

**My Emotions Belong Here and There: Extending the Phenomenon of Emotional Acculturation to Heritage Culture Fit.**

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RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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My Emotions Belong Here and There:

Extending the Phenomenon of Emotional Acculturation to Heritage Culture Fit.

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#### **Author's Note**

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The data and SPSS-syntax that support the findings of these studies are available from the corresponding author, [JDL], upon reasonable request.

**Abstract**

When immigrant minorities engage in a new cultural context, their patterns of emotional experience come to change – a process we coined *emotional acculturation* (De Leersnyder, Mesquita, & Kim, 2011). To date, research on emotional acculturation focused on the antecedents and consequences of changes in minorities' fit with the new culture. Yet, most minorities also continue to engage in their *heritage* culture. Therefore, the current research investigated which personal and situational factors afford minorities to maintain emotional fit with their heritage culture. Two studies compared the emotional patterns of Korean Americans ( $n = 49$ ) with those of Koreans in Korea ( $n = 80$ ), and the emotional patterns of Turkish Belgians ( $n = 144$ ) with those of Turks in Turkey ( $n = 250$ ), respectively. As expected, we found that although minorities did not fit the heritage emotional patterns as well as participants in their home countries, spending time with heritage culture friends and interacting in heritage culture settings explained within-group differences in minorities' heritage culture fit. Therefore, the current research shows that minorities' emotional patterns are not only cultivated, but also activated by their interactions in different socio-cultural contexts. Moreover, it provides further evidence for cultural frame-switching in the domain of emotion.

Words: 200

Keywords: Emotional acculturation; emotion; culture; acculturation; cultural frame switching, cultural fit

### **My Emotions Belong Here *and* There:**

#### **Extending the Phenomenon of Emotional Acculturation to Heritage Culture Fit.**

*Emotional acculturation* refers to the process of changes in one's emotional life that are due to sustained contact with another culture (De Leersnyder, 2017). Indeed, the more immigrant minorities engage in a new culture, the more their patterns of emotion come to fit with the typical patterns of that culture (Consedine, Chentsova-Dutton, & Krivoshekova, 2014; De Leersnyder, Mesquita, & Kim, 2011; Jasini, De Leersnyder, Phalet, & Mesquita, 2019) – fit that is positively associated with well-being (Consedine et al., 20014; De Leersnyder, Kim, & Mesquita, 2015; De Leersnyder, Mesquita, Kim, Eom, & Choi, 2014). However, since many (if not most) immigrant minorities not only engage in their *new* socio-cultural environment, but also continue to be part of social networks and communities that represent their *heritage* culture (van den Broek & van Ingen, 2008), emotional acculturation may not only pertain to adopting a new culture's emotional patterns, but also to preserving one's heritage culture's patterns.

To date, no studies have investigated minorities' emotional fit with their heritage culture. Therefore, the current research addresses which personal and situational factors foster Korean Americans (Study 1) and Turkish Belgians (Study 2) to maintain their heritage culture's emotional patterns. As personal factors, we investigated which specific aspects of minorities' engagement in the heritage culture predict their heritage culture emotional fit. Is it a matter of having been exposed to the heritage cultural context? Or rather a matter of having heritage culture friends? As situational factor, we tested if the cultural setting of interaction matters for emotional fit. Do minorities have a higher fit with heritage emotional patterns when they interact in heritage culture settings, such as at home?

By addressing these questions, the current research aims to contribute to our understanding of emotional acculturation as a multi-dimensional and context-dependent process of emotional adaptation. Simultaneously, it aims to contribute to our understanding of

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3 emotion itself. For instance, if we were to find that minorities' emotional fit with their heritage  
4 culture is a function of their heritage culture engagement, this would provide further support  
5 for the idea that people's cultural engagements shape their emotional experiences (Mesquita,  
6 2003; Mesquita, Boiger, & De Leersnyder, 2017). Furthermore, if minorities would fit heritage  
7 emotional patterns better in heritage culture settings, this would suggest that people construct  
8 their emotional experiences 'in the moment' to be in line with the prevailing cultural context  
9 (Boiger & Mesquita, 2012; Mesquita, Boiger, & De Leersnyder, 2016).

### 19 **Cultural differences in emotional patterns**

21 The main starting point for research on emotional acculturation are the well-documented  
22 and systematic cultural differences in people's emotional experiences (Kitayama, Mesquita, &  
23 Karasawa, 2006; Mesquita, 2003; Tsai, Knutson, & Fung, 2006). For instance, experiences like  
24 pride, anger, or irritation that afford autonomy and independence and that have been called  
25 *socially disengaging* or *autonomy-promoting* emotions (De Leersnyder, Koval, Kuppens, &  
26 Mesquita, 2018) tend to be most prevalent and intense in cultural contexts that value  
27 independence and autonomy, such as European American middle class contexts. In contrast,  
28 experiences like feeling close, ashamed or indebted that encourage relatedness and  
29 interdependence and that have been called *socially engaging* or *relatedness-promoting*  
30 emotions, tend to be most prevalent and intense in cultural contexts that value interdependence  
31 and relatedness, such as in Japanese and Mediterranean contexts (e.g., Boiger, Mesquita,  
32 Uchida, & Barrett, 2013; Boiger, Güngör, Karasawa, & Mesquita, 2014; Kitayama et al., 2006;  
33 Markus & Kitayama, 1991; Rothbaum, Pott, Azuma, Miyake, & Weisz, 2000). Thus, emotions  
34 that match a culture's central goals and values tend to be experienced more frequently and  
35 intensely than emotions that do not.

