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NATIONALITY DIFFERENCES IN THE RELATIONSHIP BETWEEN CAREER DECISION-MAKING PROFILES AND CAREER SELF-EFFICACY

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We examined the moderating role of Chinese versus American nationality on the relationship between university students' career decision making and career self-efficacy. Participants were 196 American and 323 Chinese college students, who completed the Career Decision-Making Profiles questionnaire (assessing information gathering, locus of control, information processing, effort spent in decision making, procrastination, consulting with others, speed of decision making, dependence on others, desire to please others, willingness to compromise, and aspiration) and a measure of career self-efficacy (assessing adaptability, career-training motivation, feedback-seeking attitudes, and job mobility preparedness). Results showed that the positive relationship between career self-efficacy and the aspiration for an ideal occupation, speed of final decision making, and information gathering dimensions was

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stronger among American than Chinese students. In addition, the negative relationship between career self-efficacy and the willingness to compromise and desire to please others was weaker among Chinese than American students. Implications for career education are discussed.

Keywords: career decision-making profiles, career decision making, career self-efficacy, culture, nationality.

Career decision-making behavior plays an important role in helping individuals to make the right choices for their future career development (Gadassi, Gati, & Dayan, 2012; Gati, Gadassi, & Mashiah-Cohen, 2012; Gati, Landman, Davidovitch, Asulin-Peretz, & Gadassi, 2010). Gati, Landman, et al. (2010) criticized previous measures of career decision-making behaviors, such as those assessing career decision-making styles (Harren, 1979), for capturing limited components of these behaviors; so they developed the comprehensive Career Decision-Making Profiles (CDMP) questionnaire (Gati, Landman, et al., 2010). This scale consists of the following dimensions: *information gathering* (the thoroughness of information collection), *locus of control* (the belief that one's career is less determined by external than by internal factors), *information processing* (whether individuals analyze all kinds of information in a detailed way), *effort spent in decision making* (how much energy individuals put into the decision-making process), *procrastination* (whether individuals postpone making decisions), *consulting with others* (to what extent individuals seek suggestions from others), *speed of decision making* (how quickly individuals make their final choice), *dependence on others* (to what extent individuals rely on others to make decisions for them), *desire to please others* (whether individuals would like to fulfill others' preferences and expectations), *willingness to compromise* (whether individuals are willing to make changes to their original decisions), and *aspiration* (whether individuals have an ideal occupational choice in mind). It has been found that the CDMP model can be applied to different cultural settings, such as Israel, the United States, and China (Gati, Landman, et al., 2010; Tian et al., 2014; Willner, Gati, & Guan, 2015), and that the CDMP dimensions significantly predict career-related variables, such as career decision-making difficulty, career decision status, and career decision-making self-efficacy (Gadassi et al., 2012; Gati, Gadassi, et al., 2012; Tian et al., 2014; Willner et al., 2015).

However, recently researchers have shown that there are national variations within the CDMP dimensions (Guan, Chen, et al., 2015). For example, cultural differences in values between Chinese and Americans have been established (Hofstede, 2001; Markus & Kitayama, 1991). According to the self-construal model (Kwan, Bond, & Singelis, 1997; Markus & Kitayama, 1991), individuals in collectivistic cultures, such as China, are socialized to use a more collective

approach for making choices about their careers when compared with people from individualistic cultures, such as the United States (Buchtel et al., 2015; Hofstede, 2001; Markus & Kitayama, 1991). Chinese people have been found to score consistently higher than Americans do on the CDMP dimensions of willingness to please others, acceptance of compromise, consultation with others, procrastination, and relying on others (Guan, Chen, et al., 2015). In contrast, Americans generally value autonomy and self-direction, regarding career decision making as their personal responsibility. Accordingly, American university students typically score higher than Chinese students do on the CDMP dimensions of locus of control, aspiration, and effort spent in making decisions (Guan, Chen, et al., 2015).

