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Dynamic self-representation of interdependent Chinese: The effect of bicultural experience

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he process of globalisation has increased the opportunity for Chinese individuals to utilise influences from other cultures that differ from their own collectivistic culture. The explorations of the impact of acculturation on Chinese

culture (Markus & Kitayama, 1991; Oyserman, Coon, & Kemmelmeier, 2002).

However, as noted above, with globalisation, there have been an increasing number of individuals who have been exposed to other cultures. The explorations regarding the influence of the multicultural experience on the self-construals of Chinese individuals has become intriguing. How does one's own self change depending on the cultural frame one adopts? Although there were categorical assumptions in traditional cultural research studies, Morris, Chiu, and Liu (2015) have proposed a polyculturalism framework, which assumes that cultural influence on individuals is not categorical but partial and plural. This framework asserts that both the individuals' engagement with their primary culture and the culture's imprint on the individuals are partial. The partiality enables individual to incorporate influences from plural cultures. According to the polyculturalism framework, an individual's self is dynamically influenced by more than one culture.

Previous research provides evidence for this assumption. Hong, Morris, Chiu, and Benet-Martínez (2000) adopted pictures of American and Chinese icons to prime a different culture and found culture-congruent cognitions and behaviour, which indicated that the influences of culture are dynamic rather than static. The researchers put forward the dynamic constructivist theory of culture, which agrees with the view that an individual can hold more than one cultural meaning system (Hong et al., 2000). Moreover, the research asserts that individuals with multiple systems will be guided by whichever system is more accessible; this has been well proven by researches that successfully adapted culture priming to manipulate the accessibility of one particular cultural meaning system (Chiu, Malorie, Keh, & Law, 2009; Hong et al., 2000; Verkuyten & Pouliasi, 2002). Verkuyten and Pouliasi (2002) found that cultural priming could affect a bicultural individuals' attribution, as well as the level of connectedness at which they view themselves, their friends, and ethnic identity. Behavioural and neuroimaging studies used self-construal priming, which primed interdependent or independent self-construal by requesting participants to read essays that contained plural or singular pronouns ("we" or "I"). These behavioural and neuroimaging studies also found self-construal priming as a valid paradigm to prime different cultures (e.g., Sui, Hong, Liu, Humphreys, & Han, 2013). Sui et al. (2013) primed Chinese and British participants with interdependent and independent self-construals and then recorded the event-related potentials, whereas they judged the orientations of their own and a friend's faces after being primed. Although they did not observe independent self-construal priming effect in their behaviour data, they did indicate the significant impact of self-construal priming on culturally specific neural responses.

As noted, China has been classified as a collectivist culture, and Chinese people prefer interdependent self-construals (Markus & Kitayama, 1991). However, according to the polyculturalism framework and the dynamic constructivist theory, people can simultaneously hold more than one cultural meaning systems; in addition, whether a construct comes to the fore in one's mind depends on the extent to which the construct is highly accessible. Thus, we suggest that due to the acceleration of international communication and through the influence of acculturation, Chinese people may currently have both

priming more than those who have contact with other cultures through more indirect means.

Gender differences in self-construal

The results from psychological research indicate that men and women may differ in their self-construal orientation (refer to review by Cross & Madson, 1997). Specifically, men may have a more independent orientation, whereas women may have a more interdependent orientation. Additional research has extended the idea by including collective aspects of interdependence, which related to an individual's group memberships ial
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paragraph was accompanied by a question ("How many pronouns are there in this paragraph?") along with two response options to ensure participants really read the story.

Twenty Statement Test

Self-perceptions were elicited through the Twenty Statement Test (TST; Kuhn & McPartland, 1954) in which participants repeatedly answer the question, "Who am I?". The question was typically answered by completing 20 sentences beginning with "I am …". This test measured self-construal and was personalised to the respondents because the responses were spontaneous and self-directed. To avoid the independent self-construal priming from "I", we used a modified version of the TST (Becker et al., 2012) in which the original question "who am I?" was replaced by "who are you?". The instructions were as follows (Abdukeram, Mamat, Luo, & Wu, 2015; Becker et al., 2012):

> In the numbered spaces below, please write down anything that can describe you. You can write your answers as they occur to you without worrying about the order; however, together they should summarize the image you have of who you are. Your answers might include social groups or categories you belong to, personal relationships with others, as well as characteristics of yourself as an individual. Some may be things that other people know about, others may be your private thoughts about yourself. Some things you may see as relatively important, and others less so. Some may be things you are relatively happy about, and others less so.