56 Building on these findings, we may expect that different cultural contexts are  
57 characterized by different 'typical' patterns of emotional experience and that individuals who  
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3 engage in the *same* cultural context – and, therefore, are exposed to the *same* meanings and  
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5 practices – experience more similar patterns of emotion than people who engage in different  
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7 cultural contexts. Furthermore, we may expect that the emotional patterns of immigrant  
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9 minorities may be initially different from those that are typical for their new majority culture,  
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11 yet come to be aligned with them upon increased engagement in the majority culture – that is,  
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13 that people’s emotional patterns may *acculturate*.  
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**Emotional acculturation towards the new majority culture patterns of emotion**

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19 There is now strong evidence for emotional acculturation, with several large scale  
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21 studies on different minority groups in both the United States and Belgium that documented  
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23 that minorities’ engagement in a new cultural context is positively associated with their  
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25 emotional fit to that context (Consedine et al., 2014; De Leersnyder et al., 2011; Jasini et al.,  
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27 2019). Firstly, whereas first generation immigrants had significant lower emotional fit with the  
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29 majority culture than majority members themselves, fit levels seemed to increase for each later  
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31 generation. This finding was most outspoken for negative situations and resonates with the  
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33 general observation that emotional fit tends to be higher in (typically more straightforward)  
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35 positive than in (typically more complex) negative situations (see De Leersnyder et al., 2011  
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37 for a discussion on this issue).  
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43 Secondly, minorities’ emotional fit (in both positive and negative situations) was higher  
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45 to the extent they were more exposed to the majority culture (i.e. were younger at the time of  
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47 migration; have spent more years) and had more social interactions with majority members.  
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49 Zooming in on this latter link, a recent large-scale social network study on immigrant minority  
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51 youth showed that although their emotional fit with the majority was predicted by both outgoing  
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53 and incoming ties with majority peers, it was most strongly predicted by *bi-directional ties*,  
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55 which signal reciprocity and thus ‘true friendship’ (Jasini, De Leersnyder, Kende, et al.,  
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57 submitted). This latter finding suggests a potential special function of close friends in learning  
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3 and maintaining emotional patterns: It is perhaps in the (safe and open) context of friendships  
4 that people mostly share emotional episodes with one another and that they get reinforced or  
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6 questioned about the meanings and experiences they associate with these episodes.  
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10 Finally, minorities' emotional fit with the majority culture was unrelated to their  
11 attitudes towards adopting the majority culture's values and traditions (De Leersnyder et al.,  
12 2011; Jasini, et al., 2019). Though counterintuitive at first sight, this finding is in line with the  
13 ideas that i) "explicit beliefs [attitudes] may be quite independent of implicit psychological  
14 tendencies [emotions]" (Kitayama & Imada, 2010, p. 186), and that ii) different domains may  
15 acculturate at a different pace or even in different directions (Mesquita, De Leersnyder, &  
16 Jasini, 2019; Schwartz, Unger, Zamboanga, & Szapocznik, 2011; Snauwaert, Soenens,  
17 Vanbeselaere, & Boen, 2003). Taken together, past research thus suggests that minorities'  
18 emotional fit with the typical majority patterns is a function of their *actual* rather than their  
19 desired engagement in the majority culture.  
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### 33 **Emotional acculturation and heritage culture patterns of emotion**