However, most previous researchers have focused only on the main effects of nationality on the CDMP dimensions, and few have examined how nationality interacts with the CDMP dimensions in predicting career-related outcomes (Guan, Chen, et al., 2015). To address this gap, we examined how nationality (United States vs. China) affects the relationship between career decision-making behaviors and career-related outcomes. Mau (2000) compared national differences in the roles of career decision-making styles and self-efficacy of career decision making, but was criticized for capturing very few types of decision making behaviors and not providing a comprehensive account of how nationality affects the relationship between career decision-making behavior and other constructs (Gati, Landman, et al., 2010).

On the basis of current theories about Eastern–Western cultural differences, such as the self-construal model (Kwan et al., 1997; Markus & Kitayama, 1991), we considered the CDMP to be a comprehensive measure to examine the interactions between nationality and CDMP in predicting *career self-efficacy*, which reflects one's belief that he or she has the ability to achieve positive outcomes in career development (Guan, Deng, et al., 2013; Guan, Guo, et al., 2014; Kossek, Roberts, Fisher, & DeMarr, 1998). In extensive research conducted in Western cultures, it has been revealed that career self-efficacy beliefs are associated with positive career-related outcomes, such as career success (Blustein, 1989). In addition, researchers using Chinese participants have shown that career self-efficacy positively predicts a task-oriented coping style and job performance, and is negatively related to job burnout (Di, Huang, & Zhang, 2003). These findings suggest that career self-efficacy is closely related to various positive career development outcomes and is an appropriate dependent variable for examining the CDMP's positive effects.

To extend prior research on the mean differences in CDMP across cultures, we set out to examine how CDMP affects career self-efficacy in different cultural groups. Researchers of the adaptability of the CDMP for use among Western participants have shown that the analytic style of information processing,

comprehensive information gathering, high levels of internal locus of control and effort, high speed of decision making, low procrastination, low dependence, and high desire to please others predict advantageous career outcomes (Gadassi et al., 2012). However, researchers using Chinese students have found some differences in these relationships compared to those using participants from Western cultures (Tian et al., 2014).

Kwan et al. (1997) suggested that collectivistic values and interdependent self-construal underscore the importance of nurturing one's social network. Consequently, we believed that the adaptability of the CDMP for use among Chinese participants should depend not only on successfully achieving personal career goals, but also on achieving relational harmony both inside and out of the workplace context. In addition, as Chinese tend to have a holistic thinking style, involving understanding a system by sensing its overall patterns rather than the details, and a more dialectical self-view, which is characterized by the coexistence of contradictory traits and behaviors (Markus & Kitayama, 1991), the CDMP dimensions that match these cultural orientations may be applicable in the Chinese, but not American, cultural context. We empirically examined these possibilities by testing how nationality moderates the effects of CDMP on self-efficacy in relation to one's career (Kossek et al., 1998).

According to Bandura (1977), individuals' learning experiences give rise to different levels of self-efficacy beliefs in various life domains, which, in turn, affect behavioral outcomes, such as approach behavior, level of performance, and persistence. Consistent with self-efficacy theory (Bandura, 1977), we believed that the CDMP dimensions would reflect different learning experiences in individuals' career development, and may be associated with different levels of adaptability that help individuals achieve their career goals. Therefore, CDMP may interact with nationality in predicting individuals' career self-efficacy. Among the 11 dimensions of the CDMP, dependence on others and the desire to please others capture a relationship-oriented approach of career decision making and may be regarded as maladaptive factors in Western cultures (Gadassi et al., 2012); however, because these two types of behavior give rise to a sense of connection with significant others (Markus & Kitayama, 1991), they may be perceived as intrinsically rewarding among Chinese people. Chinese with high scores on these two dimensions may achieve positive career outcomes; thus, the negative effects of the dimensions on career self-efficacy may be weaker in a Chinese, compared to an American, cultural setting. Further, the effects of consulting with others on career self-efficacy have been found to be mixed when using Western participants (Gadassi et al., 2012). Because consulting with others helps individuals adjust their career goals to match the expectations of significant others, we predicted that the positive effect of consultation with others would be stronger among Chinese than Americans.