Procedure

The experiment had a 3 (Self-construal priming: interdependent priming, independent priming, no priming) × 2(Cultural group: Mainland-Chinese, German-Chinese) between-subject design. The independent variables are self-construal priming and cultural group, and the dependent variables are self-levels (private self, collective self, relational self). Participants were randomly assigned to one of three priming conditions. After finishing the self-construal priming task (Gardner et al., 1999; Sui & Han, 2007; Sui et al., 2013), they were required to complete the TST (Kuhn & McPartland, 1954), which was conducted at their university in a quiet room in groups of 5–10 participants. The participants were told not to communicate with each other through the experiment. The participants were informed that the goal of this study was to explore how they evaluate themselves. At the end of the experiment, participants received a debriefing interview procedure,which ensured that participants did not suspect the correlation between self-construal priming task and TST.

RESULTS

Preliminary analyses

The self-describing items generated by participants in the TST were first coded into one of three categories in accordance with the method described by Brewer and Gardner (1996). The categories were private self-statements (e.g., "I am clever," "I am very optimistic"), relational self-statements (e.g., "I am a daughter," "I am good at making friends") and collective self-statements (e.g., "I am Chinese," "I am a student"). Partial results (20%) were double coded by naive raters who did not know the experimental purposes. The agreement between the two coders was acceptable (= .84). Then the proportion of each category was calculated as a function of the total number of items generated by each participant, which were the dependent measures of this experiment. The total number of self-describing items generated by both groups did not show significant difference (Mainland-Chinese: = 18.66, $D = 3.31$; German-Chinese: = 18.04, $D = 3.55$).

Existence of the priming effect

To test the hypothesis, we first conducted a 3 (Self-level: private self, collective self, relational self) × 3 (Self-construal priming: interdependent priming, independent priming, no priming) × 2(Cultural group: Mainland-Chinese, German-Chinese) × 2(Gender: men, women) multivariate analysis of variance (MANOVA) on the three self-levels. The results showed a significant main effect of self-level, $F(2, 744) = 1185.722$, < 0.001, $\eta^2 = 0.76$. Planned simple contrasts showed that the participants generated a higher proportion of private self-statements (= 0.71, $D = 0.19$) than that of relational self-statements (= 0.19, $D = 0.14$), $F(1, 383) = 1142.97$, < 0.001, $\eta^2 = 0.75$, and collective self-statements (= 0.11, $D = 0.13$), $F(1, 383) = 1647.43$, < 0.001, $\eta^2 = 0.81$. As we predicted, the interaction between self-level and self-construal priming was significant, $F(4, 744) = 5.85$, < 0.001, $\eta^2 = 0.03$, which indicate that self-construal priming could affect one's self-representation (Hypothesis 1). A further simple main effect showed that the proportion of private self-statements differed across self-construal primings, $F(2, 381) = 6.98$, < 0.01, $\eta^2 = 0.04$.

Bonferroni tests showed that the proportion of private self was significantly higher in the independent self-construal priming (= 0.74, $D = 0.17$) condition and the control condition (= 0.72, $D = 0.19$) than in the interdependent self-construal priming condition (= 0.66, $D = 0.19$; < 0.01 and < 0.05). Analyses of simple effects showed that the proportion of collective self-statements also differed across self-construal primings, $F(2, 381) = 9.69$, < 0.001, $\eta^2 = 0.05$, and the

TABLE 1
Means and standard deviations of proportion of private, relational and collective self as a function of cultural group under different self-construal priming

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Private	0.69(0.16)	0.75(0.18)	0.72(0.19)	2.00	0.63(0.20)[a]	0.70(0.20)[ab]	0.76(0.15)[b]	7.95***
Relational	0.18(0.14)	0.17(0.14)	0.20(0.14)	0.85	0.21(0.14)[a]	0.20(0.14)[ab]	0.17(0.12)[b]	2.05
Collective	0.13(0.14)[a]	0.08(0.10)[b]	0.08(0.11)[b]	3.56*	0.16(0.15)[a]	0.11(0.14)[ab]	0.08(0.11)[b]	6.68**

. Row means with different superscripts represent significant differences.
* < .05; ** < .01; *** < .001.

Bonferroni tests showed that the collective self was significantly higher in the interdependent self-construal priming condition (= 0.15, $D = 0.15$) than in the independent self-construal priming condition (= 0.08, $D = 0.11$) and the control condition (= 0.09, $D = 0.12$; < 0.001 and < 0.01). The simple effects did not show significant differences in the proportion of relational self-statements across self-construal primings (= 0.66).

