientations. Specifically, openness to experience, holistic thinking, and BII were hypothesized to predict multicultural acquisition positively and predict ethnic protection negatively.

### **Method**

#### **Participants and procedure**

Two hundred and thirty-four Chinese students from the Hong Kong Polytechnic University participated in the study (154 females;  $M_{\text{age}} = 21.23$ ,  $SD = 2.15$ ). A battery of online questionnaires was administered in Chinese. Anonymous participation and

confidentiality were ensured.

### Measures

**Global orientations.** Same as Study 2a ( $\alpha = .86$  and  $.73$  for multicultural acquisition and ethnic protection, respectively, in this study).

**Openness to experience.** The 4-item subscale of openness to experience was extracted from the SAPPS (Yik & Bond, 1993) which was used in Study 1 ( $\alpha = .88$  in this study).

**Bicultural Identity Integration.** The 19-item Bicultural Identity Integration Scale (BIIS-2; Huynh & Benet-Martínez, 2010) was used to tap the perceived blendedness and harmony between one's two cultural orientations and identities (e.g., "I find it easy to balance both Hong Kong and Western cultures"). Responses were indicated on 5-point Likert scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) ( $\alpha = .76$  in this study).

**Holistic thinking.** The 24-item Analysis-Holism Scale (Choi, Koo, & Choi, 2007) was used to assess one's holistic cognitive-perceptual style on four dimensions, namely causality, attitude toward contradictions, perception of change, and locus of attention. Participants were asked to indicate the extent to which they agreed with the statements on holistic thinking (e.g., "Everything in the world is intertwined in a causal relationship"), using 7-point scales ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) ( $\alpha = .74$ ).

### Results and Discussion

Descriptive statistics and bivariate correlations of the measures are presented in Table 5. As hypothesized, multicultural acquisition was positively correlated with openness to experience, holistic thinking, and BII, whereas ethnic protection was negatively correlated with openness to experience and BII.

Two sets of hierarchical regression analyses were conducted to predict the two global orientations, with openness to experience, holistic thinking, and BII as independent variables, controlling for the effects of age and gender. The first regression model explained 16.1% of

the total variance in multicultural acquisition,  $F(5, 228) = 9.93, p < .001$ . Openness to experience ( $\beta = .29, p < .001$ ) and holistic thinking ( $\beta = .23, p < .001$ ) positively predicted multicultural acquisition. The second regression model explained 11.1% of the total variance in ethnic protection,  $F(5, 228) = 6.85, p < .001$ . Openness to experience ( $\beta = -.20, p < .01$ ) and BII ( $\beta = -.27, p < .001$ ) negatively predicted ethnic protection.<sup>3</sup>

These results show cognitive, personality, and bicultural identity predictors of global orientations and thus expand their nomological network. Multicultural acquisition is sustained by a dispositional attribute that is attracted to the variety and diversity of life experiences and a cognitive style that attends to the wholeness and interconnectedness of the parts, maybe conducive to effectiveness in cultural interactions. BII is more relevant to ethnic protection than multicultural acquisition. Perceiving conflict and incompatibility between Chinese and Western cultural identities generates a defensive reaction to globalization, and resistance to interacting with other cultural groups.

### Study 2d

Next, we examined the incremental predictive validity of global orientations on well-being indicators and in intergroup contexts. Hong Kong's geographic location connects the East and the West, with strong economic, political, and historical links with Mainland China and Western countries, providing an intricate context in which to study intercultural contact. In Study 2d, we recruited a large sample of students from universities in Hong Kong, and investigated the prediction of global orientations from their contact with foreigners and Mainland Chinese. Given its proactive orientation, multicultural acquisition was hypothesized to predict the pleasantness of contact with foreigners and mainlanders in college and in the community over and above demographic variables, language proficiency and usage, and cultural identification, which are conventional measures of acculturation. Given its

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<sup>3</sup> The significance of the predictors remained the same after controlling for participants' overseas stay and the education levels of their father and mother.

defensive orientation, ethnic protection was hypothesized to predict the pleasantness of intercultural contact negatively and be more strongly predictive of acculturative stress over and above demographics and the variables of depression, anxiety, and stress, which are general indicators of poor psychological health.

## Method

### Participants and Procedure

The sample consisted of 3,025 local students from eight institutions in Hong Kong (1,855 females;  $M_{\text{age}} = 20.74$ ,  $SD = 1.72$ ). Participants were recruited on a voluntary basis, and asked to complete an online survey in Chinese on their own in a private and quiet environment. They also reported demographic information including age and gender.

### Measures

**Global orientations.** Same as previous studies ( $\alpha = .89$ , and  $.75$  for multicultural acquisition and ethnic protection, respectively, in this study).

**Language proficiency and usage.** Similar to Study 1, participants were asked to report on their language abilities and frequency of usage in Mandarin and English ( $\alpha = .75$ , and  $.73$  for the two languages, respectively).

**Cultural identification.** Participants' identification with Mainland Chinese and Western cultures were assessed by Acculturation Index (Ward & Kennedy, 1994). Ward and Kennedy (1994) suggested 14 out of the original 21 items were most culturally relevant and thus these were chosen for use in this study, including cognitive and behavioural aspects such as pace of life, food, recreational styles, mode of communication, values, and worldview. Participants were asked to respond to two questions about each aspect (e.g., their lifestyles in Hong Kong), viz., "Are your experiences and behaviours similar to Mainland Chinese [Westerners]?" The responses were anchored on 7-point scales, ranging from 1 (*not at all*) to 7 (*extremely*) ( $\alpha = .90$  and  $.86$  for Mainland Chinese and Western cultural identification, respectively).



**Pleasantness of intercultural contact.** Adapted from Greenland and Brown (2005), contact experience with Mainland Chinese and foreign students in college as well as contact experience with Mainland Chinese and foreigners in the community were measured by four questions: “Is your contact experience with Mainland Chinese students in college in general pleasant?”, “Is your contact experience with Mainland Chinese in the community in general pleasant?”, “Is your contact experience with foreign students in college in general pleasant?”, and “Is your contact experience with foreigners in the community in general pleasant?” The responses were reported on 5-point scales ranging from 1 (*not at all*) to 5 (*very much*).

**Acculturative Stress.** The 15-item *Riverside Acculturation Stress Inventory* (Benet-Martínez & Haritatos, 2005) was used to assess culture-related challenges in five life domains: language skills, work, intercultural relations, discrimination/prejudice, and cultural isolation (e.g., “I feel that my particular cultural/ethnic practices have caused conflict in my relationships” and “I feel that the environment where I live is not multicultural enough; it doesn’t have enough cultural richness”). The responses were anchored on 5-point scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) ( $\alpha = .83$ ).

**Depression, anxiety, and stress.** The 21-item Depression Anxiety and Stress Scale (Lovibond & Lovibond, 1995) was employed to assess emotional distress in the previous week in three sub-categories: depression, anxiety, and stress. Responses were anchored on 4-point scales ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much, or most of the time*). Sample items included, “I felt that life was meaningless” (depression), “I felt scared without any good reason” (anxiety), and “I felt that I was rather touchy” (stress) ( $\alpha = .87, .83, \text{ and } .85$ , respectively).

## Results and Discussion

Descriptive statistics and bivariate correlations of the measures are presented in Table 6. As hypothesized, multicultural acquisition was positively correlated with pleasantness of

intercultural contact with foreign students in both college and the community, as well as pleasantness of intercultural contact with Mainland Chinese students in both college and the community. In addition, multicultural acquisition was also positively related to English proficiency and usage, Mandarin proficiency usage, Western cultural identification, and Mainland Chinese cultural identification. On the other hand, it was negatively correlated with acculturative stress, depression, anxiety, and stress.

Ethnic protection was negatively correlated with pleasantness of intercultural contact with foreign students and with Mainland Chinese students in college, pleasantness of intercultural contact with foreigners and with Mainland Chinese in the community. In addition, it was negatively related to English proficiency and usage, Mandarin proficiency and usage, and Western cultural identification, but positively correlated with Mainland Chinese cultural identification, acculturative stress, depression, anxiety, and stress.

Hierarchical multiple regression analyses were conducted to test the incremental predictive validity of global orientations (see Table 7). We first used the four variables of intercultural contact as criteria. Age and gender were entered into the first block. The second block contained control variables, i.e., English and Mandarin proficiency and usage, and Western and Mainland Chinese cultural identification. In the third block, we entered the two global orientation factors. After controlling for demographic (age and gender), language, and identity variables, multicultural acquisition positively predicted pleasantness of intercultural contact with foreign students in college,  $\beta = .23, p < .001$ , pleasantness of intercultural contact with Mainland Chinese students in college,  $\beta = .17, p < .001$ , pleasantness of intercultural contact with foreigners in the community,  $\beta = .22, p < .001$ , and pleasantness of intercultural contact with Mainland Chinese in the community,  $\beta = .16, p < .001$ . Ethnic protection was a negative predictor of these dependent variables.

In addition, the two global orientation factors also explained a significant amount of

variance in acculturative stress over and above depression, anxiety, and stress, controlling for age and gender (see Table 7). As hypothesized, ethnic protection positively predicted acculturative stress in the regression model,  $\beta = .35, p < .001$ .<sup>4</sup>

Consistent with the first few studies showing that multicultural acquisition was positively related to both first and second language proficiency and usage and to dual cultural identities, this study further found that it was positively correlated with identification with both Western and Mainland Chinese cultures. The correlation coefficients for Mainland Chinese identification and Mandarin proficiency and usage are only modest in magnitude, reflecting cultural distance between Hong Kong and Mainland China though both are Chinese societies. On the other hand, ethnic protection was positively correlated with Mainland Chinese cultural identification but negatively correlated with Western identification, supporting our conceptualization of multicultural acquisition as being more inclusive and integrative of different cultural orientations whereas ethnic protection is more exclusive and resistant to other cultures' influences.

In the literature related to intercultural contact, acculturation theory posits that the acculturation process involves changes and adjustment, precipitating acculturative stress (e.g., Berry, 1984; Berry & Kim, 1988). In contrast, the contact hypothesis (Allport, 1954) maintains that increased contact between members of different groups reduces conflict and prejudice, as it entails positive generalization from individuals to groups. Greenland and Brown (2005) commented that acculturation theory focused on the negative effects of intercultural contact on minority ethnolinguistic groups, whereas the contact hypothesis overemphasized the positive effects of intercultural contact on majority group members. Our results suggest that in globalization-based acculturation, both phenomena can occur within majority group members, yet with different predictors. Specifically, multicultural acquisition

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<sup>4</sup> The significance of the predictors remained the same after controlling for participants' overseas stay and the education levels of their father and mother.

predicted positive experiences of intercultural contact, be it in college or in the community, with Mainland Chinese or foreigners; ethnic protection predicted acculturative stress. Their incremental predictive validity over and above conventional acculturation and mental health measures demonstrates the utility of global orientations. In the next study, we examined intercultural contact in minority groups who moved to another place.

### **Study 2e**

Mainland China is a major beneficiary of globalization. In recent years, its rapid economic growth has brought about an increase of resources and mobility that enable Mainland students to pursue tertiary education outside their hometown. Are people with higher multicultural acquisition more likely to study in another culture than those who score lower? Study 2e compared Mainland Chinese students who studied in Hong Kong and Beijing as non-locals. As individuals adopting a proactive approach to globalization may seek opportunities to maximize their cultural learning, we hypothesized that those studying in Hong Kong would score higher on multicultural acquisition with more pleasant and frequent intercultural contact, but their counterparts in Beijing would score higher on ethnic protection with less pleasant and frequent intercultural contact. We thus included measures relevant to intercultural contact (pleasantness and frequency), acculturation (language proficiency and usage, and acculturative stress). Living in highly competitive environments like Hong Kong and Beijing as minority groups, these students might experience psychological distress, so we also assessed stress, depression, anxiety, and perceived discrimination.