In addition, because Americans generally value autonomy and self-direction, an internal locus of control, more procrastination, greater effort, and faster speed of decision making may strengthen their sense of having control in their given situations (Markus & Kitayama, 1991); therefore, these factors may be perceived as more beneficial for achieving desirable career outcomes among Americans than among Chinese. The American emphasis on a clear, coherent, and stable sense of self (Markus & Kitayama, 1991) indicates that high aspiration may predict high self-efficacy because individuals with high aspiration may express their distinctive attributes consistently over time and in different contexts, and strive to achieve personal goals. On the other hand, because Chinese people have a more dialectical self-view, they may regard willingness to compromise as an appropriate means to adjust themselves in different situations. Thus, the positive effects of willingness to compromise may be stronger among Chinese than Americans. In addition, a more analytical, rather than holistic, style of information collection, organization, and analysis, may enable individuals to match their unique, stable personality characteristics to their career choices; therefore, the positive effects of information gathering and information processing may be stronger among Americans than among the Chinese.

In line with the above review, we formed the following hypotheses:

Hypothesis 1: The negative relationship between desire to please others and career self-efficacy will be weaker among Chinese than among American participants.

Hypothesis 2: The negative relationship between dependence on others and career self-efficacy will be weaker among Chinese than among American participants.

Hypothesis 3: The positive relationship between consulting with others and self-efficacy will be stronger among Chinese than among American participants.

Hypothesis 4: The negative relationship between external locus of control and career self-efficacy will be weaker among Chinese than among American participants.

Hypothesis 5: The negative relationship between procrastination and career self-efficacy will be weaker among Chinese than among American participants.

Hypothesis 6: The positive relationship between effort invested and career self-efficacy will be weaker among Chinese than among American participants.

Hypothesis 7: The positive relationship between speed and self-efficacy will be weaker among Chinese than among American participants.

Hypothesis 8: The positive effect of aspiration on self-efficacy will be weaker among Chinese than among American participants.

Hypothesis 9: The positive relationship between compromise and self-efficacy will be stronger among Chinese than among American participants.

Hypothesis 10: The positive relationship between information gathering and self-efficacy will be weaker among Chinese than among American participants.

Hypothesis 11: The positive relationship between information processing and self-efficacy will be weaker among Chinese than among American participants.

Method

Participants and Procedure

Before this study was conducted, we obtained ethical approval from the ethical review board of Huaqiao University, China. In addition, all the participants read a consent form and confirmed that they fully understood the terms.

We used Amazon Mechanical Turk (Paolacci, Chandler, & Ipeirotis, 2010) to recruit American participants. No significant difference has been found between the quality of data collected from Amazon Mechanical Turk and in a laboratory (Paolacci et al., 2010; Rand, 2012). The instructions given were as follows: "This is a career attitude study. In this study, we are interested in how university students make career decisions. If you are an American undergraduate student, please click the link below to get access to the survey. You will be paid US$1.00 after completing this survey." After participants completed the online survey at www.surveymonkey.com, they were paid through the Amazon Mechanical Turk system. Valid data from 196 American undergraduates (105 men and 91 women; M_{age} = 22.01 years, SD = 3.07) were used for the subsequent analyses.

Chinese participants were recruited through www.sojump.com (see, e.g., Zhou, Zhang, Su, & Zhou, 2012). The instructions given were as follows: "This is a career attitude study. In this study, we are interested in how university students make career decisions. If you are a Chinese undergraduate student, please complete the following survey." Each participant received an online shopping coupon valued at about RMB¥3.00 (US$0.50) after completing the survey. Preliminary analysis showed that 11 participants did not finish the questionnaire; thus, valid data were collected from 323 Chinese undergraduates (157 men and 166 women; M_{age} = 20.67 years, SD = 2.10).

Measures

Career Decision-Making Profiles (CDMP). Chinese participants completed a Chinese version of the CDMP questionnaire, which has been validated in previous research (Tian et al., 2014). American participants completed the English version of the CDMP (Gati, Landman, et al., 2010). Cronbach's alpha coefficient for the 11 dimensions ranged from .70 to .90 for the Chinese participants and from .77 to .90 for the American participants (see Table 1).

