International Journal of Psychology

International Journal of Psychology, 2018
DOI: 10.1002/ijop.12481

Prefer feeling bad? Subcultural differences in emotional preferences between Han Chinese and Mongolian Chinese

Xinmei Deng[1,2], Chen Cheng[3], Hiu Mei Chow[3], and Xuechen Ding[4]

[1]College of Psychology and Sociology, Shenzhen University, Shenzhen, China
[2]Shenzhen Key Laboratory of Affective and Social Cognitive Science, Shenzhen University, Shenzhen, China
[3]Department of Psychology, University of Massachusetts Boston, Boston, MA, USA
[4]Department of Psychology, Shanghai Normal University, Shanghai, China

As a multi-ethnic country that is comprised of diverse cultural systems, there has been little research on the subcultural differences in emotional preferences in China. Also, little attention has been paid to examine how explicit and implicit attitudes towards emotions influence emotional preferences interactively. In this study, we manipulated explicit attitudes towards emotions among Han ($N = 62$) and Mongolian Chinese individuals ($N = 70$). We assessed participants' implicit attitudes towards emotions to explore their contributions to emotional preferences. (a) Han Chinese had lower preferences for pleasant emotions than Mongolian Chinese after inducing contra-hedonic attitudes towards emotions, and (b) after priming contra-hedonic attitudes towards emotions, the more Han Chinese participants evaluated pleasant emotions as negative implicitly, the less they preferred to engage in pleasant emotional activities. These findings contribute to the growing literature of subcultural differences and demonstrate that explicit and implicit attitudes towards emotions interactively influence individuals' emotional preferences between different subculture groups.

Keywords: Emotional preferences; Attitudes towards emotions; Subcultural differences; Chinese culture; Implicit attitudes.

There are many occasions when people wish to, or intend to feel specific emotions, even unpleasant emotions (Tamir & Ford, 2012). For example, individuals are likely to put themselves into an angry mood during a competitive task for utilitarian purpose (Tamir, Chiu, & Gross, 2007). Through this proactive process, individuals' cultural model is reflected in divergent attitudes towards emotions (Riediger, Wrzus, & Wagner, 2014). Unlike Western cultures which value the importance of pleasant experiences, people in East Asia view it potentially dangerous and obstructive (Deng, Ding, Cheng, & Chou, 2016). For example, Chinese people believe that happiness rests in misery. This tendency to emphasise the importance of contradictory consequences of pleasant and unpleasant emotions is called contra-hedonic attitudes towards emotions (Miyamoto & Ma, 2011). Prior research also demostrated that Chinese showed contra-hedonic attitudes towards happiness implicitly (Deng et al., 2016). Although studies have shown the existence of culture differences in the contra-hedonic attitudes towards emotions (Deng et al., 2016), how these attitudes impact on individuals' emotional preferences, especially in a diverse subcultural context are not well understood. Therefore, motivated by prior research, the present study aimed to investigate subcultural differences in individuals' emotional preferences in China, which may be caused by their divergent attitudes towards emotions.

Cultural differences in emotional preferences

Emotional preferences refer to the emotional states which people want to experiences (Tamir & Ford, 2012). It should be noted that the desirability about emotions are

Correspondence should be addressed to Xinmei Deng, School of Psychology and Sociology, Shenzhen University, Shenzhen, China or Xuechen Ding, Department of Psychology, Shanghai Normal University, Shanghai, China. (E-mail: xmdeng@szu.edu.cn; dingxuechen_psy@163.com).

This work was supported by the Humanity and Social Science Youth foundation of Ministry of Education of China (16YJC190003), the PhD Start-up Fund of Natural Science Foundation of Guangdong Province (2017A030310299), Innovation and Creative Research Fund by Education Department of Guangdong Province (2016GXJK140) and the National Natural Science Foundation for Young Scientists of China (31700941) to Dr. Xinmei Deng.

not necessarily universal (Chentsova-Dutton, Senft, & Ryder, 2014). Cultural model determines what emotion people prefer to experience (Mesquita, De Leersnyder, & Albert, 2014). As for the differences in cognitive styles between Chinese and Western cultures, emotional system in China is more dialectical and relational (Nisbett, 2003). In fact, cross-cultural studies suggest that the contra-hedonic motivations—the tendencies of savoring unpleasant emotions and dampening pleasant emotions—are more prevalent in East Asia than Western cultures (Miyamoto, Ma, & Petermann, 2014). Instead of fulfilling personal hedonic needs, contra-hedonic preferences of emotions are considered to serve a utilitarian purpose in East Asian cultures (Wei, Su, Carrera, Lin, & Yi, 2013). When East Asians dampen pleasant emotions, it appear to be socially appropriate or instrumental to preserve interpersonal harmony, whereas their Western counterparts may not decrease their emotions for this goal. In addition, attaining long-term benefits demand Chinese to sacrifice their short-term hedonic needs (e.g. suppressing happiness for getting good grade on an exam and working even harder for the next academic challenge, Deng, Sang, & Luan, 2013).