### **Method**

#### **Participants and Procedure**

We recruited 487 Mainland Chinese students studying in Hong Kong universities (305 females;  $M_{\text{age}} = 21.15$ ,  $SD = 2.54$ ) and 643 Mainland students coming from other regions of China and currently studying in Beijing (335 females;  $M_{\text{age}} = 18.81$ ,  $SD = 1.12$ ). Since the

length of sojourning in a culture may affect the acculturation process, all participants in this study were first-year university students. Participants who studied in Hong Kong completed an online survey in Chinese; their counterparts in Beijing filled out either an online survey or a paper-and-pencil questionnaire if internet access was not convenient, both in Chinese.

### Measures

**Global orientations.** Same as previous studies ( $\alpha = .91$ , and  $.68$  for multicultural acquisition and ethnic protection, respectively, for the Hong Kong sample;  $\alpha = .89$ , and  $.71$ , respectively, for the Beijing sample).

**English proficiency and usage.** Same as Study 1 (Benet-Martínez & Haritatos, 2005;  $\alpha = .65$  and  $.62$  for the Hong Kong and Beijing samples, respectively).

**Intercultural contact with foreigners.** Same as Study 2d, two items were used to measure the pleasantness of contact with foreigners in college and in the community. We averaged the two items to form an index of contact pleasantness ( $\alpha = .81$  and  $.82$  for the Hong Kong and Beijing samples, respectively). In this study, we also assessed the frequency of contact with foreigners in three different settings, namely, formal contact in college, informal contact in college, and contact in the community (e.g., “How much formal contact (such as in classrooms, group projects) do you have with foreigners in college?”). Responses were anchored on 6-point scales ranging from 1 (*not at all*) to 6 (*almost every day*). The three items were averaged to form a single index of contact frequency with foreigners ( $\alpha = .84$  and  $.86$  for the Hong Kong and Beijing samples, respectively).

**Acculturative Stress.** Same as Study 2d (Benet-Martínez & Haritatos, 2005;  $\alpha = .83$  and  $.86$  for the Hong Kong and Beijing samples, respectively).

**Depression, anxiety, and stress.** Same as Study 2d (Lovibond & Lovibond, 1995;  $\alpha = .85$ ,  $.80$ , and  $.84$  for depression, anxiety, and stress, respectively, for Hong Kong sample;  $\alpha = .81$ ,  $.76$ , and  $.81$ , respectively, for the Beijing sample).

**Perceived discrimination.** The 4-item Campus Climate Scale (Nora & Cabrera, 1996) was adapted to tap discrimination experienced by participants on campus (e.g., “I have heard negative words about Mainland Chinese students while attending classes” for the Hong Kong sample; “I have heard negative words about students from other parts of China while attending classes” for the Beijing sample). Participants responded on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) ( $\alpha = .88$  for both Hong Kong and Beijing samples).

### Results and Discussion

We first tested the measurement invariance of the GOS before comparing the levels of global orientations between Mainland Chinese students studying in Hong Kong and Beijing. The model testing for configural invariance indicated adequate fit:  $\chi^2(16) = 94.17, p < .001$ , CFI = .97, RMSEA = .09, SRMR = .05, showing that the factorial structure of the construct was equivalent across the two groups. After constraining factor loadings to be equal across groups, chi-square and CFI did not change significantly,  $\Delta\chi^2(4) = 6.79, p > .05$ ,  $\Delta\text{CFI} = .001$ , indicating that the factor loadings were equivalent across the two groups. Finally, scalar invariance was established as indicated by non-significant chi-square and CFI change,  $\Delta\chi^2(4) = 9.10, p > .05$ ,  $\Delta\text{CFI} = .002$ , suggesting that the means of the construct could be meaningfully compared across the two groups.

A series of *t*-tests were conducted to compare the mean differences of the variables measured in this study. As expected, Mainland students studying in Hong Kong ( $M = 6.07$ ,  $SD = 0.71$ ) scored higher on multicultural acquisition than their counterparts in Beijing ( $M = 5.73$ ,  $SD = 0.78$ ),  $t(1091) = 7.70, p < .001, d = .46$ . Interestingly, Mainlanders in Hong Kong ( $M = 3.68$ ,  $SD = 0.68$ ) also scored higher on ethnic protection than those in Beijing ( $M = 3.53$ ,  $SD = 0.72$ ),  $t(1125) = 3.55, p < .001, d = .21$ .

In addition, Mainlanders in Hong Kong scored higher than those in Beijing on English

proficiency and usage ( $M_{HK} = 3.96$ ,  $SD_{HK} = 0.84$ ;  $M_{Beijing} = 3.24$ ,  $SD_{Beijing} = 0.80$ ;  $t(1013) = 14.61$ ,  $p < .001$ ,  $d = .88$ ), pleasantness of intercultural contact with foreigners ( $M_{HK} = 3.68$ ,  $SD_{HK} = 0.62$ ;  $M_{Beijing} = 3.42$ ,  $SD_{Beijing} = 0.67$ ;  $t(996) = 6.81$ ,  $p < .001$ ,  $d = .59$ ), frequency of intercultural contact with foreigners ( $M_{HK} = 2.01$ ,  $SD_{HK} = 1.39$ ;  $M_{Beijing} = 0.96$ ,  $SD_{Beijing} = 1.20$ ;  $t(938) = 13.17$ ,  $p < .001$ ,  $d = .81$ ), acculturative stress ( $M_{HK} = 2.87$ ,  $SD_{HK} = 0.55$ ;  $M_{Beijing} = 2.48$ ,  $SD_{Beijing} = 0.58$ ;  $t(1127) = 11.16$ ,  $p < .001$ ,  $d = .67$ ), and perceived discrimination ( $M_{HK} = 1.92$ ,  $SD_{HK} = 0.81$ ;  $M_{Beijing} = 1.64$ ,  $SD_{Beijing} = 0.68$ ;  $t(943) = 6.16$ ,  $p < .001$ ,  $d = .38$ ).

On the other hand, Mainland students studying in Beijing scored higher than those in Hong Kong on anxiety ( $M_{Beijing} = 0.55$ ,  $SD_{Beijing} = 0.49$ ;  $M_{HK} = 0.40$ ,  $SD_{HK} = 0.43$ ;  $t(1095) = 5.42$ ,  $p < .001$ ,  $d = .32$ ), and stress in general ( $M_{Beijing} = 0.65$ ,  $SD_{Beijing} = 0.54$ ;  $M_{HK} = 0.57$ ,  $SD_{HK} = 0.54$ ;  $t(1038) = 2.39$ ,  $p < .05$ ,  $d = .14$ ). However, the two groups did not differ in depression,  $p > .05$ .<sup>5</sup>

In this study, both groups had moved from one place to another, with one of them studying in another city of the same culture (Beijing), and the other studying in a city (Hong Kong) that is heavily influenced by Western culture, has adopted a different political and socioeconomic system, uses a different spoken language, and values different customs and cultural practices. It is thus understandable that sojourners in Hong Kong exhibited higher levels of proactive responses (i.e., multicultural acquisition, English language proficiency and usage) and positive experiences (pleasantness) of intercultural contact, perhaps as a method of dealing with the relatively new cultural experience of studying in Hong Kong, though the measure of contact frequency may not indicate positive encounters.

The pattern of ethnic protection is intriguing. As the effects of acculturation are not uniformly positive, those studying in Hong Kong also exhibited higher levels of defensive responses, perhaps due to perceived discrimination from Hong Kong locals, negative

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<sup>5</sup> After controlling for participants' overseas stay and the education levels of their father and mother, all comparison results were similar except that there was no significant difference in stress levels between the two groups.

reactions to globalization pressure (i.e., ethnic protection), and negative experiences of intercultural contact (i.e., acculturative stress and perceived discrimination). In general, the Hong Kong sojourners scored higher on acculturation-related variables, while the Beijing sojourners scored higher on general negative variables such as anxiety and stress, but the two groups did not differ in depression.

### **Study 2f**

Thus far, the previous six studies were all based on student samples, though varying in cultural contexts. In Study 2f, we recruited community samples and extended the construct of global orientations not only to majority groups and sojourners, but also to immigrants. Hong Kong locals and immigrants from Mainland China were interviewed using a structured questionnaire to measure their psychological and sociocultural adjustment. We also investigated their intergroup attitudes and acculturation-related variables. In particular, Berry and colleagues (1989) devised separate acculturation measures for majority groups, termed acculturation expectations, and for minority groups, termed acculturation strategies. They are important predictors of intergroup relations, and may seem similar to global orientations. Yet, acculturation expectations and strategies have been studied in bicultural contexts, delineating attitudes toward two groups and participation in two cultures. Global orientations, on the other hand, refer to affective, cognitive, and behavioral responses to a general multicultural context. We aimed at demonstrating the incremental predictive validity of global orientations on adjustment and intergroup outcomes over and above acculturation expectations in the majority group and acculturation strategies in the minority group. To increase the representativeness of the community samples, we used stratified sampling based on the population statistics from the Census and Statistics Department of Hong Kong.

### **Part 1**

This study was conducted among Hong Kong community adults. We hypothesized that



multicultural acquisition would predict psychological adjustment and tolerance toward ethnocultural groups over and above acculturation expectations.

## Method

### Participants and procedure

The sample consisted of 202 Hong Kong adults (114 females;  $M_{\text{age}} = 44.99$ ,  $SD = 14.86$ , age ranged 20-82). Among the participants, 2.5% received no schooling, 22.3% attended or completed primary school, 50.5% attended or completed secondary school, 8.9% attended or completed post-secondary school, 14.8% attended or completed university, 0.5% had a postgraduate degree, and 0.5% of participants did not provide information on their education. Participants were recruited in public areas in Hong Kong by trained research assistants. Though using a structured questionnaire, face-to-face interview was employed to prevent less educated participants from having difficulties in understanding the content of items.

### Measures

**Global orientations.** Same as previous studies ( $\alpha = .87$  and  $.62$  for multicultural acquisition and ethnic protection, respectively).

**Acculturation expectations.** The 16-item Acculturation Attitudes Scale (AAS; Berry et al., 1989) was adapted to assess Hong Kong locals' expectations of how Mainland Chinese immigrants should acculturate to Hong Kong society, viz., integration, assimilation, separation, and marginalization. The scale included four domains of life: culture traditions, language, social activities, and friends; for example, "Mainland Chinese immigrants should have only Hong Kong friends" (assimilation); "Mainland Chinese immigrants should not have either Hong Kong or Mainland Chinese immigrant friends" (marginalization); "Mainland Chinese immigrants should have only Mainland friends" (separation); and "Mainland Chinese immigrants should have both Mainland Chinese and Hong Kong friends" (integration). Responses were anchored on 5-point scales, ranging from 1 (*strongly disagree*)

to 5 (*strongly agree*) ( $\alpha = .51, .72, .52, \text{ and } .61$ , respectively).

The modest reliabilities of the AAS have also been evident in previous studies, such as ranging from .48 to .64 in a 13-country study (Berry, Phinney, Sam, & Vedder, 2006). This might be due to the complexity of the constituent items or inadequate operationalization (Berry & Sam, 2003; Brown & Zabefka, 2011).