Career Self-Efficacy Scale. The 11-item Career Self-Efficacy Scale was used to assess employees' adaptability, career-training motivation, feedback-seeking attitudes, and job mobility preparedness (Kossek et al., 1998). A sample item is "When I make plans for my career, I am confident I can make them work."

Participants rated their responses on a 7-point Likert scale (1 = *completely disagree*, 7 = *completely agree*). Cronbach's alpha was .78 for Chinese participants and .86 for American participants.

Results

Descriptives and Correlations

As shown in Table 1, among American participants, career self-efficacy was positively related to information gathering, information processing, effort, speed, consultation, and aspiration, and negatively associated with external locus of control, procrastination, dependence on others, and desire to please others. Among Chinese participants, career self-efficacy was positively correlated with information gathering, information processing, speed, consultation, aspiration, and compromise, and negatively correlated with external locus of control, procrastination, and dependence on others.

Interactions Between Nationality and CDMP

To examine whether nationality moderates the relationship between different dimensions of the CDMP and career self-efficacy, gender (dummy coded as male = 0, female = 1) and age were entered in Step 1 as control variables (Becker, 2005). In Step 2, nationality (American = 0, Chinese = 1) and the 11 CDMP dimensions were entered. In Step 3, the interaction terms (e.g., culture × procrastination, culture × speed, culture × effort, culture × dependence on others) were entered.

For predicting career self-efficacy (see Table 2), there were significant interactions between nationality and information gathering, supporting Hypothesis 10; between nationality and speed, supporting Hypothesis 7; between nationality and desire to please others, supporting Hypothesis 1; between nationality and aspiration, supporting Hypothesis 8; and between culture and willingness to compromise, supporting Hypothesis 9. However, the other interactions were nonsignificant.

For the significant interactions, we ran regression analyses to further examine their patterns (Aiken & West, 1991). Results showed that information gathering and career self-efficacy were positively related among Americans ($\beta = .20$, $t = 3.02$, $p < .01$), but this relationship was not significant among Chinese participants ($\beta = -.01$, $t = -0.08$, *ns*). Speed of making the final decision positively predicted self-efficacy among Americans ($\beta = .16$, $t = 2.39$, $p < .01$), but this relationship was not significant among Chinese participants ($\beta = -.01$, $t = -0.10$, *ns*). Desire to please others negatively predicted career self-efficacy among Americans ($\beta = -.22$, $t = -3.03$, $p < .01$), but this relationship was not significant among Chinese participants ($\beta = -.01$, $t = -0.06$, *ns*). The positive relationship between

Table 1. *Descriptives and Intercorrelations Among Study Variables*

	Mean	*SD*	1	2	3	4	5	6
1. Gender[a]	–	–	–					
2. Age	22.01 (20.67)	3.07 (2.10)	.04 (-.01)	–				
3. IG	4.52 (4.05)	1.65 (1.20)	.15* (.09)	-.10 (-.18**)	**.83 (.70)**			
4. IP	5.19 (5.28)	1.05 (0.85)	.08 (.02)	-.02 (.12*)	.23** (.17**)	**.77 (.74)**		
5. LC	3.58 (3.85)	1.53 (1.18)	-.14 (-.04)	.14* (.25**)	-.65** (-.42**)	-.20** (-.02)	**.86 (.80)**	
6. EI	5.15 (4.34)	1.09 (1.00)	.08 (-.14**)	-.02 (.30**)	.13 (-.02)	.68** (.46**)	-.15* (.36**)	**.79 (.73)**
7. PR	3.96 (4.17)	1.57 (1.25)	-.12 (-.02)	.07 (.04)	-.52** (-.12*)	-.20** (.01)	.54** (.42**)	-.12 (.25**)
8. SP	3.62 (3.38)	1.31 (1.07)	.02 (.04)	-.09 (-.12*)	.25** (-.07)	-.08 (-.29**)	-.34** (-.33**)	-.21** (-.58**)
9. CO	3.52 (4.91)	1.35 (1.17)	.14* (.11*)	-.10 (-.23**)	.30** (.47**)	-.06 (.11*)	-.24** (-.37**)	-.05 (-.22**)
10. DO	3.46 (3.95)	1.58 (1.11)	-.17* (.10)	.10 (.15**)	-.65** (-.13*)	-.07 (.03)	.65** (.38**)	.02 (.25**)
11. DP	3.55 (4.66)	1.58 (1.01)	-.08 (.03)	.05 (.27**)	-.63** (-.02)	-.03 (.23**)	.64** (.32**)	-.03 (.35**)
12. AI	5.07 (4.47)	1.23 (1.39)	.05 (-.12*)	-.13 (.27**)	-.06 (.01)	.40** (.21**)	-.06 (.10)	.39** (.27**)
13. WC	4.77 (5.20)	1.16 (0.85)	.05 (.11*)	.05 (.20**)	-.14* (-.09)	.42** (.30**)	.23** (.12*)	.31** (.11*)
14. CSE	4.84 (4.94)	0.99 (0.69)	.08 (-.02)	-.16* (-.01)	.63** (.21**)	.42** (.39**)	-.62** (-.35**)	.33** (.03)