Cultural differences in attitudes towards emotions

Attitudes towards emotions are kind of evaluations and mental representations of different emotions (Riediger et al., 2014). Culture also plays a critical role in individual's attitudes towards emotions, for implications and meanings of certain emotional event may vary across cultural contexts (Chentsova-Dutton et al., 2014) Although some situations are considered to be positive or negative, the related emotions are depend on specific cultural background, which can give rise to differences in attribution processes (An, Marks, & Trafimow, 2016). For example, happiness is related to pleasant event and situation in Western cultures, which is dominated by hedonism. However, maintaining a balanced state of pleasant and unpleasant emotions (Luo, Gilmour, & Kao, 2001) and the wholeness of experience are important elements in attitudes towards emotions in Chinese culture (Sundararajan, 2015). When indulging in pleasant emotions, Chinese expect the potential negative consequences (Wei et al., 2013). Contradicoty propositions (i.e. dialectical and changing logic) are also salient factors when individual involve in emotional situation in Chinese culture (Peng & Nisbett, 1999). The key characteristic of dialectical thinking by Chinese is the tolerance of contradiction or seek the "middle way" (Choi & Choi, 2002). For example, Chinese people believe that pleasant emotions have dialectical relations with unpleasant emotions (misery follows or co-occurs with happiness; Deng et al., 2016; Spencer-Rodgers, Peng, & Wang, 2010). Indeed, some empirical evidences supported these notions. Spencer-Rodgers et al. (2010) found that Chinese reported the mixed emotions of pleasant and unpleasant more frequently than European Americans. Also, the relations between down-regulated pleasant emotions and positive emotional experiences were wearker among Chinese (Deng et al., 2013). In fact, some findings suggests that a given emotion contains both negativity and positivity. Further, Easterners, including Chinese, felt stronger ambivalence of each emotion compared with Westerners (An, Ji, Marks, & Zhang, 2017).

Subcultural differences in china

To our knowledge, most of the prior findings in China were derived from Han Chinese sample. Less is known about subcultural differences in China, in which is a multi-ethnic and -cultural context (Li, Wu, Li, & Zhuang, 2012). The national cultural majority is marked by the Han Chinese culture while there are other 55 national minority cultures (Luo, Gilmour, & Kao, 2001). In China, each of the minorities has their own unique culture and characteristic. As an important minority in China, Mongolian Chinese share similarities and differences in the cultural values and emotional characteristics with Han Chinese (Oyunbileg, Sumberzul, Udval, Wang, & Janes, 2009).

According to the Eco-cultural theory, ecological and sociodemographic differences within countries can give rise to diverse subcultural values and characteristics (Esteban-Guitart, Borke, & Monreal-Bosch, 2015; Greenfield, 2014). Each subcultures are shaped during their own sociocultural practices in local ecology (Esteban-Guitart et al., 2015). From this perpective, subcultural differences need to be considered as the ecological conditions where socialisation practices taking place (Greenfield, 2014). Also, psychological processes differ between cultures and subcultures could be the result of fundamental differences in the structure of the environment (Nisbett, 2003). Geography may presumably create the environment that people shared biology which have great impact on individuals. Similar to the Han culture, Mongolian culture place a high emphasis on interdependence and collectivism. Collectivistic living style promotes psychological and physical closeness among family members (Oyunbileg et al., 2009). However, most Mongolian Chinese live in the Inner Mongolian autonomous region of China. The territorial autonomy of Inner Mongolia made them relatively less influenced by the mainstream of Chinese culture—Han culture (Li et al., 2012). The geographical "autonomy" and different language make Mongolian Chinese a different ethnic group from the Han Chinese in the multiculral "Chinese Nation" (Bulag, 2003). For example, rather than living in the urban cities, there are still many Mongolian Chinese

living in the traditional Mongolian tent in the pastoral areas in Inner Mongolia. Herding and pastoralism remain the spirit of Mongolian cultural (Bulag, 2003) and many of these Mongolian Chinese keep their pure traditional Mongolian rituals (Li et al., 2012).

In addition, unlike Han Chinese, Mongolian Chinese are considered to be unconstrained, extroverted and outgoing (Yang & Zhang, 2010). The spacious living space and vigorous traditional activities may have a great impact on shaping their unconstrained characteristics, thereby leading to the higher hedonism among Mongolian Chinese than Han Chinese (Deng et al., 2016; Yang & Zhang, 2010). Also, living far from big cities might make them less endorsed in the mainstream Chinese cultural values. These geographical "autonomy" makes Mongolican Chinese a different socio-background with Han Chinese. Endorsed by their own daily practice (e.g. horse riding, wrestling) in this unconstrained cultural atmosphere, they are encouraged to express self-emotions freely (Cai, 2011). Prior research found that Han college students reported higher levels of emotion regulation than Mongolian Chinese. Compared with Mongolian Chinese, Han Chinese showed stronger associations between implicit contra-hedonic attitudes towards happiness and mixed emotions during pleasant emotional events (Deng et al., 2016). Thus, different geographical surrounding and socialisation practices in daily lives between Mongolian and Han Chinese may produce different cultural values and psychological orientations (e.g. attitudes towards emotions). As mentioned, compared with Monglian Chinese, Han Chinsese tend to believe that events are constanly changing and emphasise contradictions (Ji, 2005). The lay theories of changing of Han Chinese may lead to differences in the emotional preferences. Accordingly, comparing Mongolian Chinese and Han Chinese may be an appropriate way to explore how subcultural differences in attitudes towards emotions are embedded in individual's emotional preferences when engaging in emotional events.