**Psychological adaptation.** Following Berry and colleagues (2006), psychological adaptation was measured with three scales: the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), the Rosenberg Self-esteem Scale (RSES; Rosenberg, 1965), and the Scale for Psychological Problems (Berry et al., 2006). The SWLS consists of 5 items to assess the cognitive evaluation of one's life in general (e.g., "I am satisfied with my life"). Responses were anchored on 5-point scales, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) ( $\alpha = .88$ ). The RSES consists of 10 items to measure the evaluation of one's self-worth (e.g., "I feel I have not much to be proud of"). Responses were anchored on 5-point scales, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) ( $\alpha = .80$ ). The Scale for Psychological Problems consists of 15 items evaluating the extent to which individuals experience depression, anxiety, and psychosomatic symptoms (e.g., "I am worried about something bad happening to me"). Responses were anchored on 5-point scales, ranging from 1 (*never*) to 5 (*all the time*) ( $\alpha = .93$ ). A composite score for psychological adaptation was derived by averaging the standardized scores of self-esteem, life satisfaction, and psychological problems (reversed).

**Tolerance.** This scale consists of 11 items to measure one's willingness to accept individuals or groups that are culturally or racially different from oneself (e.g., "It is good to have people from different ethnic and racial groups living in the same country") (Berry & Kalin, 1995). Responses were anchored on 5-point scales, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) ( $\alpha = .66$ ).

## Results and Discussion

Descriptive statistics and bivariate correlations of the measures are presented in Table 8. Correlation analysis showed that multicultural acquisition was positively correlated with integration expectation, psychological adaptation, and tolerance. It was negatively correlated with assimilation expectation, and separation expectation, but not significantly correlated with marginalization expectation.

Ethnic protection was positively correlated with assimilation expectation, separation expectation, and marginalization expectation, but negatively correlated with tolerance. It was not significantly correlated with integration expectation and psychological adaptation.

Hierarchical regression analysis was conducted to predict psychological adaptation. Age and gender was entered into the first block. The second block contained the four acculturation expectations. Then the two factors of global orientations were entered in the third block. Regression results showed that global orientations added significant variance to the outcome variable,  $F(2, 191) = 15.57, p < .001$ . After controlling for the effects of age and gender, multicultural acquisition positively predicted psychological adaptation over and above the four acculturation expectations,  $\beta = .19, p < .05$ .

Another set of hierarchical multiple regression analyses was conducted to predict tolerance. Similarly, age and gender was entered into the first block. The second block contained four acculturation expectations. Then the two factors of global orientations were entered in the third block. Regression results showed that global orientations explained additional variance in the outcome variable,  $F(2, 191) = 6.49, p < .01$ . After controlling for the effects of age and gender, multicultural acquisition positively predicted tolerance over and above the four acculturation expectations,  $\beta = .23, p < .01$ .<sup>6</sup>

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<sup>6</sup> For this community sample, we adapted Berry's (2013) SES measure consisting of ownership and computed a composite score of owning a car (yes/no), computer (yes/no), washing machine (yes/no), and telephone (yes/no). After controlling for ownership and frequency of travelling abroad in the past five years, all regression results were similar except that ethnic protection also significantly predicted tolerance ( $\beta = -.16, p < .05$ ).

These results generalized the construct of global orientation and its utility to community adults, and demonstrated the incremental predictive validity of global orientations on intrapersonal (psychological adaptation) and intergroup (tolerance) functioning among majority group members.

## Part 2

This study was conducted among immigrants from Mainland China to Hong Kong. Given the characteristics of immigrant samples, we added a measure on sociocultural competence, and used attitude toward the majority group (i.e., Hong Kong people) as the intergroup outcome. We hypothesized that multicultural acquisition would predict psychological adaptation, sociocultural competence, and attitude toward Hong Kong people over and above acculturation strategies.

## Method

### Participants and procedure

The sample consisted of 200 Mainland immigrants residing in Hong Kong (161 females;  $M_{\text{age}} = 41.24$ ,  $SD = 11.28$ , age ranged 22-79). The gender ratio and age range are generally representative of the characteristics of recent Mainland Chinese immigrants to Hong Kong based on the population statistics from the Census and Statistics Department of Hong Kong. Their average length of immigration in Hong Kong was 8.75 years. Among the participants, 5.0% received no schooling, 27.0% attended or completed primary school, 47.0% attended or completed secondary school, 4.0% attended or completed post-secondary school, 1.5% attended or completed university, 5.0% had a postgraduate degree, and 0.5% of participants did not provide information on their education. The procedure of data collection was identical to that of Part 1.

### Measures

**Global orientations.** Same as previous studies ( $\alpha = .88$  and  $.64$  for multicultural

acquisition and ethnic protection, respectively).

**Acculturation strategies.** The 16-item Acculturation Attitudes Scale (AAS; Berry et al., 1989) was adapted to assess Mainland immigrants' strategies for acculturating to Hong Kong society, viz., integration, assimilation, separation, and marginalization. The scale included four domains of life: culture traditions, language, social activities, and friends; for example, "I feel that Mainland Chinese immigrants should maintain our own cultural traditions and not adapt to those of Hong Kong" (separation); "I feel that it is not important for Mainland Chinese immigrants either to maintain their own cultural traditions or to adopt those of Hong Kong" (marginalization); "I feel that Mainland Chinese immigrants should maintain our own cultural traditions but also adopt those of Hong Kong" (integration); and "I feel that Mainland Chinese immigrants should adopt Hong Kong's cultural traditions and not maintain those of our own" (assimilation). Responses were anchored on 5-point scales, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) ( $\alpha = .50, .62, .71, \text{ and } .52$ , respectively). Given the modest reliabilities of the AAS (Berry & Sam, 2003; Brown and Zabefka, 2011), the results should be interpreted with caution.

**Psychological adaptation.** Same as Part 1 ( $\alpha = .89, .80, \text{ and } .93$  for the SWLS, RSES, and Scale for Psychological Problems, respectively). A composite of psychological adaptation was derived by averaging the standardized scores of self-esteem, life satisfaction, and psychological problems (reversed).

**Sociocultural competence.** Based on Furnham and Bochner's (1982) Social Situation Questionnaire, Ward and Kennedy (1994) developed a 20-item scale to assess skills required to manage everyday social situations in a new cultural environment (e.g., "Using transport system", and "Going to social gatherings"). Participants were asked to rate the amount of difficulty they experienced in these social domains on a 5-point scale from 1 (*no difficulty*) to 5 (*extreme difficulty*) ( $\alpha = .92$ )

**Attitude toward Hong Kong people.** A single item from the measure of attitudes toward ethnocultural groups (Berry, 2006) was used to tap Mainland Chinese immigrants' attitude toward Hong Kong people. Participants were told that the scale was like a thermometer with numbers ranging from 0 to 100 degrees. Higher numbers indicated more favourable attitude toward members of an ethnocultural group.

### **Results and Discussion**

Descriptive statistics and bivariate correlations of the measures are presented in Table 9. Correlation analysis showed that multicultural acquisition was positively correlated with integration strategy, attitude toward Hong Kong people, psychological adaptation, and sociocultural competence. It was negatively correlated with assimilation strategy and separation strategy, but not significantly correlated with years in Hong Kong or marginalization strategy.

Ethnic protection was positively correlated with assimilation strategy and separation strategy. It was negatively correlated with integration strategy, psychological adaptation, and sociocultural competence, but not significantly correlated with years in Hong Kong, marginalization strategy, or attitude toward Hong Kong people.

Hierarchical regression analysis was conducted to predict psychological adaptation. Age and gender was entered into the first block. The second block contained four acculturation strategies. Then the two factors of global orientations were added to the third block. Regression results showed that global orientations added significant variance to the outcome variable,  $F(2, 191) = 15.57, p < .001$ . After controlling for the effects of age and gender, multicultural acquisition positively predicted psychological adaptation over and above the four acculturation strategies,  $\beta = .35, p < .001$ , whereas ethnic protection was a negative predictor,  $\beta = -.17, p < .05$ .

Using similar steps as above, regression analysis was conducted to predict sociocultural

competence. Again, global orientations added significant variance to the outcome variable,  $F(2, 191) = 6.49, p < .01$ . After controlling for age and gender, multicultural acquisition positively predicted sociocultural competence over and above the four acculturation strategies,  $\beta = .23, p < .01$ , whereas ethnic protection was a negative predictor,  $\beta = -.16, p < .05$ .

Another set of regression analyses was conducted to predict attitudes toward Hong Kong people using similar steps. Global orientations accounted for additional variance in the outcome variable,  $F(2, 191) = 3.03, p = .05$ . After controlling for age and gender, multicultural acquisition positively predicted attitudes toward Hong Kong people over and above the four acculturation strategies,  $\beta = .18, p < .05$ .<sup>7</sup>

The above findings support the general applicability of global orientations to immigrants, providing evidence for the incremental predictive validity of global orientations on intrapersonal and intergroup functioning in the process of immigration-based acculturation.

### Study 2g

Moving beyond the intergroup contexts of Hong Kong and Mainland China, this study examined Caucasian Americans' attitudes toward outgroup members in the U.S. We hypothesized that global orientations would predict whether people think of themselves as being close to or distanced from their outgroups. Another objective of this study was to control for conceptually related factors, namely multicultural exposure and political orientation, and also potential response bias (social desirability) when evaluating the predictive power of global orientations.

### Method

#### Participants and Procedure

We recruited psychology undergraduates from the subject pool at Iowa State University. Participants completed an online survey for course credit. One hundred and thirty-three

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<sup>7</sup> Similar to Part 1, we used the composite score of ownership as a proxy of SES. The significance of the predictors remained the same after controlling for ownership and frequency of travelling abroad in the past five years,

participants who identified themselves as Caucasian Americans were selected in the current study (85 females;  $M_{age} = 19.65$ ,  $SD = 2.66$ ). They completed the following measures in English.

### Measures

**Global orientations.** We used the English version of the GOS from Study 3 to measure multicultural acquisition and ethnic protection ( $\alpha = .85$  and  $.77$ , respectively).

**Overlap of self and outgroup.** To measure participants' closeness with outgroups, we adopted the Self-Group Overlap measure from Schubert and Otten (2002). Participants were asked to choose from seven sets of circles to represent their closeness to a particular outgroup. The two circles differed in their degree of overlap across sets, which were assigned a value of 1 (*no overlap*) to 7 (*completely overlap*). In each set of circles, one circle was labeled "self" and the other one was labeled with an outgroup; in this study, we targeted four outgroups, namely Asians, Latinos, Africans, and Muslims. We averaged the four Self-Outgroup Overlap items to form a single index with higher scores indicating higher overlap between the self and outgroups ( $\alpha = .77$ ).

**Political orientation.** Participants' political orientation was assessed by a single-item measure that has been used in previous research on political thoughts and behaviors (e.g., Jost, 2006; Jost, West, & Gosling, 2009). Participants were asked to place themselves on a 7-point scale ranging from 1 (*very liberal*) to 7 (*very conservative*).

**Multicultural exposure.** We measured multicultural exposure using two sets of items. Participants were asked to indicate whether they spoke a foreign language other than their mother tongue. About 40% of them reported that they spoke a foreign language (most commonly Spanish), coded as yes (1) or no (0). In addition, participants were asked to list five of their closest friends and indicate their ethnicity. We then counted the number of friends who were not Caucasian Americans for each participant. Overall, they listed 0.90 out



of 5 friends as not from their own ethnic group.

**Social desirability.** Because people may adjust their self-reported feelings and thoughts toward ethnic minority groups in a socially desirable manner, we used the short form of the Marlowe-Crowne Social Desirability Scale (Ballard, 1992) to control for participants' level of social desirability, with 13 true-false statements ( $\alpha = .63$ ).

### Results and Discussion

Means, standard deviations, and bivariate correlations among the variables are summarized in Table 10. Several associations in the current results are noteworthy. First, Caucasian Americans who were lower on ethnic protection thought that they overlapped to a greater extent with outgroups. Second, political orientation was negatively correlated with multicultural acquisition but positively correlated with ethnic protection, indicating that people high on multicultural acquisition were more liberal whereas those high on ethnic protection were more conservative. Third, people high on multicultural acquisition were more likely to speak a foreign language. Fourth, number of close friends from outside one's ethnic group was positively correlated with multicultural acquisition, while negatively correlated with ethnic protection. Finally, the two global orientation factors were not significantly related to social desirability.