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35 Notwithstanding the importance of minorities' fit with the majority culture, we may not  
36 lose sight of the potential multi-dimensional nature of the emotional acculturation process. As  
37 mentioned above, most immigrant minorities not only engage in majority contexts, but continue  
38 to engage in heritage contexts on a daily basis, be it through family members, friends, or the  
39 ethnic composition of their neighbourhood (van den Broek & van Ingen, 2008). If emotional  
40 experiences, then, are a function of socio-cultural engagements, both majority *and* heritage  
41 culture engagement should shape emotional patterns. Moreover, and grounded in research that  
42 showed minorities' potential for simultaneous endorsement of positive attitudes towards *both*  
43 the majority and heritage cultures (Berry, 1997; Ryder, Alden, & Paulhus, 2000), it may well  
44 be that they can come to fit the emotional patterns of the new majority culture without losing  
45 fit with the heritage culture. If so, minorities may furthermore alternate between majority and  
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3 heritage emotional patterns depending on their context of interaction, just like they do in the  
4 domains of identity and cognition (e.g., LaFromboise, Coleman, & Gerton, 1993; Hong, Morris,  
5 Chiu, & Benet-Martinez, 2000). Thus, to gain insight into the (complexities of the) process of  
6 emotional acculturation, it may be fruitful to study minorities' heritage culture fit and, more  
7 specifically, to identify both the personal and situational factors that foster this fit.  
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14 **Personal factors.** To identify personal factors associated with minorities' heritage  
15 culture fit, we build on the studies on majority culture fit reviewed above. Firstly, we expect  
16 group differences in people's emotional fit to the heritage culture (H1), such that this is highest  
17 for majority members living in the home country (i.c., Koreans in Korea, Turks in Turkey),  
18 lowest for majority members from the *new* majority context who are unlikely to have spent time  
19 in minorities' home country (i.c., European Americans and Belgians), and somewhere 'in  
20 between' for immigrant minority groups, with first generation minorities having slightly higher  
21 fit to the heritage culture than later generation minorities.  
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33 Secondly, we expect that minorities' heritage culture fit is positively associated with  
34 their direct exposure to the heritage culture (H2) as measured by i) the number of years spent  
35 in the heritage culture and ii) the percentage of time spent in the heritage versus new majority  
36 context.  
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42 Thirdly, we expect that minorities' emotional fit with the heritage culture is a function  
43 of their social contacts with heritage culture members (H3) as measured by composite scores  
44 of i) the number of colleagues, friends and neighbours that have a heritage cultural background,  
45 (which is a direct index of the ethnicity of one's social contacts), and/or ii) whether one speaks  
46 one's heritage language with family members, colleagues, friends, neighbours, etc., (which is  
47 an indirect index of whether one interacts with heritage versus majority culture members).  
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55 Finally, we expect that minority members' explicitly formulated attitudes towards the  
56 heritage cultural values and traditions will *not* predict heritage culture fit (H4), because  
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3 emotional fit – as a rather implicit measure of minorities’ cultural affiliation – may change at a  
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5 different pace, or even in a different direction, than explicitly endorsed attitudes.  
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8         However, since most immigrant minorities live in ethnic enclaves, and the participants  
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10 of this research were no exception to this, we may think of two *alternative hypotheses* that do  
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12 not mirror the findings on majority culture fit. Firstly, since ethnic enclaves expose their  
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14 residents to (a form of) heritage cultural ideas and practices on a daily basis, the time or  
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16 proportion spent in the country of origin may not substantially add to minorities’ exposure to  
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18 the heritage culture (H2A). Secondly, minority groups may be very homogenous in the extent  
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20 to which they have contact with heritage culture family members, colleagues and neighbours,  
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22 which lowers their predictive value. Therefore, only social contact with heritage culture friends,  
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24 which already have a special status in relation to (re)shaping emotional experience (Jasini, et  
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26 al., submitted), may be the best (if not the only) personal factor predicting heritage culture  
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28 emotional fit (H3A). The current research will explore which one of these two sets of  
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30 hypotheses fit the data best.  
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35         **Situational factor.** The second aim of this research is to test if immigrant minorities’  
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37 emotional patterns depend on the situation and, more specifically, the socio-cultural context in  
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39 which they are experienced. Indeed, biculturals may display different psychological tendencies  
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41 and behaviours when being primed with their heritage versus new majority culture – a  
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43 phenomenon that is commonly referred to as *cultural frame switching* (Hong, Morris, Chiu, &  
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45 Benet-Martínez, 2000) and that has been extensively documented in various psychological  
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47 domains (e.g., Hong et al., 2000; Ramírez-Esparza, Gosling, Benet-Martínez, Potter, &  
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49 Pennebaker, 2006; Briley, Morris, & Simonson, 2005), except for emotion. In fact, evidence is  
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51 limited to one study (Perunovic, Heller, & Rafaeli, 2007) showing that East Asian Canadians’  
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53 momentary positive and negative moods were less (rather than more) negatively correlated after  
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55 having spoken an Asian language or having identified with their heritage culture, which is in  
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3 line with an Asian (rather than Western) dialectical emotional style. Therefore, we hypothesize  
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5 that when minorities report emotional patterns that took place in heritage culture settings, like  
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7 one's home, these will be more concordant to the typical heritage cultural patterns than those  
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9 that were experienced in majority settings, like one's school or workplace (H5).

**Current studies**

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15 **Data.** To investigate the above outlined hypotheses, we extend previous research on  
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17 immigrants' adoption of the new culture's emotional patterns (De Leersnyder et al., 2011), by  
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19 studying the same immigrant groups in terms of their maintenance of heritage culture emotional  
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21 patterns. These previous studies focused on (mainly first generation) Korean Americans (Study  
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23 1) and first and second generation Turkish Belgians (Study 2), each time comparing their  
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25 emotional patterns to those of their respective majority cultural groups (European Americans  
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27 and Belgians). In the current research, we collect new data to compare minorities' emotional  
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29 patterns to those of their *heritage* cultural groups, i.e. Korean and Turkish majority members in  
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31 Korea and Turkey, respectively. Hence, the here reported analyses are novel and in no sense  
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33 similar to what we have analysed and reported in previous work.  
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38 **Cultural groups under study.** We chose the target minority and majority groups on  
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40 the basis of two criteria. First, and to maximize the prospect of observing acculturative shifts in  
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42 minorities' emotional patterns, we chose majority and minority groups that differ in their typical  
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44 emotional patterns (see Kitayama et al., 2006; Mesquita, 2001). Second, and to maximize the  
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46 potential for analytic inference from these case studies to a more general theory on emotional  
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48 acculturation, we selected two minority groups that are very different in their socio-economic  
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50 statuses, migration histories and diversity contexts.<sup>1</sup> Hence, Study 1 and Study 2 are theoretical  
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55 <sup>1</sup>Korean Americans are more highly educated and better employed than Turkish Belgians (FOD  
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57 Werkgelegenheid, 2009; Terrazas, 2009) and face a racial rather than a religious 'divide' whereas the opposite is  
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59 true for Turkish Belgians (Alba, 2005; Yoo & Chung, 2009). Moreover, both groups navigate very different  
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3 replications of one other, enabling us to be more confident in drawing conclusions about the  
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5 personal and situational factors that afford minorities to maintain their heritage culture patterns  
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7 of emotion.  
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### 10 Study 1

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12 Study 1 was designed to test our hypotheses in a sample of Korean Americans. To  
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14 calculate their emotional concordance to their heritage culture's typical patterns of emotional  
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16 experience, we collected data from Koreans in South Korea.  
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#### 19 Method.