Explicit and implicit measures of attitudes towards emotions

In addition to the explicit domain of attitudes towards emotions, prior research indicated that implicit as well as the explicit evaluations of emotions affect individuals' affective experience in their daily lives (Riediger et al., 2014). How individuals evaluate different emotions might be reflected in their attitudes towards emotions and how they respond to emotional experiences. Also, when examining individuals' attitudes towards emotion, most of the prior studies used a retrospective self-reported measurement (Miyamoto et al., 2014; Miyamoto & Ma, 2011). However, individuals' explicit evaluations about emotions might be confounded by their semantic memory biases and social desirabilities (Greenwald, Poehlman, Uhlmann, & Banaji, 2009). Thus, examining implicit domain of attitudes towards emotions could be a more promising way to reduce the potential influence of the social desirability (Mauss, Cook, & Gross, 2007).

Implicit Association Test (IAT) is considered to be a valid and reliable method to assess implicit attitudes (Greenwald, Nosek, & Banaji, 2003). It assesses the strengths of associations by observing response reaction times in computer-administered categorisation tasks (Greenwald et al., 2009). The sensitivity of IAT measures to automatically activated associations is credited with making IAT scores resistant to faking and social desirability (Greenwald et al., 2009). It has been used to examine evaluative associations with different attitudes in many social cognition domains (Greenwald et al., 2009). Specifically, its implications in assessing implicit attitudes towards emotions are drawing more attention in recent years (e.g. approach or avoidance attitudes towards fearful emotion, Hammer & Marsh, 2015; positive and negative attitudes towards pleasant emotions, Riediger et al., 2014). With this, theoretically and methodologically, measuring implicit attitudes towards emotions will contribute to understand explicit attitudes towards emotions.

The present study

Proceeding from these findings, cultural variations in preferences of emotion might reflect the differences of contra-hedonic attitudes towards emotions. However, little attention has been paid to examine how implicit and explicit contra-hedonic attitudes towards emotions influence cultural differences of emotional preferences interactively.

There is accumulating evidence that attitudes towards emotions can be induced in experimentally controlled situations (Tamir et al., 2007). Previous research used correlational measurements and simple categorisation of culture groups (Miyamoto & Ma, 2011). In the present study, we manipulated hedonic and contra-hedonic attitudes towards emotions experimentally to examine the influences of explicit attitudes towards emotions in subcultural differences. IAT was used to examine the implicit attitudes towards emotions.

The present study compared samples of Han Chinese and Mongolian Chinese on implicit and explicit attitudes towards emotions and emotional preferences, aiming to examine: (a) whether subcultural differences in the implicit evaluations about pleasant and unpleasant emotions exist; (b) how explicit attitudes towards emotions influence subcultural variations in emotional preferences under different experimental manipulating conditions; (c) how individuals' implicit attitudes towards emotions relate to their emotional preferences under different explicit attitudes manipulating conditions.

TABLE 1
Items used in the IAT (Chinese original/English translation)

Pleasant emotions	*Unpleasant emotions*	*Positive*	*Negative*
快乐 Happiness	悲伤 Sadness	运气 Luck	毒药 Poison
欢乐 Joy	悲痛 Grief	美貌 Beauty	暴力 Violence
喜乐 Bliss	悲哀 Sorrow	礼物 Gift	疾病 Sickness
高兴 Cheerfulness	沮丧 Gloominess	健康 Health	失败 Failure
欢喜 Merriment	忧郁 Melancholia	智慧 Wisdom	恶臭 Stench
愉快 Delight	忧虑 Distress	成功 Success	愚蠢 Stupidity

Building on the idea that contra-hedonic attitudes towards emotions are highly related to the dialectical philosophy of emotions, which is prevalent and encouraged in Han Chinese (Luo et al., 2001; Miyamoto et al., 2014), we expected that Han Chinese participants would evaluate pleasant emotions as more negative than Mongolian Chinese participants implicitly (Hypothesis 1).

Because of the promoted cultural meaning system of emotions among Han Chinese, contra-hedonic attitudes towards emotions would be more predominant to make people prefer experiencing pleasant emotions. On the contrary, Mongolian Chinese are more hedonic than Han Chinese due to their subcultural values (Cai, 2011; Deng et al., 2016; Li et al., 2012). Their attitudes towards emotions are less influenced by mainstream Chinese culture. Thus, we expected that Han Chinese participants would have a lower preference for pleasant emotions than their Mongolian counterparts after induced contra-hedonic attitudes towards emotions (Hypothesis 2). Finally, after inducing contra-hedonic attitudes towards emotions, the more Han Chinese participants considered pleasant emotions as negative implicitly, the less they would prefer to experience pleasant emotions (Hypothesis 3).