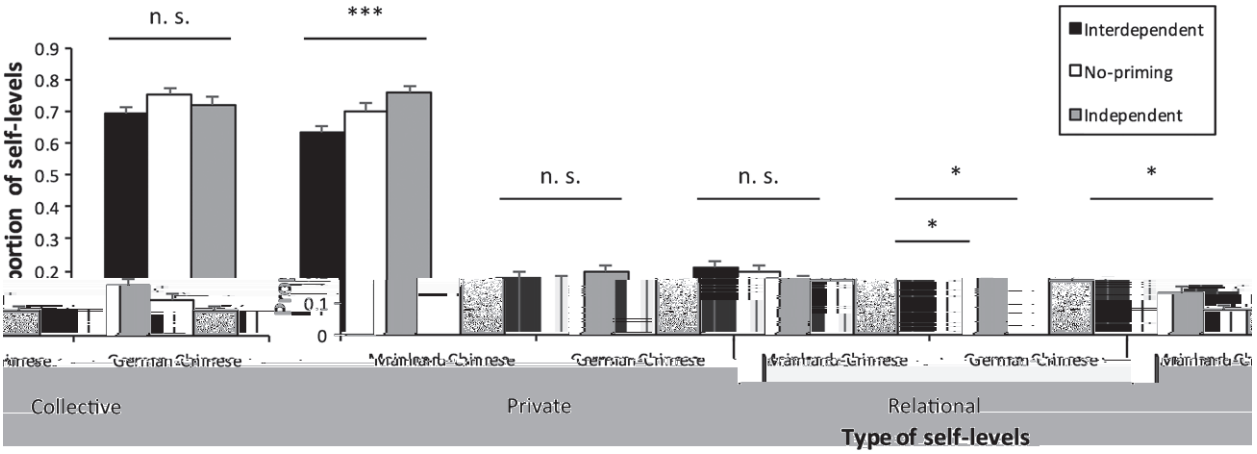

Figure 1. The effect of self-construal priming × cultural group on the proportion of private, relational and collective self. Error bars represent one SE. * < .05. ** < .01. *** < .001.

< 0.01, $\eta^2 = 0.03$, and collective self-statement, $F(1, 382) = 5.50$, < 0.05, $\eta^2 = 0.01$. Women generated significantly more relational self-statements than men (men: = 0.16, $D = 0.13$; women: = 0.21, $D = 0.14$), whereas men generated significantly more collective self-statements than women (men: = 0.12, $D = 0.14$; women: = 0.09, $D = 0.12$).

However, this two-way interaction was qualified by an unexpected three-way interaction between self-level, cultural group and gender, $F(2, 744) = 3.25$, = 0.04, $\eta^2 = 0.01$. The further simple effects were tested by follow-up 3 (Self-level) × 2 (cultural group) MANOVA of men and women. Whereas there was no significant interaction between self-level and cultural group in men (p = 0.64), the significant interaction in women was not expected, $F(2, 760) = 4.77$, < 0.01, $\eta^2 = 0.01$. Furthermore, the simple main effect showed no differences in the proportion of relational self-statements (= 0.24), but it showed a significant difference in the proportion of private self-statements, $F(1, 380) = 6.19$, < 0.05, $\eta^2 = 0.02$, and collective self-statements, $F(1, 380) = 5.54$, < 0.05, $\eta^2 = 0.01$. Mainland-Chinese women generated significantly more private self-statements (Mainland-Chinese women: = 0.73, $D = 0.17$; German-Chinese women: = 0.67, $D = 0.20$) and fewer collective self-statements (Mainland-Chinese women: = 0.07, $D = 0.10$; German-Chinese women: = 0.11, $D = 0.15$) than German-Chinese women (for raw data and code snippets used in the statistic analysis, see: http://www.psy.pku.edu.cn/faculty.php?fid=12&pub).

DISCUSSION

In this study, our objective was to examine whether acculturation induced by indirect and direct bicultural experiences affected the self-construal of Chinese individuals, as well as to understand the self-construal flexibility under different cultural priming. To meet this objective, we compared the self-construal of Mainland-Chinese individuals who had been exposed to Western cultures through more indirect means with those of German-Chinese individuals who had direct contact with the German cultural context. Then, we investigated their accessibility to both interdependent and independent cultural frameworks through temporal self-construal priming. As in previous studies (Abdukeram et al., 2015; Hong, Ip, Chiu, Morris, & Menon, 2001), we have also observed the prominence of the private self in our study; the participants generated a higher proportion of private self-statements than relational self-statements and collective self-statements. Moreover, all three hypotheses were supported. These results indicate that an individual's self-representation could be modulated by self-construal priming. Participants showed interdependent orientations after interdependent self-construal priming by generating high proportions of collective self-statements and independent orientations after independent self-construal priming by generating high proportions of private self-statements. Of great importance, the priming effects differed between the two groups. The Mainland-Chinese individuals were solely affected by interdependent self-construal priming, whereas the German-Chinese individuals were affected by both interdependent and independent self-construal priming. In addition, the gender effect for individuals' self-construals were observed, showing different proportions of three self-levels. The results also showed cultural group differences within gender. In sum, the results of this study confirmed our hypothesis and suggested that individuals could be influenced by more than one culture, as well as that the direct bicultural experiences facilitate cultural frame switching.