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21 **Participants.** Participants were 49 Korean Americans, of whom 37 were first generation  
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23 immigrants who had spent about half of their lives in Korea ( $M_{\text{proportion\_life\_Korea}} = 0.54$ ,  $SD =$   
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25  $0.34$ ), and 44 European Americans; both were available from earlier research (De Leersnyder  
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27 et al., 2011). For the purpose of this research, we additionally sampled 80 Koreans living in  
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29 South Korea. The three samples were comparable in terms of self-reported social class,  
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31 education and gender composition (See Online Supplementary Materials for full statistics), but  
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33 Koreans were younger ( $M_{\text{age}} = 27.9$ ;  $SD_{\text{age}} = 4.3$ ) than both Korean Americans ( $M_{\text{age}} = 38.2$ ;  
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35  $SD_{\text{age}} = 12.8$ ;  $M_{\text{diff}} = -10.317$ ;  $t_{(50.96)} = -5.280$ ,  $p \leq .001$ ) and European Americans ( $M_{\text{age}} = 37.6$ ;  
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37  $SD_{\text{age}} = 16.6$ ;  $M_{\text{diff}} = -9.762$ ;  $t_{(43.95)} = -3.741$ ,  $p = .001$ ).  
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42 Controlling for Gender, Age, Class, or Educational Attainment did not alter the results.  
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44 Yet, in order to keep the current series of analyses consistent with those on minorities' adoption  
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46 of *new majority* emotional patterns, (De Leersnyder et al., 2011), we excluded one Korean  
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48 American who had received none or only primary education and controlled for Educational  
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50 Attainment in our analyses (dummy coded as 0 = "secondary education"; 1 = "tertiary  
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52 education"). We further excluded two Korean Americans who failed to report situations that  
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acculturation environments because immigration patterns, discourses, institutions and policies differ substantially between the United States and Belgium (Kosic & Phalet, 2006; Van Acker, 2012).

## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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2  
3 matched the valence of the prompts, which prevented us from calculating their emotional fit  
4  
5 (see below).  
6  
7

8 **Materials. Emotional Patterns Questionnaire (EPQ).** To capture people's emotional  
9  
10 fit with culture, we administered the EPQ (De Leersnyder et al., 2011), which asks participants  
11  
12 to describe a recently experienced emotional situation that matches a prompt. Prompts vary on  
13  
14 the dimensions of valence (positive vs. negative), social engagement (socially  
15  
16 disengaging/autonomy-promoting vs. socially engaging/relatedness-promoting) and relational  
17  
18 context (home/family vs. work/school). For example, the prompt for positive disengaging  
19  
20 situations in work/school contexts read: "Please think about an occasion at work or at school in  
21  
22 which you felt good for yourself. For example, you felt superior, proud, top of the world". After  
23  
24 describing such a situation, participants were asked to rate the intensity (from 1 = "Not at all"  
25  
26 to 7 = "Extremely") of their experience in that situation on a set of 20 emotion scales that cover  
27  
28 the emotional domain in terms of valence and social engagement (see Online Supplementay  
29  
30 Materials Table 1A). These data constitute a participant's emotional pattern for a given  
31  
32 situation.  
33  
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36

37 To calculate emotional fit with the heritage culture, we took the following steps. Firstly,  
38  
39 we removed three emotion items from participants' emotional patterns because a Simultaneous  
40  
41 Component Analysis (De Roover et al., 2012) had indicated that only the 17 other items were  
42  
43 structurally equivalent across Korean and European American samples (see De Leersnyder et  
44  
45 al., 2011 for full results).<sup>2</sup> Secondly, we established the average Korean emotional patterns for  
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51  
52 <sup>2</sup> In both Study 1 and Study 2 we employed a Simultaneous Component Analysis (SCA; De Roover et al., 2012)  
53  
54 to assess structural equivalence of the emotion data. This analysis provides insight into i) whether one common  
55  
56 factor solution can be used across the different samples under study and ii) which items load on different factors,  
57  
58 implying that they are *not* structurally equivalent and hence, differently understood across the cultural groups. For  
59  
60 instance, in Study 2, "feeling resigned" loaded on the negative autonomy-promoting emotion component in the

## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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2  
3 each type of prompt (e.g., for positive autonomy-promoting situations at work/school) by  
4  
5 averaging the emotion ratings from all Korean majority members who had responded to that  
6  
7 prompt. As such, we obtained eight different Korean average patterns of emotion, one for each  
8  
9 type of prompt. Thirdly, we calculated Korean American's and European Americans' *emotional*  
10  
11 *concordance* or *fit* to the average Korean patterns by correlating each individual's pattern to the  
12  
13 corresponding (i.e., same situation-type) Korean average pattern. To calculate Korean majority  
14  
15 members' fit with their own culture's average patterns, we correlated each individual's pattern  
16  
17 of emotion to a pattern that consisted of all *other* Koreans' scores and thus *excluded* the  
18  
19 participants own score from the average. In this way, we avoided an artificial inflation of  
20  
21 Koreans' concordance scores; individuals' patterns are never correlated to an average pattern  
22  
23 they have contributed to themselves. Fourthly, we transformed all correlation scores into Fisher-  
24  
25 z scores to ensure linearity, which is required for further analyses.