METHOD

Participants

Han Chinese undergraduates ($N = 62$, 45.2% female, $M_{age} = 20.76$ years, $SD = 1.42$) and Mongolian Chinese undergraduates ($N = 70$, 48.6% female, $M_{age} = 20.84$ years, $SD = 1.44$) from a public University in Shanghai volunteered to participate in the study. The parents and grandparents of the Han Chinese participants were also Han Chinese. All of the Mongolian Chinese participants in the present study self-identified as Mongolian Chinese. The parents and grandparents of the Mongolian Chinese were Mongolian Chinese as well. All of them were lived in the Inner Mongolian autonomous region of China before they entered the university. Mongolian Chinese in the present study have lived in Shanghai for 1–4 years. All participants gave written consent to participate in the study.

Materials

Implicit attitudes towards emotions

To assess whether participants evaluated unpleasant/pleasant emotions as positive or negative implicitly, IAT paradigm (modified from Riediger et al., 2014) was used to examine the relative association strength between unpleasant/pleasant emotions and positive/negative concepts. The items from the categories unpleasant emotions (e.g. sadness), pleasant emotions (e.g. happiness), positive and negative were presented in Table 1. Participants categorised items according to these four concepts by pressing different response keys. In the task, participants first saw a word at the center of the screen. Then they were asked to classify the word according to the indication of the concept to be emotionally pleasant, emotionally unpleasant, positive or negative as fast as possible by pressing the left button (key "1") or right button (key "9"). Word stimuli of the IAT were selected based on data from a prestudy in which 30 Chinese university students rated 30 words for the IAT. Rating dimensions included familiarity and intensity. Based on the ratings of familiarity, we selected six words with the highest scores per category (e.g. positive and negative). And we identified that the positive and negative stimuli lists did not differ significantly regarding their ratings of intensity. The items from the categories happiness, positive, and negative were presented in Table 1. All of the items were presented in Chinese (Table 2).

D values of the IAT were calculated according to D-Scoring algorithm proposed by Greenwald et al. (2003). Data from practice as well as test blocks were all included when calculating the D values of the IAT. Trials with RT greater than 10,000 ms were omitted. We excluded participants for whom more than 10% of trials had a RT of less than 300 ms. Standard deviations across practice and test trials were computed for

TABLE 2
Basic Information about the IAT

Block	*N of trials*	*Left key response (press key "1")*	*Right key response (press key "9")*
1 Practice	20	Positive	Negative
2 Compatible practice	20	Unhappiness–Positive	Happiness–Negative
3 Compatible test	40	Unhappiness–Positive	Happiness–Negative
4 Incompatible practice	20	Happiness–Positive	Unhappiness–Negative
5 Incompatible test	40	Happiness–Positive	Unhappiness–Negative

each participant. D values of the IAT were calculated by measuring the difference in mean RT between compatible (pleasant emotions-negative) and incompatible blocks (pleasant emotions-positive) in units of the participants' standard deviations. Higher IAT D scores indicate more contra-hedonic attitudes towards emotions (positive implicit evaluation of unpleasant emotions relative to pleasant emotions, and negative implicit evaluation of pleasant emotions relative to unpleasant emotions). Positive IAT D scores indicated that participants implicitly considered unpleasant emotions positive and pleasant emotions negative (the contra-hedonic attitudes towards emotions). Negative D scores indicated that participants implicitly considered pleasant emotions as positive and unpleasant emotions negative (the hedonic attitudes towards emotions).

Emotion experiences

To ensure that the priming manipulation didn't lead to differences in emotional experiences, we assessed participants' current emotional experiences. Participants rated their current emotional experiences by answering 12 items (scores ranged from 1 = *not at all* to 5 = *extremely*) adapted from the PANAS (Watson, Clark, & Tellegen, 1988). We averaged ratings of energetic, excited, proud and enthusiastic for pleasant emotion experiences ($\alpha = .82$) and ratings of sad, guilty, upset, nervous, fearful, ashamed, frighten and anger for unpleasant emotion experiences ($\alpha = .83$).

Emotional preferences

To assess emotional preferences after inducing different explicit emotional attitudes, we asked participants to read twelve descriptions of scenes from films (four pleasant, four unpleasant and four neutral scenes) and to rate each one the extent they preferred watching (Tamir et al., 2007). Preferences ratings scaled from 1 (*not at all*) to 9 (*extremely*). Scores of the preferences for different emotional activities were used as an index of emotional preferences. These filmclips varied by emotional content (e.g. pleasant clip: "In the celebration party, everybody enjoys delicious food, dance and sing for joy. Everybody looks forward to another big harvest next year"; neutral clip: "During the winter, polar bears will range along the southern edge of the ice pack or northern edge of ice formed off the coasts of the continents"; unpleasant clip: "when she heard the news of his conviction, she cried. She knew they would never meet again in the rest of her life"). We averaged ratings of preferences of four pleasant films for pleasant emotional preference ($\alpha = .78$), ratings of preference of four unpleasant films for unpleasant emotional preference ($\alpha = .77$) and ratings of preference of four neutral films for neutral emotional preference ($\alpha = .75$).

Procedures

The research protocol was approved by the Institutional Reviewing Board at Shenzhen University. All participants completed an informed consent form, provided demographic information, and then completed the IAT in their first visit to the laboratory. One week later, they come to the laboratory again and took part in the recall task to prime different explicit attitudes towards emotions (Spencer-Rodgers et al., 2010).