We conducted hierarchical regression analysis to predict self-outgroup overlap from global orientations after controlling for the covariates. Specifically, we entered participants' age, gender, and social desirability scores in block 1. In the next block, we entered speaking of foreign language, number of close ethnic-outgroup friends, and political orientation. Finally, we entered the two global orientation factors. None of the covariates significantly predicted the outcome. As expected, global orientations explained significant additional variance over and above the covariates,  $F(2, 122) = 10.87, p < .001$ . In particular, ethnic protection negatively predicted self-outgroup overlap ( $\beta = -.32, p < .01$ ). That is, Caucasian

Americans who were high on ethnic protection perceived themselves as more distanced from their outgroups. The effect of multicultural acquisition was in the predicted positive direction, but did not reach significance.

Though both political orientation and global orientations have implications for intergroup relations, the subjective experience of one's relations to outgroups entails more than simply being liberal versus conservative. It involves self-observed agency and effort that do not arise merely from social desirability and go beyond multicultural exposure.

### **Study 3**

In Study 3, we examined the predictive power of global orientations on behavior styles and behavioral outcomes. As Study 2b found that multicultural acquisition was positively related to individuating and modest behavior, the same patterns were hypothesized in this study using a sample from a different age group, bilingual adolescents in Hong Kong. We also included these students' oral presentation scores as outcome measures of their English and Chinese performance. As incorporating useful elements from individualistic and collectivistic cultures enriches one's behavioral repertoire and facilitates beneficial functioning, we hypothesized that multicultural acquisition would predict both English and Chinese presentation performance positively.

### **Method**

#### **Participants and Procedure**

The sample consisted of 744 (302 females;  $M_{\text{age}} = 13.91$ ,  $SD = 1.47$ ) Chinese students from a secondary school (with English as the medium of instruction) in Hong Kong, with age ranged from 11 to 17. Participants were recruited from each of the five grades ( $n = 140, 154, 148, 165, \text{ and } 137$  from Form 1, 2, 3, 4, and 5 respectively (equivalent to Grade 7, 8, 9, 10, and 11 in the American school system); 52, 56, 70, 72, and 52 females, respectively;  $M_{\text{age}} = 11.86, 12.89, 13.87, 14.95, \text{ and } 15.82$ , respectively;  $SD = 0.47, 0.50, 0.54, 0.56, \text{ and } 0.48$ ,

respectively), and they participated in this study on voluntary basis. After excluding missing data in written and behavioral measures, subsequent analyses included 713 students.

Informed consent was obtained from the students and their parents in advance.

Participants first completed questionnaires containing the following instruments in Chinese, and also reported demographic information, such as age and gender. After approximately one month, they made oral presentations in both Chinese and English, and their performance was assessed by their Chinese and English teachers, respectively.

### Measures

**Global orientations.** Using the same scales in Studies 1 and 2b, we measured global orientations ( $\alpha = .85$ , and  $.73$  for multicultural acquisition and ethnic protection, respectively), individuating behavior ( $\alpha = .88$ ), and modest behavior ( $\alpha = .84$ ).

**Presentation performance.** Participants' presentation performance was measured by the scores of Chinese and English oral examinations, consisting of individual presentation and group discussion. Participants were given five minutes to read an article and asked to prepare for a three-minute oral presentation individually. After individual presentations, they went to another examination room and joined a group discussion. Based on the Evangel College Summative Assessment Speaking Scoring Guide (2010), the examiners who were language teachers in the school scored students' performance in four areas, namely, 1) ideas and organization, 2) vocabulary and language patterns, 3) pronunciation and delivery, and 4) strategies for oral communication. Each student's performance was scored on a 10-point scale ranging from 1 (*very poor*) to 10 (*very good*) in each of the four areas. Both individual presentation and group discussion accounted for 50% in the full mark of 80.

### Results and Discussion

Due to the multilevel structure of the data with students (Level 1 within-grade) nested within grades (Level 2 between-grade), multilevel analysis was employed. Models were fitted

with random intercepts and fixed slopes, controlling for gender in all of the following analyses. All variables in the models were at the individual level (Level 1 within-grade); the interdependence among students within each grade was taken into account by the multilevel model.

First, we tested the predictive validity of global orientations on Chinese and Western behavioral styles. The multilevel model supported our hypotheses (see Figure 1). Multicultural acquisition positively predicted both modest behavior,  $\beta = .15, p < .05$ , and individuating behavior,  $\beta = .45, p < .001$ . Ethnic protection negatively predicted both modest behavior,  $\beta = -.15, p < .001$ , and individuating behavior,  $\beta = -.06, p < .05$ . We also tested the model predicting two individuation factors. Multicultural acquisition positively predicted both taking the lead,  $\beta = .44, p < .001$ , and seeking attention,  $\beta = .40, p < .001$ , whereas ethnic protection negatively predicted taking the lead,  $\beta = -.07, p < .01$ , and marginally and negatively predicted seeking attention,  $\beta = -.04, p = .065$ .<sup>8</sup>

Second, to generalize the predictive validity to behavioral outcomes, we tested whether global orientations predicted presentation performance in Chinese and English. The multilevel model supported our hypotheses (see Figure 2). Multicultural acquisition positively predicted both Chinese presentation performance,  $\beta = .09, p < .01$ , and English presentation performance,  $\beta = .12, p < .001$ , but the effects of ethnic protection were not significant,  $ps > .05$ .<sup>9</sup> As English presentation performance might be affected by students' English proficiency, we obtained their scores and rankings in the English subject. Raw scores differed by grade (for example, the highest score in Form 4 was 79.5 but the highest in other forms was 87.7 to 94.0), so we first group-mean-centered the raw scores separately for each Form. The effect of multicultural acquisition still held after controlling for the centered scores

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<sup>8</sup> The significance of the predictors remained the same after controlling for the education levels of their father and mother (participants' overseas stay was not measured in this secondary school sample).

<sup>9</sup> Multicultural acquisition remained significant after controlling for the education levels of their father and mother.

and rankings,  $\beta = .07, p < .01$ , in the prediction of Chinese presentation performance, and  $\beta = .07, p < .01$ , in the prediction of English presentation performance.

Thus, multicultural acquisition facilitates the incorporation of behavioral styles from individualistic and collectivistic cultures and enhances the skills needed for effective functioning. Consistent with the correlational results in Study 2b, this study used multilevel analysis and further found that ethnic protection predicted both modest and individuating behavior negatively. Conceivably, ethnic protection comprises the element of believing in the superiority of one's own culture, which is incompatible with the self-effacing and other-enhancing features of modest behavior, and also contains the element of feeling anxious about cultural interactions, which is at odds with the taking-the-lead and seeking-attention features of individuating behavior. These elements are not conducive to favorable impression and successful outcomes in a presentation task that requires the public display of the best of oneself.

#### **Study 4**

Though Study 2d showed that global orientations predicted intercultural contact, the results did not indicate the direction of influence. It is plausible that living in Hong Kong with diverse immigrant and ethnic groups increases the level of global orientations. Thus, we conducted a longitudinal study to examine the prospective influence of global orientations and infer directional relations between global orientations and intercultural contact in Study 4.

#### **Part 1**

We first examined the long-term impact of global orientations among majority group members using a cross-lagged panel design. In this study, we focused on Hong Kong local students' intercultural contact with foreigners, and hypothesized that multicultural acquisition was especially relevant to Hong Kong's cosmopolitan milieu, such that this proactive

approach would facilitate intercultural contact over time.

## Method

### Participants and Procedure

Five-hundred and eighty-nine first-year Hong Kong college students (340 females;  $M_{age} = 19.29$ ,  $SD = 1.10$ ) from a large-scale study were contacted to participate in a three-wave longitudinal study. It lasted for around one year with intervals of approximately 6 months. Participants were asked to complete an online survey in Chinese on a voluntary basis. In the first wave of data collection (T1), 377 participants (64%) responded to our email request. In the next two waves, we contacted additional participants from the large-scale study via telephone and recruited 560 for Time 2 (T2). Finally, 479 of them participated in Time 3 (T3), with 14% attrition rate from T2 to T3. On average, the participants completed the measures for 2.40 waves.

### Measures

**Global orientations.** We used the GOS to measure multicultural acquisition ( $\alpha = .90$  for T1,  $.92$  for T2, and  $.92$  for T3) and ethnic protection ( $\alpha = .73$  for T1,  $.73$  for T2, and  $.76$  for T3).

**Intercultural contact with foreigners.** Same as Study 2e (for frequency of intercultural contact,  $\alpha = .74$ ,  $.76$ , and  $.78$  at T1, T2, and T3, respectively; for pleasantness of intercultural contact,  $\alpha = .74$ ,  $.74$ , and  $.77$  at T1, T2, and T3, respectively).

## Results and Discussion

The longitudinal data were analyzed using cross-lagged panel models to determine the prospective influence of multicultural acquisition on intercultural contact outcomes. Three issues are noteworthy in our models. First, we used the latent factor approach to model the multicultural acquisition factor. Three parcels were loaded on the latent factor of multicultural acquisition for each wave. Second, we constrained the cross-lagged effects to be equal across

waves because we expected the degree of influence (e.g., from multicultural acquisition to frequency of intercultural contact) to be similar across the time points. Finally, Maximum Likelihood was used to estimate missing data in our analyses. In these models, we tested if there were any cross-lagged effects from one variable to another variable. Although we only predicted that multicultural acquisition influenced both frequency and pleasantness of intercultural contact, there might also be reciprocal effects of intercultural contact on the change of multicultural acquisition. Analyses were conducted separately for the frequency and pleasantness of intercultural contact with foreigners.

Consistent with our hypotheses, multicultural acquisition predicted frequency of intercultural contact over time ( $\beta_{T1-T2} = .09, p = .001$ ;  $\beta_{T2-T3} = .09, p = .001$ ; see Figure 3). However, frequency of intercultural contact did not predict the changes in multicultural acquisition ( $\beta_{T1-T2} = .001, p = .95$ ;  $\beta_{T2-T3} = .001, p = .95$ ). The cross-lagged effects from multicultural acquisition to frequency of intercultural contact were significantly stronger than that of the opposite direction, with unstandardized estimate =  $-.15, p < .01$ . Moreover, the model showed acceptable fit,  $\chi^2(46) = 268.17, CFI = .95, RMSEA = .09, SRMR = .05$ .

In a similar vein, multicultural acquisition predicted pleasantness of intercultural contact ( $\beta_{T1-T2} = .23, p < .001$ ;  $\beta_{T2-T3} = .26, p < .001$ ), but not in the opposite direction ( $\beta_{T1-T2} = .03, p = .17$ ;  $\beta_{T2-T3} = .04, p = .17$ ; see Figure 4). Again, causal dominance was observed for the cross-lagged effects from multicultural acquisition to pleasantness of intercultural contact, with unstandardized estimate =  $-.17, p < .001$ . The model showed an acceptable fit,  $\chi^2(46) = 246.23, CFI = .95, RMSEA = .09, SRMR = .05$ .

We also explored the influence of ethnic protection on frequency and pleasantness of intercultural contact with foreigners over time. Ethnic protection did not predict frequency of contact with foreigners nor did frequency of contact predict the level of ethnic protection. Ethnic protection negatively and significantly predicted pleasantness of intercultural contact

( $\beta_{T1-T2} = -.13, p < .001$ ;  $\beta_{T2-T3} = -.16, p < .001$ ), but not in the reverse direction ( $\beta_{T1-T2} = -.03, p = .25$ ;  $\beta_{T2-T3} = -.04, p = .25$ ).