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30 Finally, we aggregated participants' Fischer z-scores to obtain one mean emotional  
31  
32 concordance variable. However, because of logistical reasons, Korean majorities completed  
33  
34 four versions of the EPQ, with each prompt pertaining to a different type of  
35  
36 valence\*engagement within the same relational context (either home/family ( $n = 40$ ) or  
37  
38 work/school ( $n = 40$ )), whereas Korean Americans and European Americans had completed  
39  
40 two versions of the EPQ, with prompts that pertained to same type of valence\*engagement, but  
41  
42 differed across relational contexts (i.e., one in a work/school context; the other in a home/family  
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48 Belgian sample, but loaded on both the negative autonomy-promoting *and* the positive relatedness-promoting  
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50 components in the Turkish Belgian samples. Personal conversations with Turkish Belgian participants explained  
51  
52 that "resigning" can be understood as embracing "kismet" (i.e., the Turkish concept of faith), which has a positive  
53  
54 connotation in the Turkish cultural context. Although these cultural differences are interesting in itself, we removed  
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56 items like this from the emotional patterns before calculating 'fit', because any (cultural) difference in intensity on  
57  
58 these items may be due to their different meaning, while 'fit' is about the (cultural) differences in patterns of  
59  
60 intensity across emotions that have similar meanings across the groups under study.

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3 context). This implies that Korean majorities' overall emotional fit score was the average of  
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5 four fit scores, whereas those of Korean Americans and European Americans was the average  
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7 of only two.  
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9

10 **Personal Factors of Cultural Engagement.** Korean Americans' exposure to Korean  
11  
12 culture was captured by the *Number of Years* and their *Proportion of Life* spent in the heritage  
13  
14 culture. The scale capturing Korean Americans' degree of *Social Contact with Heritage Culture*  
15  
16 *Members* consisted of three items ( $\alpha = .74$ ) that asked about the ethnicity of their friends,  
17  
18 colleagues, and neighbors, respectively (on a scale from 1 = "heritage culture only" to 5 =  
19  
20 "Euro-Americans only"). We recoded all items such that higher scores indicated more social  
21  
22 contact with Koreans ( $M = 3.01$  ( $SD = 0.88$ )).  
23  
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26 Korean Americans' acculturation attitudes were measured by 8 items from the  
27  
28 Vancouver Index of Acculturation (Ryder et al., 2000), with scales ranging from 1 (*totally*  
29  
30 *disagree*) to 9 (*totally agree*). A Principal Component Analysis yielded two different factors  
31  
32 that formed the basis of two scales: *Attitudes toward the Maintenance of Values and Traditions*  
33  
34 (four items,  $\alpha = .78$ ;  $M = 6.28$ ,  $SD = 1.55$ ; Example: "It is important for me to maintain or  
35  
36 develop Korean cultural practices") and *Attitudes toward Social Contacts with Heritage Culture*  
37  
38 *Members* (four items,  $\alpha = .77$ ;  $M = 7.29$ ,  $SD = 1.35$ ; Example: "I am interested in having Korean  
39  
40 friends"). The two scales were significantly correlated with each other ( $r = .523$ ,  $p \leq .001$ ).  
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45 **Situational factor of Cultural Engagement:** Our situational factor is the socio-cultural  
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47 context in which the situation took place (as specified by the prompt): either at home/with  
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49 family versus at work/school. We consider the home/family context as representative for the  
50  
51 heritage culture since most minorities have family members with a heritage culture background,  
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53 and consider the work/school context as representative for the new majority culture since most  
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55 of minorities' colleagues/classmates have a majority cultural background.  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3       **Procedure.** Before participating, participants received, read, and signed an informed  
4 consent (approval granted by the Human Subjects Committee, University of California at Santa  
5 Barbara). Korean Americans and European Americans had been recruited in public places, such  
6 as malls, churches, and coffee shops in Southern California, where Korean Americans live in  
7 immigrant neighbourhoods (see De Leersnyder et al., 2011). Koreans in Korea were recruited  
8 through a Christian mega-church because 91% of Korean Americans self-identify as Christians  
9 (Yoo & Chung, 2009) and we wanted the Korean sample to be similar in this regard. Korean  
10 participants received ₩10,000 (about \$10) for completing the questionnaires in Korean.  
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**Results.**

21  
22       **Analytic strategy.** To assess how personal factors were associated with heritage culture  
23 emotional fit (i.e., to test H1-H4), we made use of participants' aggregated emotional fit scores  
24 with the Korean typical patterns of emotion. To test group differences in participants' emotional  
25 fit (H1), we conducted an ANOVA that predicted all participants' fit score from their group  
26 membership. To test if minorities' emotional fit with the Korean patterns was predicted by their  
27 exposure (H2) or not (H2A) and general level of social contact with Koreans (H3) versus only  
28 by the number of heritage culture friends (H3A), we conducted a carefully planned series of  
29 hierarchical linear regression analyses. The dependent variable was always Korean Americans'  
30 fit with the typical Korean patterns of emotion, yet separate regressions were run for each  
31 'predictor of interest', resulting in 4 different analyses to test the 4 main hypotheses (i.e.,  
32 Regression 1: *Number of Years in Korea*; Regression 2: *Proportion of Life in Korea*; Regression  
33 3: *Social Contact Koreans*; Regression 4: *Acculturation Attitudes*; see also Table 1) and 3  
34 additional ones to test H3A. The first two blocks of each regression included our control  
35 variables, namely Valence and Engagement as the between-subject variables in our design  
36 (Block 1) and Educational Attainment (Block 2). Block 3 always included our predictor of  
37 interest. Whereas Block 4 tested all two-way interactions between the specific predictor of  
38 interest. Whereas Block 4 tested all two-way interactions between the specific predictor of  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 interest (as entered in Block 3) and Valence and Engagement, Block 5 did so for the two way  
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5 interaction between the predictor of interest and Educational Attainment. Finally, Block 6 tested  
6  
7 the 3-way interaction between the specific predictor of interest, Valence, and Engagement.  
8  
9