Table 1 (continued from right side of above table)

	7	8	9	10	11	12	13	14
7. PR	**.90 (.90)**							
8. SP	-.68** (-.59**)	**.79 (.79)**						
9. CO	-.23** (-.22**)	.03 (.08)	**.84 (.84)**					
10. DO	.62** (.38**)	-.52** (-.37**)	-.03 (-.09)	**.87 (.75)**				
11. DP	.50** (.29**)	-.39** (-.38**)	-.13 (-.05)	.79* (48**)	**.87 (.75)**			
12. AI	-.23** (.05)	.12 (-.15*)	-.14* (-.18**)	-.03 (.11*)	.12 (.22**)	**.84 (.90)**		
13. WC	.13 (.09)	-.20** (-.15**)	-.08 (-.02)	.16* (.07)	.27** (.29**)	.30** (.01)	**.79 (.86)**	
14. CSE	-.67** (-.35**)	.44** (.12*)	.20** (.22**)	-.63** (-.37**)	-.59** (-.10)	.33** (.19**)	-.06 (.15*)	**.78 (.86)**

Note. [a] male = 0, female = 1. The results for Chinese participants are shown in parentheses. Reliability coefficients are shown in **bold** along the diagonal. IG = information gathering, IP = information processing, LC = locus of control, EI = effort invested, PR = procrastination, SP = speed of making the final decision, CO = consultation with others, DO = dependence on others, DP = desire to please others, AI = aspiration for an ideal occupation, WC = willingness to compromise, CSE = career self-efficacy. * $p < .05$, ** $p < .01$.

aspiration for an ideal occupation and career self-efficacy was stronger among Americans ($\beta = .29$, $t = 4.56$, $p < .01$) than among Chinese participants ($\beta = .16$, $t = 4.08$, $p < .01$). Finally, willingness to compromise negatively predicted career self-efficacy among Americans ($\beta = -.09$, $t = -1.76$, $p < .10$), but was positively related to career self-efficacy among Chinese participants ($\beta = .12$, $t = 2.56$, $p < .05$).

Table 2. *Hierarchical Regression Results: Culture and Career Decision-Making Profiles as Predictors of Career Self-Efficacy*

	Career self-efficacy ($N = 519$)		
Predictors	Step 1	Step 2	Step 3
Gender (male = 0, female = 1)	.03	-.02	-.03
Age	-.11*	-.03	-.04
Nationality (United States = 0, China = 1)		.18**	.20**
Information gathering		.09*	.20**
Information processing		.26**	.24**
Locus of control		-.12**	-.04
Effort		.10*	.14*
Procrastination		-.18**	-.13†
Speed of decision making		.08	.16**
Consulting others		.13**	.15*
Dependence on others		-.24**	-.13
Desire to please others		-.11*	-.22**
Aspiration		.18**	.29**
Compromise		.03	-.09†
Nationality × Information gathering			-.14*
Nationality × Information processing			.03
Nationality × Locus of control			-.09
Nationality × Effort			-.08
Nationality × Procrastination			-.04
Nationality × Speed			-.12†
Nationality × Consulting others			-.03
Nationality × Dependence on others			-.09
Nationality × Desire to please others			.13*
Nationality × Aspiration			-.11†
Nationality × Compromise			.14**
R^2	.01*	.56**	.59**
F	3.28*[a]	46.09**[b]	28.51**[c]
ΔR^2	.01*	.55**	.03**

Note. † $p < .10$, * $p < .05$, ** $p < .01$. [a] $df = 2, 516$, [b] $df = 14, 504$, [c] $df = 25, 493$.