These results confirm the direction of influence in globalization-based acculturation. Higher levels of multicultural acquisition consistently predicted majority group members' higher motivation to interact with people from other cultures as well as their positive experiences in intercultural contact over time. Intriguingly, multicultural acquisition, but not ethnic protection, predicted frequency of contact with foreigners among Hong Kong Chinese students. We reason that intercultural contact with foreigners is relatively involuntary in the university setting (e.g., with teachers and classmates). While Hong Kong students with high levels of multicultural acquisition may actively seek more opportunities to contact foreigners inside and outside classroom, those with high levels of ethnic protection do not have much freedom to choose avoidance if their teachers or group mates working on the same class project are foreigners. Therefore, frequency of contact is explained by multicultural acquisition, but not ethnic protection. On the other hand, both multicultural acquisition and ethnic protection predicted the pleasantness of contact with foreigners.

## **Part 2**

We then examined the long-term impact of global orientations on minority group members also using a cross-lagged panel design. In this study, we focused on Mainland students' intercultural contact with Hong Kong locals, and hypothesized that ethnic protection was especially relevant to the atmosphere of increasing hostility between Hong Kong and Mainland Chinese, such that this resistant approach would impede intercultural contact over time.

## **Method**

### **Participants and Procedure**

We contacted 188 first-year Mainland Chinese students from the large scale study (111



females;  $M_{\text{age}} = 20.48$ ,  $SD = 2.59$ ) who were currently studying in universities in Hong Kong. They were asked to participate in a three-wave longitudinal study with intervals of approximately 6 months and to complete an online survey in Chinese. One hundred and twenty-seven participants (68%) took part in Time 1. After we contacted additional participants via telephone, the response rate increased in Time 2 ( $n = 177$ ) and Time 3 ( $n = 151$ ). On average, they completed the measures for 2.42 waves.

### Measures

**Global orientations.** We used the GOS to measure ethnic protection ( $\alpha = .78$  for T1,  $.77$  for T2, and  $.73$  for T3) and multicultural acquisition ( $\alpha = .92$  for T1,  $.92$  for T2, and  $.95$  for T3).

**Intercultural contact with majority group members.** We used the same measure in Part 1 to assess the quantity and quality of intercultural contact with majority group members, i.e., Hong Kong people (for frequency of intercultural contact,  $\alpha = .69$ ,  $.81$ , and  $.84$  at T1, T2, and T3, respectively; for pleasantness of intercultural contact,  $\alpha = .81$ ,  $.81$ , and  $.90$  at T1, T2, and T3, respectively).

### Results and Discussion

Similar cross-lagged panel models were conducted to examine the influence of ethnic protection on minority group members' intercultural contact experience with majority group members over time. As hypothesized, ethnic protection significantly and negatively predicted frequency of intercultural contact across time ( $\beta_{T1-T2} = -.17$ ,  $p = .003$ ;  $\beta_{T2-T3} = -.15$ ,  $p = .003$ ), while frequency did not predict the change of ethnic protection ( $\beta_{T1-T2} = -.08$ ,  $p = .13$ ;  $\beta_{T2-T3} = -.08$ ,  $p = .13$ ; see Figure 5). The cross-lagged effects from ethnic protection to frequency of intercultural contact were significantly stronger than the reverse direction, with unstandardized estimate =  $.22$ ,  $p < .05$ . The model fit was adequate,  $\chi^2(47) = 92.93$ , CFI =  $.95$ , RMSEA =  $.07$ , SRMR =  $.05$ .

Yet, the effects of ethnic protection were marginally significant on pleasantness of intercultural experience across time ( $\beta_{T1-T2} = -.11, p = .07$ ;  $\beta_{T2-T3} = -.10, p = .07$ ), whereas pleasantness did not predict the change of ethnic protection significantly,  $ps > .05$ . The cross-lagged effects from ethnic protection to pleasantness of intercultural contact were in the predicted direction, i.e. slightly stronger than the reverse direction, but did not reach significance. The model fit was less satisfactory,  $\chi^2(47) = 118.40$ , CFI = .91, RMSEA = .09, SRMR = .07 (see Figure 6).

We explored whether Mainland Chinese students' level of multicultural acquisition affected intercultural contact with Hong Kong people over time, or vice versa. Multicultural acquisition predicted frequency ( $\beta_{T1-T2} = .10, p < .05$ ;  $\beta_{T2-T3} = .09, p < .05$ ) and pleasantness ( $\beta_{T1-T2} = .16, p < .01$ ;  $\beta_{T2-T3} = .15, p < .01$ ) of contact with majority group members, whereas intercultural contact did not predict multicultural acquisition,  $ps > .05$ .

As a result, minority group members' levels of multicultural acquisition and ethnic protection significantly predicted frequency of intercultural contact with majority group members, but the effect of ethnic protection on the pleasantness of such experience was weaker over time. In other words, while ethnic protection impedes people's initiation to interact with other cultural group members (because of anxiety and perceived cultural boundaries), it matters less in shaping how people perceive such experience once initiated. The different findings among majority and minority group members in Study 4 may be due to particular intergroup contexts which need to be further explored.

### **General Discussion**

The present research adopted an individual difference approach to understanding the psychological processes in response to globalization. We proposed a construct termed global orientation and identified its components, antecedents, and consequences. Global orientations consist of two factors to capture feelings, thoughts, and behaviors arising from contact with

other cultures, namely multicultural acquisition and ethnic protection. Multicultural acquisition reflects promotion-focused endeavors that derive pleasant feelings from intercultural contact, endorse cultural diversity, and direct goal-oriented behaviors to maximize beneficial outcomes in cultural interactions. In contrast, ethnic protection represents prevention-focused mechanisms that generate negative feelings from intercultural contact, possess ethnocentric views, and display risk-avoiding behaviors to minimize adverse consequences in cultural interactions.

Based on the ten studies, global orientations can be applied to both globalization-based acculturation (Studies 1, 2a, 2b, 2c, 2d, 2f-Part 1, 2g, 3, and 4-Part 1) and immigration-based acculturation (Studies 2e, 2f-Part 2, and 4-Part 2), can be relevant to both majority groups (Hong Kong Chinese in Studies 1, 2a, 2c, 2d, 2f-Part 1, 3, and 4-Part 1; European Canadians in Study 2b; and Caucasian Americans in Study 2g) and minority groups in the society (Mainland Chinese sojourners in Studies 2e and 4-Part 2, and Mainland Chinese immigrants in Study 2f-Part 2), and can be utilized in both multicultural contexts (Hong Kong in Studies 1, 2a, 2c, 2d, 2e, 2f, 3, and 4, and Vancouver in Study 2b) and relatively monocultural contexts (Beijing) in Study 2e, and Iowa in Study 2g). Global orientations are significantly related to but conceptually different from openness to experience, holistic thinking, and bicultural identity integration. They predict consequences in the domains of well-being (psychological adaptation and sociocultural competence), behavior (individuating and modest behavior, English and Chinese oral presentation performance), and intergroup relations (overlap of self and outgroups, attitudes toward ethnocultural groups, tolerance, and intercultural contact).

The proactive and defensive responses to globalization captured by global orientations have theoretical parallels to the integrative and exclusionary reactions to global culture outlined by Chiu and colleagues (2011) in their social cognitive experiments. Yet, we argue that global orientation is an individual difference construct with some unique features and

strengths. First, it is measured by a scale tapping feelings, thoughts, and behaviors that arise from being acculturated to the globalizing world. Its construct validity has been shown in this series of studies demonstrating its nomological network, discriminant validity, and predictive validity. Second, global orientations consist of multicultural acquisition, which is regulated by promotion orientation, and ethnic protection, conversely regulated by prevention orientation. Third, the agentic component of global orientations is geared toward bilingual competence, bicultural orientations (individualistic and collectivistic), and behavioral affordances from both Western and Eastern cultures. Fourth, global orientations involve a specific set of predictors including personality traits, thinking style, and cultural identification. Fifth, its consequences have been shown to manifest in behavioral styles and outcomes, well-being and adaptation, and intergroup attitudes and intercultural contact.

### **Multicultural Acquisition**

As a proactive response to globalization, multicultural acquisition is positively correlated with the personality traits of openness to experience, extraversion, restraint, and intellect, as well as holistic thinking, multicultural ideology, promotion focus, self-esteem, self-efficacy, cross-cultural efficacy, bicultural identity integration, and liberalism. It reflects the opening of the cultural mind, with an agentic, outward approach to equipping oneself with cultural knowledge, learning the languages, customs, traditions, and norms of other cultures, gaining multicultural experiences, and developing harmonious relationships with cultural others. Those high in multicultural acquisition appear to select multiple useful cultural elements, thus incorporating orientations of both individualistic and collectivistic cultures, as well as the behavioral styles characteristic of these cultures. People scoring high on multicultural acquisition develop proficient language skills and actively use their first and second languages. Their linguistic advantages and rich behavioral repertoires make them capable of handling culturally diverse situations well. They also perform well in situations

requiring linguistic and cultural competence. As a result, they hold positive self-views, maintain psychological well-being, and fare well in sociocultural adaptation.

Multicultural acquisition may parallel the code-switching patterns of bilingual and multilingual acquisition. Cognitively, individuals with the multicultural acquisition approach may take a constructivist view of cultural knowledge as discrete, domain-specific categories stored in the brain rather than integrated, domain-general constructs (e.g., Bruner, 1957, 1990; Heider, 1958; Hong, Morris, Chiu, & Benet-Martínez, 2000). Specific categories of cultural schemas are retrieved and enacted in response to stimuli in the environment. Research on cultural frame switching (CFS; Hong et al., 2000) has shown that bicultural individuals shift between their different cultural orientations in response to situational cues. Yet, the prerequisite for the CFS is that a set of meaning systems, such as self-concept, values, norms, attitudes, and attributional styles from both cultures have to be internalized by biculturals, and thus cognitively available, accessible, and applicable in the relevant cultural context (Hong, Benet-Martínez, Morris, & Chiu, 2003). In this sense, cultural primes activate cognitive content, i.e., domain-specific beliefs (Hong, 2009; Kashima, 2009).

However, individuals with the multicultural acquisition approach are not necessarily bicultural or multicultural. Monocultural people may also absorb useful cultural elements from multicultural exposure and intercultural contact, but keep their cultural identity intact. Research on the culture-as-situated-cognition model (Oyserman, Sorensen, Reber, & Chen, 2009) has shown that monocultural Americans are also subject to cultural priming effects and exhibit cognitive responses congruent with the primed individualistic or collectivistic cultural mindsets. In this case, what cultural primes activate is cognitive processes (contrast and separation vs. assimilation and connection), or what has been termed as the individualistic and collectivistic cultural syndromes available in any individual (Kashima, 2009; Oyserman & Sorensen, 2009). Behaviorally, people with the multicultural acquisition approach may

adopt the “alternation” model for cultural acquisition (e.g., LaFromboise et al., 1993; Ogbu & Matute-Bianchi, 1986; Phinney & Devich-Navarro, 1997). While interacting with two or more cultures, they may alternate their behaviors depending on the cultural context and adjust their responses for different purposes contingent on the situation.

### **Ethnic Protection**

As a defensive response to globalization, ethnic protection is negatively correlated with the personality traits of openness to experience, extraversion, intellect, multicultural ideology, self-esteem, and bicultural identity integration, and positively correlated with prevention focus and conservatism. It reflects the narrowing of the cultural mind, with an ethnocentric, essentialized approach to guarding one’s cultural status, adhering to behavioral ideals of local culture, and resisting multicultural environments and intercultural exchanges. These individuals may not react negatively to stimuli from a single foreign culture stimuli, but rather to mixing their own culture’s iconic image with that of another culture (Morris, Mok, & Mor, 2011; Torelli et al., 2011). They are anxious about losing their culture’s borders and unwilling to leave their comfort zone to embrace novelty. These tendencies are detrimental to individuals’ psychological health in a multicultural context, resulting in acculturative stress.