10 To assess the influence of the situational factor on heritage culture emotional fit (H5),  
11  
12 which requires to compare Korean Americans' fit with the Korean versus the European  
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14 American average patterns of experience, we relied on Korean Americans' fit scores with *both*  
15  
16 the average Korean patterns and those with the average European American patterns established  
17  
18 in previous work (De Leersnyder et al., 2011). Moreover, because this hypothesis requires a  
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20 comparison at the level of the relational context (home/with family vs. work/school) and this  
21  
22 was a within-subjects factor, we used participants' unaggregated fit scores. Specifically, we ran  
23  
24 two paired-samples t-tests (one for home/family context; the other for work/school context) that  
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26 each time compared Korean Americans' fit with the typical Korean pattern to their fit with the  
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28 typical European American pattern.  
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32  
33 **Personal factors: Which aspects of heritage engagement predict Korean**  
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35 **Americans' heritage emotional fit?** At the group level, we had hypothesized that emotional  
36  
37 fit to the typical Korean patterns would be higher for the Korean majority group than the Korean  
38  
39 American and European American groups (H1). Consistently, an ANOVA yielded group  
40  
41 differences in mean emotional fit ( $F_{(2,163)} = 16.698; p \leq .001, \eta^2 = .170$ ). Pairwise comparisons  
42  
43 showed that Koreans in Korea fitted the typical Korean pattern significantly better ( $M = 1.05;$   
44  
45  $SD = .28$ ) than European Americans ( $M = .63; SD = .50; M_{diff} = .42; p \leq .001, 95\% CI: [.263,$   
46  
47  $573]$ ) and Korean Americans ( $M = .74; SD = .50; M_{diff} = .31; p \leq .001, 95\% CI: [.156, .459]$ ).  
48  
49 The fit scores of Korean Americans fell nicely in between those of Koreans and European  
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51 Americans, yet were not significantly higher than those of European Americans (see Figure 1,  
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56 left panel).  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 At the individual level, we explored the two contrasting sets of hypotheses outlined in  
4 the Introduction. On the one hand, we had hypothesized that engagement in the heritage culture  
5 would predict heritage emotional fit (H2 & H3); on the other hand, the alternative hypotheses  
6 stated that the operationalisations of cultural exposure (number of years and proportion of life  
7 spent in heritage culture) would not be associated with immigrants' emotional fit (H2A) and  
8 that fit would be only predicted by one's number of Korean friends (H3A).  
9

10  
11 As described above, we tested these predictions by conducting a series of four  
12 hierarchical linear regressions to test H2-H4 and three additional ones to test H3A. All  
13 regressions yielded a main effect of Valence (*step 1 R<sup>2</sup> change* = .369,  $p \leq .001$ ; *B*'s ranging  
14 from -.615 to -.580,  $p \leq .001$ ; see Table 1, panel A), indicating that participants had significantly  
15 higher emotional fit in positive than in negative situations. The other control variables (Block  
16 1: Engagement; Block 2: Educational attainment) did not significantly contribute to explaining  
17 variance in immigrants' Korean emotional fit, and Blocks 5 and 6 that tested all two-way and  
18 three-way interactions never yielded significant results; hence, we don't report them here (full  
19 results can be obtained from the first author).  
20  
21

22  
23 Regressions 1 and 2 showed that Korean Americans' emotional fit to Korean patterns  
24 was neither associated with the number of years nor with the proportion of life spent in Korea  
25 (all  $p > .10$ ; for the full results, see Table 1, panel A, Regressions 1 and 2), which renders  
26 support for H2A instead of H2. For minorities in ethnic enclaves (such as the ones we recruited),  
27 time spent in the heritage country does not predict heritage emotional fit, perhaps because it  
28 does not expose minorities to heritage culture's meanings and practices above and beyond what  
29 they are exposed to in their ethnic minority communities in their country of residence.  
30  
31

32  
33 Regression 3, testing the link between heritage culture fit and social contact with  
34 heritage culture members, showed that general social contact was not predictive of emotional  
35 fit (*step 3 R<sup>2</sup> change* = .005,  $p = .592$ , see Table 1, panel A, Regression 3). To test the alternative  
36  
37

## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 hypothesis (H3A) that only the number of Korean friends matters, we first ran Regression 3bis  
4 that included the item on having Korean friends as the predictor of interest and then another  
5  
6 that included the item on having Korean friends as the predictor of interest and then another  
7  
8 two analyses that included the item on having Korean colleagues and Korean neighbours,  
9  
10 respectively. Confirming hypothesis 3A, only having Korean friends contributed significantly  
11  
12 to Korean Americans' heritage emotional fit, be it that this effect was moderated by Valence  
13  
14 (*step 4 R<sup>2</sup> change* = .132,  $p = .016$ ,  $B_{\text{Valence} \times \text{KoreanFriends}} = .372$ ,  $p = .015$ , 95% CI [.076, .669], see  
15  
16 Table 1, panel A, Regression 3bis). This effect was still significant after applying Bonferroni  
17  
18 corrections for multiple comparisons ( $p = .015 < \alpha_{.05/3} = .017$ ). Simple slopes indicated that the  
19  
20 number of Korean friends was positively associated with Korean emotional fit in negative  
21  
22 situations (simple slope  $B = .208$ ,  $SE = .114$ ,  $p = .077$ , 95% CI [-.023, .439]), but not in positive  
23  
24 situations (simple slope  $B = -.164$ ,  $SE = .141$ ,  $p = .254$ , 95% CI [-.450, .122]). Analyses on the  
25  
26 number of Korean neighbours and colleagues yielded no significant results (for full results see  
27  
28 Online Supplementary Materials, Table 2A, panel A). Supporting H3A, the only predictor of  
29  
30 heritage culture emotional fit is thus Korean Americans' number of heritage culture friends.  
31  
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34  
35 In a final regression, we tested the association between Korean Americans' emotional  
36  
37 fit with the heritage culture and the two scales that tap into their attitudes towards maintaining  
38  
39 their heritage culture (H4). As expected, minorities' emotional fit was unrelated to their  
40  
41 attitudes towards maintaining Korean values and traditions. However, their attitudes toward  
42  
43 maintaining social contacts with Koreans did marginally contribute to the prediction of heritage  
44  
45 emotional fit (see Table 1, panel A, Regression 4). To disentangle whether this is an effect of  
46  
47 *attitudes* per se versus of *actually* having Korean friends, we conducted a post-hoc regression  
48  
49 analysis in which both variables were the predictors of interest. It showed that whereas Korean  
50  
51 Americans' Korean emotional fit was *not* predicted by their attitudes towards social contact  
52  
53 (*step 3 R<sup>2</sup> change* = .060,  $p = .166$ ), it was by their actual number of Korean friends (*step 4 R<sup>2</sup>*  
54  
55 *change* = .160,  $p = .028$ ;  $B = .412$ ,  $p = .007$ , 95% CI [.122, .702]; see Table 1, panel A).  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

**Situational factor: Does interacting in Korean cultural settings afford Korean Americans to fit the Korean emotional patterns better?** Based on the cultural frame switching literature, we had expected that minorities' interactions in home/family contexts would afford emotional experiences that fit the Korean typical patterns better than the European American ones (H5). Hence, we compared, for each context, minorities' fit to the typical European American and to the typical Korean emotional patterns by means of paired samples t-tests. For the home context, we found a marginally significant effect suggesting that Korean Americans' emotional patterns fitted better with the Korean ( $M = .76$ ,  $SD = .62$ ) than European American patterns ( $M = .66$ ,  $SD = .56$ ;  $Mean\_diff = .10$ ,  $SE_{mean\ diff} = .05$ ,  $t_{(42)} = 1.895$ ,  $p = .065$ ; one-tailed  $p = .033$ ; 95% CI: [-.006, .200]). For the work/school context, however, no such difference occurred ( $Mean\_diff = -.01$ ,  $SE_{mean\ diff} = .06$ ,  $t_{(42)} = -.096$ ,  $p = .924$ ; 95% CI: [-.118, .108] see Figure 2 left panel).

Post-hoc exploratory analyses suggested that the exact pattern of emotional fit levels was different for first versus second or later generation Korean Americans. Specifically, we repeated the t-tests described above, yet now for first and second or later generations separately. For the home context, we found that first generation Korean Americans fitted significantly better with the Korean ( $M = .74$ ,  $SD = .63$ ) than European American patterns ( $M = .60$ ,  $SD = .57$ ;  $Mean\_diff = .15$ ,  $SE_{mean\ diff} = .065$ ,  $t_{(30)} = 2.249$ ,  $p = .032$ ; one-tailed  $p = .016$ ; 95% CI: [.013, .279]), whereas there was no such difference for second or later generation Korean Americans ( $Mean\_diff = -.03$ ,  $SE_{mean\ diff} = .062$ ,  $t_{(11)} = -.488$ ,  $p = .635$ ; 95% CI: [-.169, .108]). In work/school contexts, however, there was a non-significant trend for later generation Korean Americans to fit better with the European American ( $M = .98$ ,  $SD = .49$ ) than the Korean ( $M = .90$ ,  $SD = .57$ ) typical patterns ( $Mean\_diff = -.08$ ,  $SE_{mean\ diff} = .087$ ,  $t_{(10)} = -.947$ ,  $p = .366$ ; 95% CI: [-.277, .112]), but this was not the case among first generation minorities ( $Mean\_diff = .02$ ,  $SE_{mean\ diff} = .069$ ,  $t_{(31)} = .306$ ,  $p = .762$ ; 95% CI: [-.120, .162]). Given the small numbers of

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3 participants, and especially the small number of second or later generation minorities ( $n = 12$ ),  
4  
5 conclusions should be treated with extreme caution. Yet, these results provide some initial  
6  
7 support for the idea that situational factors such as the context of the interaction shape  
8  
9 minorities' emotional experiences, at least among first generation minorities.  
10  
11

## 12 Study 2

13  
14 Study 2 was not only a replication of Study 1 in another group of minorities (Turkish)  
15  
16 within a different host culture setting (Belgium), but also overcame several of its limitations.  
17  
18 Concretely, Study 2 consisted of sizable samples of first and second generation minorities,  
19  
20 which allows us to reliably compare them. Furthermore, Study 2 used a similar design of the  
21  
22 EPQ for all groups, thereby ruling out possible design effects when comparing mean emotional  
23  
24 fit scores across samples. Finally, in Study 2 minorities were prompted to report on two  
25  
26 emotional situations that either occurred in the home context or in the work/school context,  
27  
28 thereby ruling out the possibility that any evidence for emotional frame switching can be  
29  
30 accounted for by a contrast-effect that occurs when minorities report on both contexts in the  
31  
32 same questionnaire. All hypotheses were exactly the same as for Study 1.  
33  
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36