To induce different explicit attitudes towards emotions, participants were randomly assigned to two conditions: (a) contra-hedonic attitudes prime condition and the (b) hedonic attitudes prime condition. The numbers of participants in each experimental condition were (a) 31 Han Chinese and 35 Mongolian Chinese (contra-hedonic attitudes prime condition); (b) 31 Han Chinese and 35 Mongolian Chinese (hedonic attitudes prime condition).

Participants in the contra-hedonic attitudes prime condition read the following instructions (in Chinese) and completed the recall task:

> *"We would like you to recall experience in which you were very aware of the negative consequences of the pleasant emotional event. The pleasant emotional event had negative outcomes and consequences for you. Think about how these pleasant emotional events comes out to a negative outcome. Describe how you thought through all of the possible processes that pleasant emotions turn into unpleasant experience and what you did in that situation."*

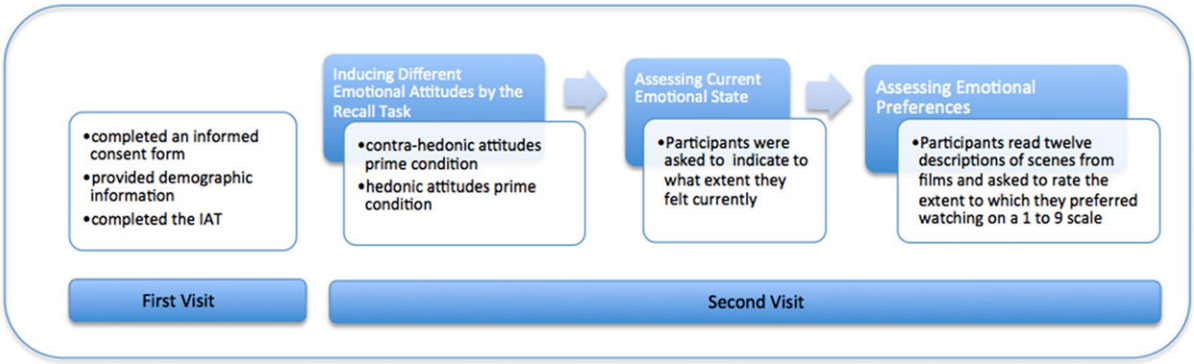

Figure 1. Procedure of the study. [Colour figure can be viewed at wileyonlinelibrary.com].

In contrast, participants in the hedonic attitudes prime condition read the following instructions and completed the recall task[1]:

> *"We would like you to recall experiences in which you were very aware of the positive consequences of the pleasant emotional event. The pleasant emotional event had positive outcomes and consequences for you. Think about how these pleasant emotional events comes out to a positive outcome. Describe how you enjoy your pleasant emotion experience and what you did in that situation."*

After completing the recall task, participants were asked to confirm that they followed the manipulation instructions and were successful in recalling the target. To assess emotional states and emotional preferences after the induction section, participants were asked to rate their current emotion experiences and the emotional preferences. After finishing the whole experiment, participants underwent a debriefing procedure (Figure 1).

RESULTS

Descriptive statistics and correlations

Descriptive statistics and correlations among the studied variables were presented in Table 3.

Subcultural differences in emotional preferences after inducing different explicit attitudes towards Emotions

A 2 (Explicit Attitudes towards Emotions: contra-hedonic vs. hedonic) × 2 (Ethnic Group: Han Chinese vs. Mongolian Chinese) analysis of variance was conducted to examine the subcultural differences in pleasant, unpleasant and neutral emotional preferences in different manipulating conditions. Scores of the preferences for different emotional activities (watching different films) were used as an index of emotional preferences. The main effect of attitudes towards emotions was significant, $F(1, 128) = 6.61$, $p = .011$, $\eta_p^2 = .05$. As expected, participants in the contra-hedonic attitudes prime condition rated their preferences in pleasant activities lower than that in the hedonic attitudes prime condition ($M_{\text{contra-hedonic attitudes prime condition}} = 5.84$; $M_{\text{hedonic attitudes prime condition}} = 6.53$). Also, the main effect of ethnic group was significant, $F(1, 128) = 6.17$, $p = .014$, $\eta_p^2 = .05$. Mongolian Chinese preferred pleasant emotions than Han Chinese ($p = .011$, $M_{\text{Mongolian Chinese}} = 6.52$; $M_{\text{Han Chinese}} = 5.86$). Interaction between attitudes prime condition and ethnic group was not significant, $F(1, 128) = 3.53$, $p = .06$, $\eta_p^2 = .03$. Mongolian Chinese preferred pleasant emotions than Han Chinese in the contra-hedonic attitudes prime condition ($p = .004$, $M_{\text{Mongolian Chinese}} = 6.43$; $M_{\text{Han Chinese}} = 5.26$). However, there was no significant subcultural difference in the hedonic attitudes prime condition ($p = .66$). No other effects were significant in the preferences of unpleasant or neutral emotions (all $ps > .10$).