In most of the ten studies, the correlations between multicultural acquisition and ethnic protection are modest or not significant, indicating that these two factors are not opposite ends of the same continuum. In fact, the results of Study 2c show that though BII was positively correlated with multicultural acquisition and negatively correlated with ethnic protection, when both factors were placed in the regression model, the effect of BII on multicultural acquisition became non-significant and that on ethnic protection remained significant. Therefore, the defensive approach to globalization is more identity-driven, related to the perception of incompatibility and conflict between cultures in addition to closed-mindedness or being closed to experience. Tong, Hui, Kwan, and Peng (2011) found that when individuals

strongly identified with their local culture, they reacted to cross-border transactions with a nationalistic and protective mindset rather than evaluating international exchanges rationally. In contrast, identification with other cultures mitigates the defensive response. The significance of ethnic protection in predicting the distancing of self and outgroups in Study 2g may indicate that such a mechanism occurs even within the same country. The defensive approach can shape one's subjective perception of the self in intergroup relations, distancing oneself from outgroup members.

In Morris and colleagues' (2011) study, Hong Kong Chinese with low Western identification exhibited need for cognitive closure in the face of culturally mixed images, but those with high Western identification did not. Since need for closure (Kruglanski, 1989) depicts the desire for definite information and firm decisions, exposure to the juxtaposition of inflowing foreign culture and local heritage culture presents ambiguity and uncertainty that threaten one's cultural identity and evoke closure reactions. High identifiers are familiar with and less resistant to Western culture, thereby not threatened by Western and local cultural mixes. In the present research, we measured the integration of Western and local cultural identities among Hong Kong Chinese. Given Hong Kong's colonial history and Chinese heritage, identification with Western culture resembles identifying with the inflowing global culture. Nevertheless, since Western culture is still an outgroup to Hong Kong, merging ingroup and outgroup identities may elicit ethnic protection.

Future studies may assess the integration of local and global cultural identities directly; for example, using the new Bicultural Identity Integration Scale (BIIS-2; Huynh & Benet-Martínez, 2010) to measure the integration of multicultural identities, or the Identification With All Humanity Scale (McFarland, Webb, & Brown, 2012) to measure the concern for global humanity as an ingroup. Lyons, Lun, and Gelfan (2010, 2011) suggested that activating both local and global identities would produce positive responses to

globalization. As shown in the present research, multicultural acquisition enhances majority groups' tolerance toward ethnocultural groups and overlap with outgroups, reduces immigrants' perceived discrimination, and increases the pleasantness and frequency of intercultural contact over time, whereas ethnic protection negatively predicts sojourners' pleasantness and frequency of intercultural contact over time. These intergroup consequences shed light on the pathways to building an inclusive and interactive global village. The optimal distinctiveness theory (Brewer, 1991) posits that members of subgroups may regard the superordinate group identity as too inclusive and threatening to the distinctiveness of their subgroup identity, and may choose to show more differentiation from the superordinate group. We suggest that integrating local and global identities, incorporating multicultural elements, and adopting behavioral alternations may balance the need for inclusiveness and the need for distinctiveness, achieving optimal integration.

### **Role of Global Orientations**

Other than the main effects on behavioral and intergroup outcomes, the utility of global orientations can be revealed from its incremental predictive validity. In Study 2b, both global orientation factors explained additional variance in individuating and modest behavior above and beyond multicultural ideology, which reveals that global orientations embody personal efforts of cultural learning that entail more than simply an endorsement of cultural diversity in a given society. In Study 2d, multicultural acquisition predicted intercultural contact over and above language proficiency and usage as well as identification with Mainland Chinese and Western cultures, indicating that it captures interpersonal initiatives in addition to the conventional acculturation measures of language skills and cultural identifications. Likewise, ethnic protection predicted acculturative stress over and above depression, anxiety, and stress, indicating that it captures nationalistic sentiments to preserve one's culture in addition to general mental health indicators. In Study 2f, multicultural acquisition predicted Hong Kong



locals' psychological adjustment and tolerance toward other ethnocultural groups over and above acculturation expectations. It also predicted Mainland immigrants' psychological and sociocultural adaptation and attitudes toward majority group members over and above acculturation strategies. These results suggest that there is more going on in the globalization process than what we already know about multiculturalism and acculturation; further studies are needed.

Though we use terms such as “antecedents” and “consequences” to indicate the directions of influence in the present research, our results are mostly based on correlational data except the cross-lagged panel design in Study 4. Conclusions about causal effects cannot be drawn without experimental evidence. While we categorize openness to experience, holistic thinking, and BII as predictors in Study 2c, we hope future research can show the functionality of global orientations by testing their mediating role in the relations between these attributes and global competence outcomes. Openness to experience and holistic thinking predict multicultural acquisition positively and may in turn contribute to one's performance in culture-related domains. Preferring variety due to intellectual curiosity and perceiving the world as interconnected are the building blocks of global mindset. As such, the effects of generalized cognitive style and personality disposition work through the cultural learning approach to affect one's functioning in culturally diverse situations. On the other hand, openness to experience and BII predict ethnic protection negatively and may in turn affect culture-related outcomes. Being narrow-minded and perceiving local and global identities as difficult to integrate are likely to create defensiveness about one's culture of origin and undermine performance in multicultural contexts.

Further studies can examine the relations between global orientations and more general personality traits related to multicultural effectiveness, such as measured by the Multicultural Personality Questionnaire (Van der Zee & Van Oudenhoven, 2000, 2001). They identify five

factors of traits most relevant to multicultural success viz., Cultural Empathy, Open-mindedness, Emotional Stability, Social Initiative, and Flexibility (Van der Zee & Van Oudenhoven, 2001). The relations between some of these factors and global orientations have been tested in the present research, but the incremental predictive validity of global orientations is yet to be investigated. The moderating role of global orientations in multicultural experiences can also be explored. For example, though exposure to the juxtaposition of cultural stimuli fosters cognitive creativity (Leung & Chiu, 2010; Leung et al., 2008), it can induce negative emotions and exclusionary reactions (Cheng, Leung, & Wu, 2011; Torelli et al., 2011). Such exclusionary reactions can be attenuated by the need for cognition and yet accentuated by the need for closure. Can individual differences in multicultural acquisition mitigate the undesirable effects of simultaneous bicultural exposure? Can individual differences in ethnic protection exacerbate the resistance to integrating local and global identities? Do global orientations affect individual “prime-ability” to cultural cues, such that the effects of cultural priming are stronger on people high on multicultural acquisition because they are more motivated to respond in culturally congruent ways, compared with those high on ethnic protection who are more resistant to behaving in accord with the cues of other cultures? Further discovery of the boundary conditions and practical effects of global orientations awaits future research.

## Author Note

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Table 1

*Factor Loadings of the Items for the Global Orientations Scale in Study 1*

Item	Factor 1	Factor 2
1. I learn and speak languages other than my mother tongue	.53	
2. Cultural diversity is beneficial to a society	.34	
3. I am proud of being able to speak more than one language	.42	
4. I travel abroad to gain experiences with other cultures	.70	
5. It is important to recognize differences among various cultural groups	.58	
6. Efforts should be made to understand people from different cultural backgrounds	.66	
7. I am curious about traditions of other cultures	.80	
8. I read books or magazines to obtain knowledge about other cultures	.62	
9. I am eager to make friends with people from different cultural backgrounds	.54	
10. I try food from different cultures	.45	
11. One should actively involve himself or herself in a multicultural environment	.66	
12. I learn customs and traditions of other cultures	.68	
13. I am happy to learn the history and geography of other cultures	.69	.31*
14. I find living in a multicultural environment very stressful		.68

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15. I make friends mostly with people of the same cultural origin as mine	.55
16. My own culture is much superior to other cultures	.34
17. I stick to the norms of my own culture no matter where I am	.48
18. Speaking another language makes me nervous	.55
19. Immigrants and ethnic minorities should forget their cultures of origin as much as possible for better adaptation to their new environment	.48
20. I feel isolated from people of other cultural groups	.58
21. I appreciate art, music and entertainments from my culture only	.33
22. I have a set of beliefs about certain cultural groups that I use to help me predict behaviors of their members	.39
23. The ways that people of different cultural origins think and act often make me confused	.68
24. I dress in my own cultural style regardless of the occasion	.45
25. I am worried that people from other cultures would not understand my ways of doing things	.53

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*Note.* Factor 1 = multicultural acquisition; Factor 2 = ethnic protection. Factor loadings below .30 are not shown.

\*Item #13 has double loadings, but the difference of loadings on the two factors shows it belongs to Factor 1.

Table 2

*Means, Standard Deviations, and Intercorrelations among the Measures in Study 1*

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. MA	5.68	0.56	-													
2. EP	3.67	0.66	-.11	-												
3. CPU	5.24	0.50	.25**	-.03	-											
4. EPU	3.94	0.58	.20*	-.30**	.28**	-										
5. MI	4.12	0.56	.42***	-.20*	.07	.20*	-									
6. Independence	5.16	0.49	.35***	.06	.19*	.21*	.12	-								
7. Interdependence	5.15	0.48	.36***	-.10	.13	.19*	.30**	.08	-							
8. ES	4.02	1.18	.06	-.15	.06	.17	.07	.14	.22*	-						
9. Extraversion	4.19	1.11	.20*	-.18*	.12	.24**	.21*	.13	.25**	.07	-					
10. Application	4.58	1.00	.05	-.15	.19*	.12	-.01	.04	.04	.01	-.06	-				
11. OE	4.07	1.18	.34***	-.18*	-.04	.16	.13	.31**	.05	.00	.37***	-.12	-			
12. Assertiveness	4.05	0.97	.12	-.12	.05	.13	-.04	.39***	-.09	.14	.12	.17	.37***	-		
13. Restraint	4.47	0.97	.19*	-.17	.27**	.19*	.13	.04	.05	.14	-.11	.36***	-.04	.09	-	
14. Helpfulness	4.01	1.02	.15	-.14	.10	.14	.12	-.07	.35***	.18*	.12	.06	.06	-.06	.25**	-
15. Intellect	4.82	0.78	.28**	-.19*	.20*	.27**	.12	.37***	-.04	.32***	.07	.32***	.25**	.33**	.52***	-.02

*Note.* MA = Multicultural acquisition; EP = Ethnic protection; CPU = Chinese proficiency and usage; EPU = English proficiency and usage; MI = Multicultural ideology; ES = Emotional stability; OE = Openness to experience.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 3

*Means, Standard Deviations, and Intercorrelations among the Measures in Study 2a*

Variable	Mean	SD	1	2	3	4	5	6
1. Multicultural acquisition	5.52	.72	-					
2. Ethnic protection	3.81	.80	-.19*	-				
3. Promotion focus	3.33	.61	.19*	.04	-			
4. Prevention focus	3.19	.58	.14	.25**	.45***	-		
5. Self-esteem	2.85	.49	.18*	-.20*	.24**	-.20*	-	
6. Self-efficacy	2.59	.49	.21**	-.13	.47***	.12	.45***	-
7. Cross-cultural efficacy	2.69	.49	.35***	-.27***	.27***	-.12	.38***	.49***

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 4

*Means, Standard Deviations, and Intercorrelations among the Measures in Study 2b*

Variable	Mean	SD	1	2	3	4	5	6	7
1. Multicultural acquisition	5.37	0.74	-						
2. Ethnic protection	3.01	0.74	-.32***	-					
3. Multicultural ideology	5.27	0.86	.47***	-.39***	-				
4. Independent self-construal	5.38	0.58	.26***	-.09	.07	-			
5. Interdependent self-construal	5.16	0.64	.24**	-.21**	.29***	.16*	-		
6. Individuating behavior	3.02	0.73	.23**	-.27***	-.03	.24***	-.04		
7. Modest behavior	3.52	0.33	.26***	-.30***	.26***	.05	.41***	-.15*	-