This finding highlights the plural cultural influences on Chinese individuals. Although the impact of multicultural experiences on an individual's self-construal was considered an important topic, the main body of this research stresses biculturals (Hong et al., 2000). In this study, we simultaneously investigated Chinese individuals who internalised a second culture through direct means (German-Chinese) with those who did so through more indirect means (Mainland-Chinese). First, we found that the self-representation of Chinese individuals could be influenced by self-construal priming, which was supplementary for the dynamic constructive theory (Hong et al., 2000). Interestingly, the priming effects existed in both the Mainland-Chinese and the German-Chinese cultural groups, which imply a polycultural assumption of culture influences on individuals. As previously mentioned, polyculturalism considers the relationship between individuals and cultures as partial and plural (Morris et al., 2015). Based on this assumption, one's self-construal can incorporate influences from multiple cultures in any cultural context. Recent cultural studies also proposed that both interdependent and independent self-construals exist in all cultures (Oyserman et al., 2002), which may be induced by individuals who are participants in the general acculturative changes underway in their own culture caused by globalisation. In today's increasingly global world, increasingly more Western cultures have been imported into Chinese society. Those imports of Western culture may lead today's Chinese people to hold a self-construal that has merged a traditional interdependent self-construal and a Western independent self-construal. Our results provide further evidence for the polycultural assumption, which suggests that although Chinese individuals were traditionally considered as having interdependent self-construals due to the influence of the Chinese collectivism culture (Triandis, 1989), they could also show independent self-construals orientations with the process of acculturation.

More importantly, the efficiency of priming was different 5-521.8(Wer)-3(5822.4(t)-0.4rw)9.9o3(5822.4ycultural)-58roup.l
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Second, the priming effects in our research were not that strong; some could solely be observed when comparing the interdependent and independent self-construal priming condition with the other, but not with a non-priming condition. The weak priming effects may be induced by individual differences in the Bicultural Identity Integration (BII), which was not investigated in this study. Benet-Martínez et al. (2002) have found that individuals with a high BII exhibit culture-congruent cognitions after cultural priming, whereas individuals with a low BII exhibit a reverse priming effect. Based on the researchers' results, one possible reason for our results is the disturbance of an individual's level of BII that is highly related to the priming effect. Therefore, future researches should consider individual differences in BII. In addition, we choose the pronoun circling means of self-construal priming in our study, which reduces potential extraneous variables, given that the sole difference between the two priming conditions were the personal pronouns. However, the previous meta-analysis of the collectivism and individualism priming research has shown that the effect of the self-construal priming we used in our study is not very strong (Oyserman & Lee, 2008). Future research could use other priming methods (e.g., Sumerian warrior) to seek stronger priming effects. Moreover, a previous study has found that the acculturation processes were facilitated when the host country was a settler society with high immigration and encouraging policies (Berry, Phinney, Sam, & Vedder, 2006). Germany, which we choose as a host country for the direct exposure group in our study, is a former colonial society with less encouraging policies. It is interesting to further investigate the effect of acculturation in more plural societies.

CONCLUSION

In summary, although the effect of globalisation on an individual's self-construal have been investigated by many studies, few have considered the influence of direct bicultural experiences on the flexibility of the dynamic self-construal of a Chinese individual. Our study filled this research gap. These results demonstrate that the self-construal priming could influence a Chinese individual's self-representation in a correspondent manner; however, German-Chinese individuals who have direct exposure to another culture showed a higher prime efficiency. Our findings generally indicate that an individual's direct bicultural experiences could facilitate cultural frame switching. Those findings are important because they help create a more nuanced understanding of the effect of acculturation on the dynamic change of an individual's self-construal, which is an important contribution to multicultural psychology literature. Our results also provide empirical evidence for the polycultural assumption (Morris et al., 2015). Future researches should continue to investigate the individual differences in acculturation. Also, due to the intra-cultural variability of self-construal in Chinese populations (Abdukeram et al., 2015; Mamat et al., 2014), it would also be interesting to focus on multicultural experience that occurrs within a acculturation.

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