How implicit attitudes towards emotion related to subcultural differences in emotional preference under different explicit attitudes prime conditions

We first compared the IAT D scores of participants to confirm that participants who were assigned to different explicit attitude primed conditions in both ethnic groups

[1]We coded the responses about how participants evaluated pleasant emotions experiences in the recall task on a 1 (none) to 5 (extremely) Likert scale to check the experimental manipulation of different priming. We conducted t-test to examine if the priming manipulation worked as intended. Supporting the effectiveness of our priming manipulation, results showed that participants in the hedonic attitudes priming conditions valued pleasant emotions experiences more positive than that in the contra-hedonic attitudes priming conditions, $t(180) = 4.87$, $p < .001$, $M_{\text{hedonic}} = 4.02$, $M_{\text{contra-hedonic}} = 3.08$. With this, our priming manipulation was valid to evoke different attitudes towards emotions.

TABLE 3
Descriptive statistics and correlation matrix for the studied variables

Studied variables	*M (SD)*	*1*	*2*	*3*	*4*	*5*	*6*
1. Ethnic	—	—	—	—	—	—	—
2. D score of the IAT	.27 (.50)	−.20*	—	—	—	—	—
3. Current emotion experiences	3.28 (.91)	−.03	.03	—	—	—	—
4. Pleasant emotional preferences	6.21 (1.61)	.21*	−.27*	.18*	—	—	—
5. Neutral emotional preferences	5.06 (2.07)	.15	−.21	−.01	.23*	—	—

*$p < .05$. $p_{21} = .03$, $p_{41} = .017$, $p_{42} = .002$, $p_{43} = .043$, $p_{54} = .008$, $p_{64} = .015$.

didn't differ in the implicit attitudes towards emotions. Results suggested that there were no significant differences in the implicit attitudes towards emotions of the participants between different explicit attitudes prime conditions (all $ps > .05$).[2] Proceeding from the above results about the influences of explicit contra-hedonic attitudes towards emotions in pleasant emotional preferences, we examined how implicit attitudes towards emotions related to subcultural variation in pleasant emotional preferences under different explicit attitudes manipulating conditions. To confirm that the influences of implicit attitudes towards emotions in emotional preferences was independent of participants' current emotional states, their current emotional experiences were controlled in the analyses. We ran partial correlations between contra-hedonic implicit attitudes towards emotions (IAT D scores) and emotional preferences (scores of the preferences for watching different films). As shown in Table 4, only Han Chinese participant's preferences for pleasant emotions were negatively correlated with IAT D scores in the contra-hedonic explicit attitudes prime condition ($r = -.41$, $p = .024$). That implies that after priming the contra-hedonic explicit attitudes towards emotions, the more Han Chinese participants evaluated pleasant emotions as negative implicitly, the less they preferred to engage in pleasant emotional activities. The finding remained unchanged after controlling for current emotional experiences.

DISCUSSION

Prior research indicated that contra-hedonic attitudes towards emotions are more prevalent in China (Miyamoto et al., 2014; Miyamoto & Ma, 2011). Do all Chinese hold the contra-hedonic attitudes towards emotions? How do the explicit and implicit contra-hedonic attitudes towards emotions interactively influence individuals' emotional preferences between different subculture groups? Findings from our present study suggested that when feeling good was expected to be bad, people had lower preferences in pleasant emotions. In addition, there were also subcultural differences in the relations between attitudes towards emotions and emotional preferences.

Subcultural differences in attitudes towards emotions and emotional preferences

Consistent with our hypothesis, we found that manipulating explicit contra-hedonic attitudes towards emotions might give rise to contra-hedonic emotional preferences, at least for Han Chinese. As reviewed above, Han Chinese emphasised the utilitarian purpose when regulating emotions (Wei et al., 2013). If pleasant emotions were considered to be hindering, contra-hedonic attitudes towards emotions might let people down-regulate their pleasant emotions or prefer lower levels of pleasant emotions. Although Mongolian Chinese had a higher level of pleasant emotional preferences than Han Chinese in different attitudes prime conditions, we did not find any differences in emotional preferences in Mongolian Chinese when manipulating emotional attitudes. This might be because contra-hedonic attitudes are more dominant in Han Chinese culture (Miyamoto et al., 2014). Contra-hedonic attitudes towards emotions are not important in Mongolians' emotional preferences. This suggests that the impact of contra-hedonic attitudes towards emotions might not be the same among all Chinese. It is in line with the previous cultural studies found that people under the same cultural background may act and think differently based on their social and ecological background (Greenfield, 2014; Park et al., 2013). For example, Japanese with higher social status expressed more anger than Janpaness with lower social status. In our study, the subcultural differences between Mongolian and Han Chinese may stem from the different geographical surrounding and socialisation practices in daily lives. Mongolian Chinese'

[2]IAT scores of both Han and Mongolian Chinese were significantly larger than 0, $t(61) = 2.97$, $p = .004$, 95% CI (.06, .30), $d = .76$, $M_{\text{Mongolian Chinese}} = .18$, $SD_{\text{Mongolian Chinese}} = .47$; $t(57) = 5.53$, $p = .000$, 95% CI (.24, .51), $d = 1.46$, $M_{\text{Han Chinese}} = .38$, $SD_{\text{Han Chinese}} = .52$. The results indicated that both of the Han and Mongolian Chinese evaluated pleasant emotions as negative implicitly, which meant they held the contra-hedonic attitudes towards emotions implicitly. To test subcultural differences in the contra-hedonic attitudes towards emotions, we compared D scores of the IAT between Han and Mongolian Chinese. Results showed that Mongolian Chinese held weaker contra-hedonic attitudes towards emotion than Han Chinese implicitly ($t\,(118) = -2.20$, $p = .03$, 95% CI [−.38, −.02], $d = -.41$).