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 5

*Means, Standard Deviations, and Intercorrelations among the Measures in Study 2c*

Variable	Mean	SD	1	2	3	4	5
1. Multicultural acquisition	5.56	.63	-				
2. Ethnic protection	3.82	.65	-.14*	-			
3. Openness to experience	3.99	1.31	.28***	-.19**	-		
4. Holistic thinking	5.17	.46	.25***	-.11	-.02	-	
5. Bicultural identity integration (BII)	3.45	.36	.16*	-.29***	.01	.17**	-

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 6

*Means, Standard Deviations, and Intercorrelations among the Measures in Study 2d*

Variable	Mean	SD	2	3	4	5	6	7	8	9	10	11	12	13	14
1. MA	5.54	0.71	-.20***	.29***	.25***	.20***	.05**	.31***	.22***	.31***	.18***	-.12***	-.20***	-.17***	-.08***
2. EP	3.84	0.68	-	-.17***	-.04*	-.08***	.09***	-.18***	-.12***	-.17***	-.07***	.45***	.28***	.30***	.24***
3. EPU	3.67	0.88		-	.33***	.29***	-.06***	.23***	.03	.23***	.00	-.20***	-.12***	-.08***	-.05**
4. MPU	3.28	0.90			-	.13***	.14***	.13***	.20***	.13***	.16***	-.08***	-.07***	-.04*	-.04
5. WCI	3.94	0.80				-	.26***	.18***	.06***	.20***	.08***	-.04*	-.11***	-.06***	-.06***
6. MCCI	3.75	0.90					-	.03	.25***	.01	.25***	.03	-.02	-.03	-.05**
7. PICFSC	3.55	0.65						-	.36***	.58***	.27***	-.16***	-.13***	-.12***	-.06***
8. PICMCSC	3.48	0.68							-	.28***	.60***	-.11***	-.12***	-.10***	-.08***
9. PICFC	3.52	0.70								-	.31***	-.15***	-.15***	-.11***	-.07***
10. PICMCC	3.31	0.69									-	-.09***	-.10***	-.06***	-.08***
11. AS	2.72	0.54										-	.39***	.41***	.35***
12. Depression	0.65	0.58											-	.77***	.74***
13. Anxiety	0.61	0.53												-	.79***
14. Stress	0.92	0.61													-

*Note.* MA = Multicultural acquisition; EP = Ethnic protection; EPU = English proficiency and usage; MPU = Mandarin proficiency and usage; WCI = Western cultural identification; MCCI = Mainland Chinese cultural identification; PICFSC = Pleasantness of intercultural contact with foreign students in college; PICMCSC = Pleasantness of intercultural contact with Mainland Chinese students in college; PICFC = Pleasantness of intercultural contact with foreigners in community; PICMCC = Pleasantness of intercultural contact with Mainland Chinese in community; AS = Acculturative stress.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 7  
*Hierarchical Regression Models for Testing Incremental Predictive Validity of Global Orientations in Study 2d*

Variable	PICFSC			PICMCSC			PICFC			PICMCC			Acculturative stress		
	β 1	β 2	β 3	β 1	β 2	β 3	β 1	β 2	β 3	β 1	β 2	β 3	β 1	β 2	β 3
Age	-.01			-.03			-.01			-.02			.05**		
Gender (1 = male, 2 = female)	-.01			-.02			-.06***			-.00			.04*		
EPU		.10***			-.06***			.10***			-.08***				
MPU		.03			.14***			.02			.12***				
WCI		.10***			-.04*			.13***			-.01				
MCCI		.00			.24***			-.03			.22***				
MA			.23***			.17***			.22***			.16***			.01
EP			-.12***			-.11***		-.09***		-.11***		-.07***			.35***
Depression														.14***	
Anxiety														.16***	
Stress														.04	
R <sup>2</sup>	.01	.07	.14	.01	.10	.14	.02	.09	.14	.00	.08	.11	.01	.18	.29
ΔR <sup>2</sup>	.01	.07	.06	.01	.09	.04	.02	.07	.05	.00	.08	.03	.01	.17	.11
ΔF	8.80***	53.07***	107.63***	10.11***	70.78***	70.67***	25.75***	57.03***	88.22***	4.57*	59.76***	44.50***	18.37***	205.83***	233.58***

*Note.* MA = Multicultural acquisition; EP = Ethnic protection; EPU = English proficiency and usage; MPU = Mandarin proficiency and usage; WCI = Western cultural identification; MCCI = Mainland Chinese cultural identification; PICFSC = Pleasantness of intercultural contact with foreign students in college; PICMCSC = Pleasantness of intercultural contact with Mainland Chinese students in college; PICFC = Pleasantness of intercultural contact with foreigners in community; PICMCC = Pleasantness of intercultural contact with Mainland Chinese in community; β 1= Block 1 beta; β 2= Block 2 beta; β 3= Block 3 beta.

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.



Table 8

*Means, Standard Deviations, and Intercorrelations among the Measures in Study 2f-Part 1*

Variable	Mean	SD	1	2	3	4	5	6	7
1. Multicultural acquisition	5.12	0.82	-						
2. Ethnic protection	3.90	0.64	-.08	-					
3. Integration expectation	3.92	0.69	.34***	-.03	-				
4. Assimilation expectation	2.35	0.67	-.18*	.36***	-.14*	-			
5. Separation expectation	2.36	0.77	-.24***	.16*	-.29***	.32***	-		
6. Marginalization expectation	2.15	0.75	-.11	.15*	-.35***	.33***	.60***	-	
7. Tolerance	3.59	0.54	.27***	-.15*	.26***	-.12	-.18*	-.23***	-
8. Psychological adaptation <sup>a</sup>	0.00	0.73	.24***	-.08	.20**	-.08	-.20**	-.16*	.14*

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

<sup>a</sup> Psychological adaptation was derived from averaging the standardized scores for self-esteem, life satisfaction, and psychological problems (reversed); mean value is not applicable.

Table 9

*Means, Standard Deviations, and Intercorrelations among the Measures in Study 2f-Part 2*

Variable	Mean	SD	1	2	3	4	5	6	7	8
1. Multicultural acquisition	4.98	0.84	-							
2. Ethnic protection	4.28	0.67	-.04	-						
3. Integration strategy	3.73	0.80	.41***	-.20**	-					
4. Assimilation strategy	2.13	0.67	-.15*	.23**	-.01	-				
5. Separation strategy	2.45	0.78	-.30***	.19**	-.22**	.27***	-			
6. Marginalization strategy	2.32	0.78	-.13	.13	-.03	.27***	.48***	-		
7. Attitude towards Hong Kong people	67.05	20.83	.18*	-.12	.08	-.01	-.17*	-.00	-	
8. Psychological adaptation <sup>a</sup>	0.00	0.77	.48***	-.23***	.43***	-.04	-.32***	-.16*	.12	-
9. Sociocultural adaptation	4.28	0.57	.29***	-.17*	.25***	-.03	-.15*	-.23**	-.07	.40**

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

<sup>a</sup> Psychological adaptation was derived from averaging the standardized scores for self-esteem, life satisfaction, and psychological problems (reversed); mean value is not applicable.

Table 10

*Means, Standard Deviations, and Intercorrelations among the Measures in Study 2g*

Variable	Mean	SD	1	2	3	4	5	6	7
Multicultural acquisition	5.04	0.81	-						
Ethnic protection	3.54	0.78	-.44***	-					
Self-outgroup overlap	2.57	1.05	.12	-.21*	-				
Political orientation <sup>a</sup>	3.90	1.47	-.27**	.19*	-.02	-			
Speaking of foreign language	0.40	0.49	.20*	-.05	.01	-.24**	-		
Number of close multicultural friends	0.90	1.23	.29**	-.18*	.05	-.05	.13	-	
Social desirability	0.42	0.20	-.12	.04	-.01	.11	-.02	.08	-

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

<sup>a</sup> From liberal to conservative.

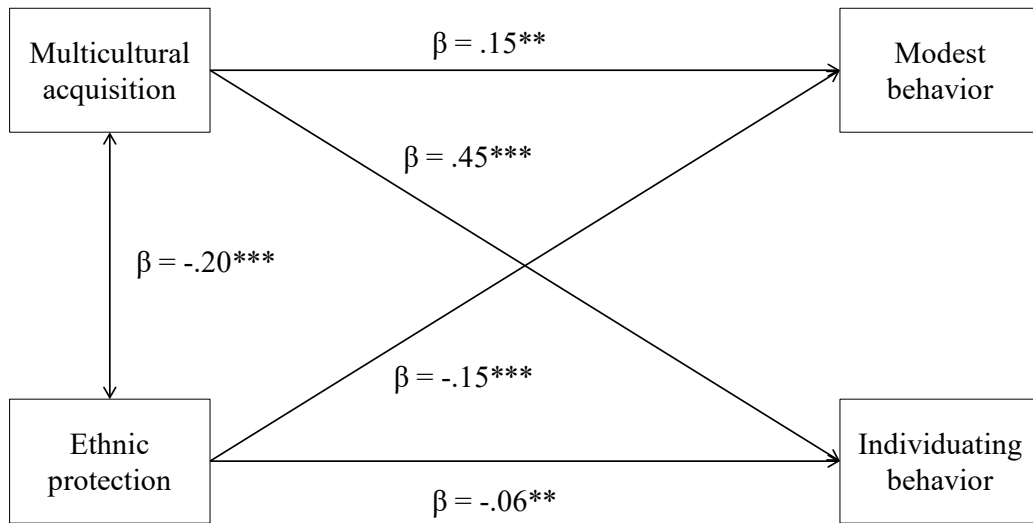
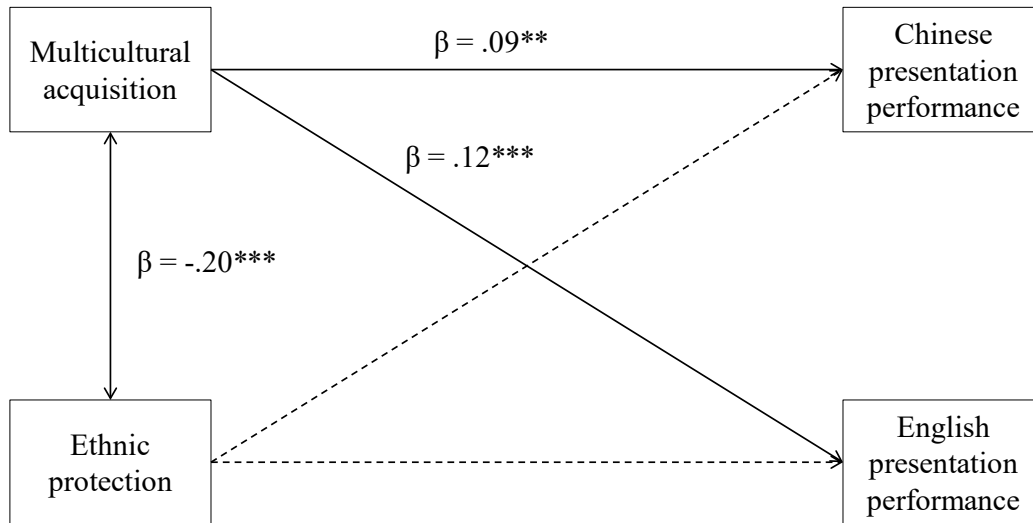


Figure 1. Within-level model predicting modest and individuating behavior in Study 3

\*\* $p < .01$ . \*\*\* $p < .001$ .