Discussion

Our results show that Hypotheses 1, 6, 7, 8, 9, and 10 were supported, whereas Hypotheses 2, 3, 4, 5, and 11 were not supported. This indicates that Chinese versus American nationality influences the effects of the CDMP dimensions on career self-efficacy. First, as Chinese culture emphasizes the importance of nurturing one's social relationships, the negative effect of desire to please others was significant among Americans, but not among Chinese. Desire to please others is at odds with the emphasis placed on striving for personal happiness and satisfaction in countries with individualistic cultures, such as the United States; therefore, it had a negative effect on career self-efficacy among American, but not Chinese participants. Second, because Americans generally value autonomy and self-direction, faster decision making may strengthen their sense of personal agency (Markus & Kitayama, 1991); therefore, the agentic dimensions may be perceived by Americans as more beneficial for achieving desirable career outcomes. Third, as Americans generally emphasize a clear, stable, and distinctive self-concept, a higher level of aspiration for an ideal occupation, lower level of compromise, and more comprehensive information gathering may be regarded as important ways to match their particular personality characteristics with their career choices. Therefore, it makes sense to us that the positive effects of aspiration and information gathering, and the negative effects of compromise on career self-efficacy, were weaker among Chinese than among American students (Guan, Jiang, Wang, Mo, & Zhu, 2016).

The significant interactions we observed between culture and CDMP on career self-efficacy attest to the importance of cultural fit for the adaptability of the CDMP questionnaire (Kwan et al., 1997). The positive effects of CDMP are determined not only by the functions of CDMP in helping individuals achieve their personal goals, but also by the extent to which CDMP help individuals fulfill goals that are shaped by their cultural norms. In addition, other dimensions of the CDMP scale, such as consulting with others, had similar effects on career self-efficacy in these two nations. These findings suggest that the positive effects of consulting with others, such as seeking information or other types of support, are prevalent in both cultures. Future researchers of CDMP should aim to contextualize current career theories into different social, economic, and ecological environments. From a career construction perspective (Savickas, 2013), individuals in different societies develop adaptive abilities to deal with difficulties in their career development, to pursue career outcomes such as job search success (Guan, Deng, et al., 2013; Guan, Guo, et al., 2014) and career success (Guan, Zhou, Ye, Jiang, & Zhou, 2015). These adaptive abilities have dispositional (Guan, Dai, et al., 2017) and contextual antecedents (Guan, Wang,

et al., 2015; Guan, Yang, Zhou, Tian, & Eves, 2016; Guan, Zhuang, et al., 2017), and more work should be done to examine whether nationality moderates the relationship between CDMP and adaptive abilities.

There are several possible limitations in this study. First, when testing the adaptability of the CDMP scale, the cross-sectional results could not be used to determine causal relationships between the examined variables. Individuals' CDMP dimensions can cause different levels of career self-efficacy beliefs, as argued in self-efficacy theory (Bandura, 1977), and it also might be true that career self-efficacy leads to CDMP (see, e.g., Kossek et al., 1998). Future researchers should use experimental or longitudinal study designs to address this limitation. Second, we used an online platform for data collection among American and Chinese college students. Although the validity of this method of data collection has been supported in previous studies (Paolacci et al., 2010; Rand, 2012; Zhou et al., 2012), future researchers should examine whether our results can be replicated with other samples collected using different methods.

Third, it is possible that the participants recruited in this study may not be representative samples for the university students from the two nations. Future researchers should attempt to use a more systematic way to collect research samples, in order to ensure the external validity of this study.

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