TABLE 4
Correlations between implicit attitudes towards emotions (D score of the IAT) and preferences for pleasant emotions in different explicit attitudes prime conditions

	Implicit attitudes towards emotions			
	Mongolian Chinese		*Han Chinese*	
Pleasant emotional preferences	*Zero-order*	*Controlling for current emotion experiences*	*Zero-order*	*Controlling for current emotion experiences*
Hedonic prime condition	−.07	−.11	−.19	−.26
Contra-hedonic prime condition	−.16	−.14	−.41*	−.40*

*$p < .05$.

lower living density and vigorous traditional activities (e.g. wrestling, horse riding) may play important roles in forming their own cultural values. An important implication of the present study was that, cultural differences within countries need to take account into the ecological factors (Esteban-Guitart et al., 2015). Although most of previous findings from cross-cultural studies have argued that the relations between attitudes towards emotions and emotional preference are expected to be based on different cultural values, they mainly focused on mainstream Han Chinese culture (Spencer-Rodgers et al., 2010). Our findings contributed to a refined understanding of the subcultural differences in attitudes towards emotions and their relations with emotional preferences. It also added to the literature by documenting how ecological differences within countries can give rise to variant psychological orientations. Further, another implication of this study was that the emotional processes that arise from culture affect how people prefer to feel. This may derive from differences in the evaluations and representations of different emotions, such as the attitudes towards happiness.

Interactions between the explicit and implicit contra-hedonic attitudes towards emotions

The dominant cultural script of Chinese is grounded in dialectical thinking. It is characterised by the changing philosophy of emotions and seeking the "middle way" (Peng & Nisbett, 1999). In line with evidence from other studies (e.g. Luo et al., 2001), our findings revealed the implicit contra-hedonic attitudes towards emotions among Chinese. Although there are subcultural differences in such implicit contra-hedonic attitudes towards emotions, Chinese generally evaluate pleasant emotions as negative implicitly. To some extant, the contra-hedonic attitudes towards emotions may reflect the dialectical cultural script of Chinese. Specifically, implicit contra-hedonic attitudes towards emotions are more prevalent among Han Chinese who are mostly influenced by the dominated Confusions culture. By extending previous findings, our study revealed the interactions between the explicit and implicit contra-hedonic attitudes towards emotions. Only Han Chinese' preferences for pleasant emotions were negatively correlated with implicit contra-hedonic attitudes towards emotions in the explicit contra-hedonic attitudes prime condition. Part of the reason could be due to the compatibility between core culture value and affective motivation in a given situation. That is, Han Chinese emphasise more of the negative aspects of pleasant emotions culturally. So if they are induced in the explicit emotional attitudes which is consistent with their implicit attitudes towards emotions, their emotional preferences and tendencies of regulation would be influenced more predominately. Explicit and implicit contra-hedonic attitudes towards emotions could reinforce each other when they are compatible (Miyamoto et al., 2014). Thus, if one's ongoing explicit attitudes towards emotions are consistent with his/her implicit attitudes, one might even sacrifices his/her hedonic needs. Our findings suggested that not only the implicit attitudes but also the explicit attudes could influence people's emotional preferences in different cultural contexts. It included a more comprehensive explanations for emotional phenomena in general.

Limitations and future direction

The present study focused on the relations between implicit and explicit attitudes towards emotions and emotional preferences among different subcultural groups. Whether different ethnic groups in China down-regulate their pleasant emotions differently in a real emotional setting with the influence of the contra-hedonic attitudes towards emotions are unclear. The current literature about cultural differences in the contra-hedonic regulation suggests that dialectical attitudes towards unpleasant emotions may lead Han Chinese to engage in less hedonic emotional regulation than European Americans (Miyamoto & Ma, 2011). However, how these attitudes towards emotions impact different processes of emotional regulation also need to be examined. This will be an intriguing direction for further studies. Last but not the least, ecological and sociodemographic differences between Han and Mongolian Chinese might lead to different subcultural values and characteristics (Esteban-Guitart et al., 2015). Pariticpants' social economic status might influence their preferences of

emotions. However, the measurement of social economic status was not included in the present study. In the future study, exploring how social economic status was related to subcultural differences between Han and Mognlian Chinese in emotional preferences would be an interesting and promising direction.

Manuscript received July 2017
Revised manuscript accepted January 2018

REFERENCES

An, S., Ji, L. J., Marks, M., & Zhang, Z. (2017). Two sides of emotion: Exploring positivity and negativity in six basic emotions across cultures. *Frontiers in Psychology*, *8*, 610.

An, S., Marks, M., & Trafimow, D. (2016). Affect, emotion and cross-cultural differences in moral attributions. *Current Research in Social Psychology*, *24*, 1–12.

Bulag, U. (2003). Monglian ethinicity and linguistic anxiety in China. *American Anthropologist*, *105*, 753–763.

Cai, H. (2011). The stiff impression of the Mongolians by university students. *Journal of Xinjiang University*, *39*, 65–69.