*Figure 2.* Within-level model predicting presentation performance in Chinese and English in Study 3.

$**p < .01$ .  $***p < .001$ .

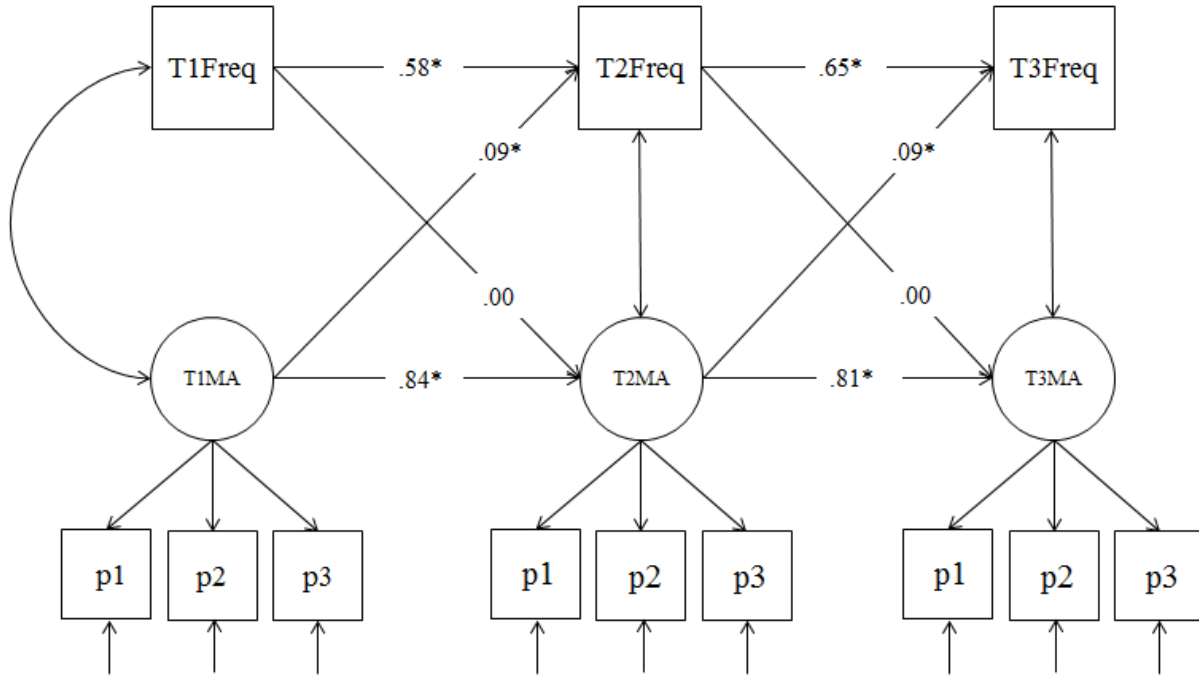


Figure 3. Cross-lagged panel model on frequency of intercultural contact among Hong Kong students in Study 4-Part 1.

Note. MA = Multicultural acquisition; Freq = frequency of intercultural contact.

\* $p < .05$ .

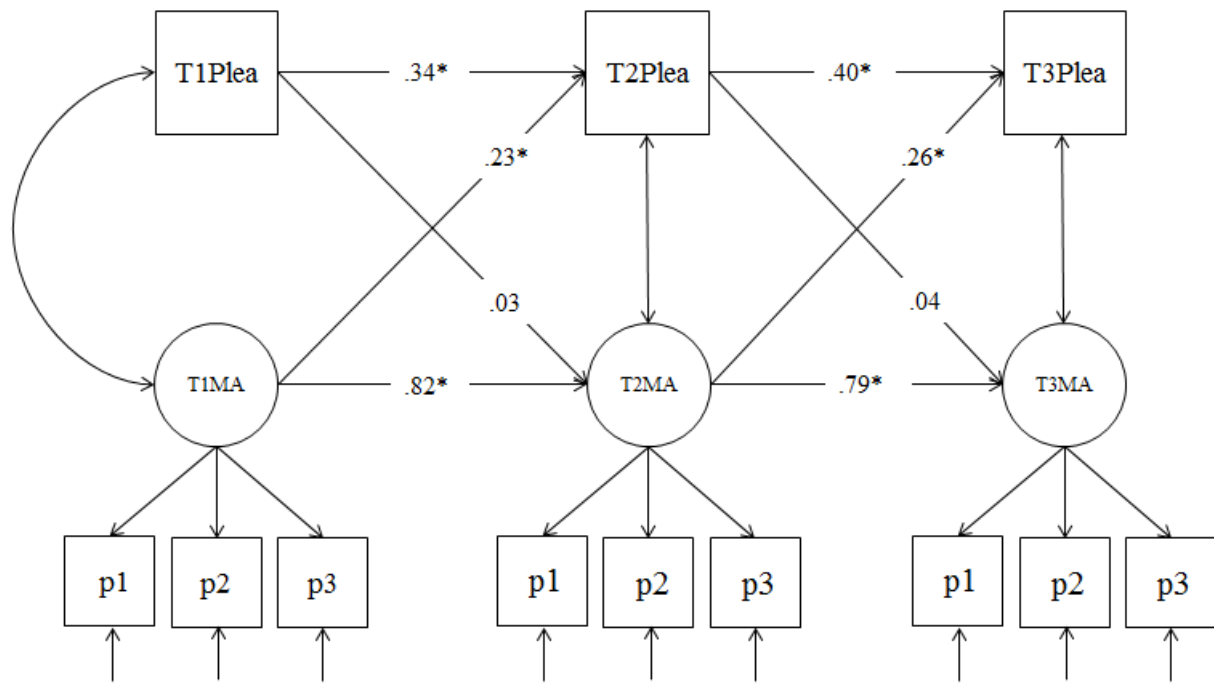


Figure 4. Cross-lagged panel model on pleasantness of intercultural contact among Hong Kong students in Study 4-Part 1.

Note. MA = Multicultural acquisition; Plea = pleasantness of intercultural contact.

\* $p < .05$ .

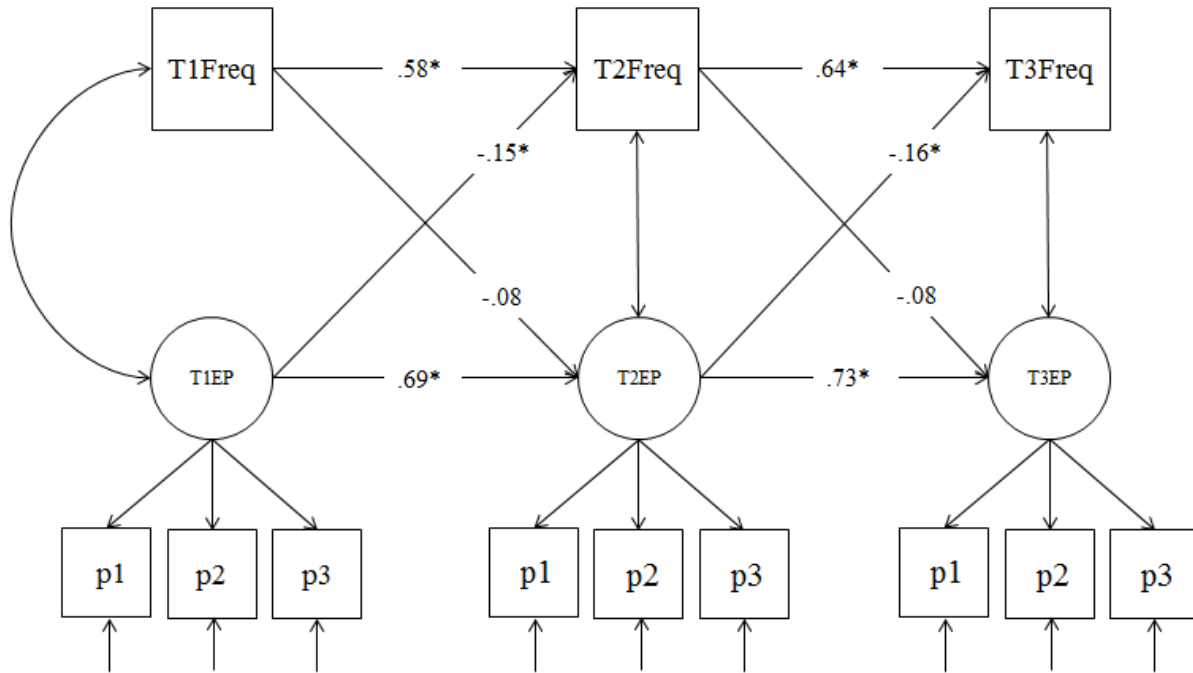


Figure 5. Cross-lagged panel model on frequency of intercultural contact among Mainland Chinese students in Study 4-Part 2.

Note. EP = Ethnic protection; Freq = frequency of intercultural contact.

\* $p < .05$ .



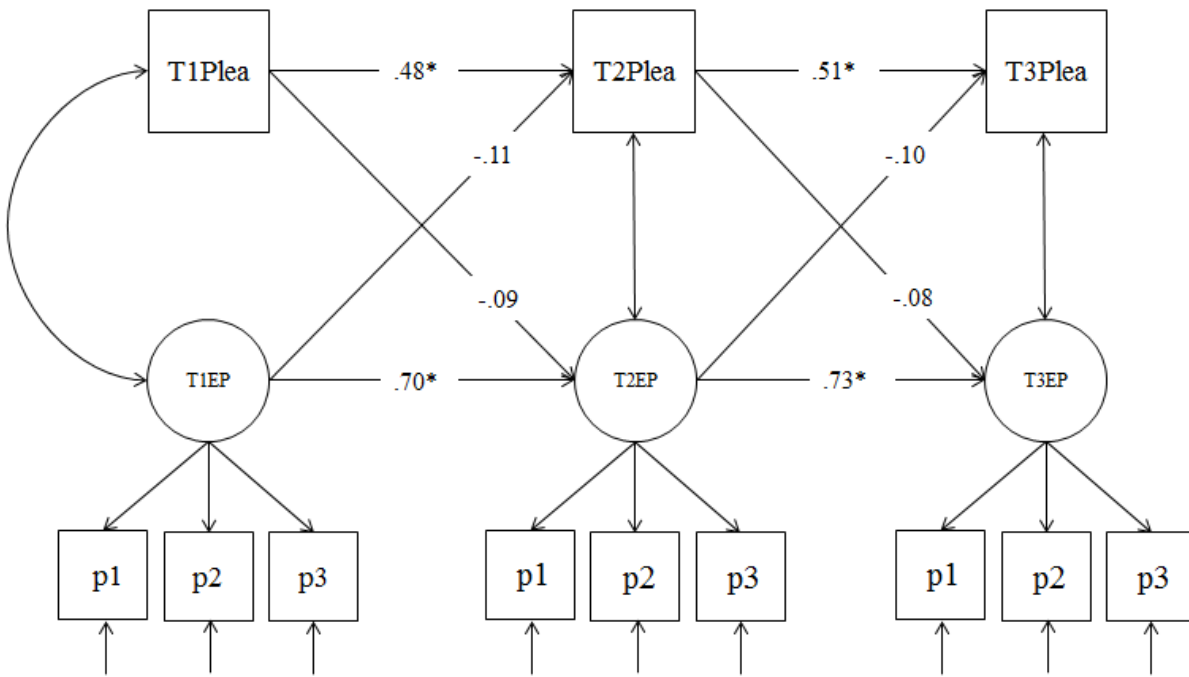


Figure 6. Cross-lagged panel model on pleasantness of intercultural contact among Mainland Chinese students in Study 4-Part 2.

Note. EP = Ethnic protection; Plea = pleasantness of intercultural contact.

\* $p < .05$ .