Chentsova-Dutton, Y. E., Senft, N., & Ryder, A. G. (2014). Listening to negative emotions: How culture constrains what we hear. In W. G. Parrott (Ed.), *The positive side of negative emotions*. New York: The Guilford Press.

Choi, I., & Choi, Y. (2002). Culture and self-concept flexibility. *Personality and Social Psychology Bulletin*, *28*, 1508–1517.

Deng, X. M., Ding, X., Cheng, C., & Chou, H. M. (2016). Feeling happy and sad at the same time? Subcultural differences in experiencing mixed emotions between Han Chinese and Mongolian Chinese. *Frontiers in Psychology*, *7*, 1692.

Deng, X., Sang, B., & Luan, Z. (2013). The up- and down-regulation of daily emotion: An experience sampling study of Chinese adolescents' regulatory tendency and effects. *Psychological Reports*, *113*, 552–565.

Esteban-Guitart, M., Borke, J., & Monreal-Bosch, P. (2015). Ecocultural effects on self-concept. A study with young indigenous people from different sociodemographic contexts. *International Journal of Psychology: Journal international de psychologie*, *50*, 319–324.

Greenfield, P. M. (2014). Sociodemographic differences within countries produce variable cultural values. *Journal of Cross-Cultural Psychology*, *45*, 37–41.

Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology*, *85*, 197–216.

Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., & Banaji, M. R. (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology*, *97*, 17–41.

Hammer, J. L., & Marsh, A. A. (2015). Why do fearful facial expressions elicit behavioral approach? Evidence from a combined approach-avoidance implicit association test. *Emotion*, *15*(2), 223–231.

Ji, L. J. (2005). "Culture and lay theories of change," in cultural and social behavior. In R. M. Sorrentino, D. Cohen, J. Olson, & M. Zanna (Eds.), *The Ontario Symposium*. (Vol. *10*, pp. 117–135). Hillsdale, NJ: Lawrence Erlbaum.

Li, L., Wu, A., Li, X. W., & Zhuang, Y. (2012). Constructing self-identity: Minority students' adaptation trajectories in a Chinese university. *Integrative Psychological & Behavioral Science*, *46*, 335–356.

Luo, L., Gilmour, R., & Kao, S. F. (2001). Cultural values and happiness: An east-west dialogue. *The Journal of Social Psychology*, *141*, 477–493.

Mauss, I. B., Cook, C. L., & Gross, J. J. (2007). Automatic emotion regulation during anger provocation. *Journal of Experimental Social Psychology*, *43*, 698–711.

Mesquita, B., De Leersnyder, J., & Albert, D. (2014). The cultural regulation of emotions. In J. Gross (Ed.), *The handbook of emotion regulation*. (2nd ed., pp. 284–304). New York: Guilford Press.

Miyamoto, Y., & Ma, X. (2011). Dampening or savoring positive emotions: A dialectical cultural script guides emotion regulation. *Emotion (Washington, D.C.)*, *11*, 1346–1357.

Miyamoto, Y., Ma, X., & Petermann, A. G. (2014). Cultural differences in hedonic emotion regulation after a negative event. *Emotion (Washington, D.C.)*, *14*, 804–815.

Nisbett, R. E. (2003). *The geography of thought : How Asians and Westerners think differently and why*. (). New York: Free Press.

Oyunbileg, S., Sumberzul, N., Udval, N., Wang, J.-D., & Janes, C. R. (2009). Prevalence and risk factors of domestic violence among Mongolian women. *Journal of Women's Health*, *18*, 1873–1880.

Park, J., Kitayama, S., Markus, H. R., Coe, C. L., Miyamoto, Y., Karasawa, M., … Ryff, C. D. (2013). Social status and anger expression: The cultural moderation hypothesis. *Emotion*, *13*, 1122–1131.

Peng, K., & Nisbett, R. E. (1999). Culture, dialectics, and reasoning about contradiction. *American Psychologist*, *54*, 741–754.

Riediger, M., Wrzus, C., & Wagner, G. G. (2014). Happiness is pleasant , or is it ? Implicit representations of affect valence are associated with contrahedonic motivation and mixed affect in daily life. *Emotion*, *14*, 950–961.

Spencer-Rodgers, J., Peng, K., & Wang, L. (2010). Dialecticism and the co-occurrence of positive and negative emotions across cultures. *Journal of Cross-Cultural Psychology*, *41*, 109–115.

Tamir, M., Chiu, C.-Y., & Gross, J. J. (2007). Business or pleasure? Utilitarian versus hedonic considerations in emotion regulation. *Emotion (Washington, D.C.)*, *7*, 546–554.

Tamir, M., & Ford, B. Q. (2012). When feeling bad is expected to be good: Emotion regulation and outcome expectancies in social conflicts. *Emotion (Washington, D.C.)*, *12*, 807–816.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063–1070.

Wei, M., Su, J. C., Carrera, S., Lin, S. P., & Yi, F. (2013). Suppression and interpersonal harmony: A cross-cultural comparison between Chinese and European Americans. *Journal of Counseling Psychology*, *60*, 625–633.

Yang, Y., & Zhang, R. (2010). A study on characteristics of psychological adaptation of Mongolian adolescents. *Chinese Journal of Research on Education for Ethinic Minorities*, *21*, 69–74.