### 37 Method.

38  
39 **Participants.** Participants were 144 Turkish Belgian minorities (59 first generation; 85  
40  
41 second generation) and 79 Belgian majorities that were available from earlier research (De  
42  
43 Leersnyder et al., 2011), as well as 250 Turkish majority students from the Döküz Eylül  
44  
45 Universitesi in Izmir, Turkey, who were sampled for the purpose of this study. Across the  
46  
47 samples there were significant differences in age, with Turkish students being significantly  
48  
49 younger ( $M = 20.1$ ,  $SD = 1.47$ ) than first generation ( $M = 34.1$ ,  $SD = 10.85$ ) and second  
50  
51 generation minorities ( $M = 25.59$ ,  $SD = 6.63$ ) as well as majority Belgians ( $M = 31.38$ ,  $SD =$   
52  
53  $8.67$ ; all *Mean diff* were significant at  $p \leq .001$ ). Furthermore, the Turkish majority sample was  
54  
55 characterized by a higher proportion of female participants (67% females) than the other three  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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2  
3 samples (around 50%;  $\chi^2 = 10.338, p = .016$ ) and was less highly educated since none of the  
4  
5 Turkish students held a tertiary education degree yet (see Online Supplementary Materials for  
6  
7 full statistics).  
8  
9

10  
11 However, controlling for Age, Gender, or Educational Attainment did not change the  
12  
13 results. In order to keep them comparable to both Study 1 and our earlier work (De Leersnyder  
14  
15 et al., 2011), we excluded three first generation minorities who had received none or only  
16  
17 primary education and controlled for Educational Attainment in our analyses (dummy coded as  
18  
19 0 = “secondary education”; 1 = “tertiary education”). We further excluded 17 participants who  
20  
21 failed to report a situation that matched the valence of the prompts; the proportion did not differ  
22  
23 across cultural groups ( $\chi^2 = 2.052, p = .562$ ; Excluded: Turkish majority  $n = 10$ , Turkish Belgian  
24  
25 first generation  $n = 2$ , Turkish Belgian second generation  $n = 1$ , Belgian majority  $n = 4$ ).  
26  
27

28  
29 **Materials. Emotional Patterns Questionnaire (EPQ).** The EPQ used in Study 2 was  
30  
31 identical to the one used in Study 1. However, participants from all groups now completed two  
32  
33 versions of the EPQ that pertained to the same Relationship Context (either home/family or  
34  
35 work/school) and Valence (either positive or negative), but differed in terms of Engagement.  
36  
37 In order to calculate emotional fit scores, we followed the exact same procedure as in Study 1,  
38  
39 yet now using the Turkish average emotional patterns as standard of reference with which we  
40  
41 correlated individuals’ patterns. Again, the correlations were based on only those 17 emotion  
42  
43 items for which a Simultaneous Component Analysis indicated cross-culturally equivalence  
44  
45 (see Online Supplementay Materials for the full list of emotions and De Leersnyder et al., 2011  
46  
47 for the full results of the SCA) and were transformed into Fischer z-scores. Participants’ two  
48  
49 z-scores were aggregated into one index of emotional fit with the Turkish average patterns.  
50  
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52

53  
54 **Personal Factors of Cultural Engagement.** Similar to Study 1, we operationalised  
55  
56 Turkish Belgians’ exposure to the heritage culture as the *Number of Years* and *Proportion of*  
57  
58 *Life* spent in the heritage culture. *Social Contact with Heritage Culture Members* was measured  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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2  
3 through an eight item scale that asked participants whether they use to speak only Turkish (1),  
4 only Dutch (3) or both languages (2) when interacting with their partner, siblings, co-workers,  
5 neighbours, friends, etc. (De Leersnyder et al., 2011); Cronbach's  $\alpha = .76$ ). We re-coded the  
6 scale such that higher scores indicate more Turkish (instead of Dutch) language use when  
7 having social contact ( $M = 2.00$ ,  $SD = 0.54$ ). Since majority Belgians do not have any  
8 knowledge of Turkish, this scale is an indirect measure of the degree to which immigrants'  
9 social contacts are with heritage culture members. As an extra check, we directly asked  
10 minorities their agreement with the statement "I have a lot of Turkish friends" (1 = *totally*  
11 *disagree* – 7 = *totally agree*;  $M = 6.09$   $SD = 1.44$ ). We could not combine their answers with  
12 the indirect social contact scale because of the different scales.  
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26 As in Study 1, acculturation attitudes were measured by 8 items of the VIA (Ryder et  
27 al., 2000) that constituted two scales: one referring to *Maintaining Values and Traditions* (four  
28 items,  $\alpha = .73$ ;  $M = 5.59$ ,  $SD = 1.17$ ), the other referring to *Maintaining Social Contacts with*  
29 *Heritage Culture Members* (four items,  $\alpha = .73$ ;  $M = 5.68$ ,  $SD = 1.17$ ). The two scales correlated  
30 substantially ( $r_{(140)} = .68$ ,  $p \leq .001$ ), but nevertheless formed 2 factors in the PCA.<sup>3</sup>  
31  
32  
33  
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35  
36

37 **Situational factor of Cultural Engagement:** The situational factor was operationalized  
38 in the exact same way as in Study 1, namely by looking at whether the self-reported situations  
39 had taken place at home/with family versus at work/school (as defined by the prompt).  
40  
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43

44 **Procedure.** Before each study, participants received, read, and signed an informed  
45 consent. The Belgian and Turkish Belgian community samples were recruited through centres  
46 for adult education and through flyers being distributed in (mainly) Turkish neighbourhoods in  
47 the city of Gent. The Turkish majority sample was recruited at the Educational Studies  
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54  
55 <sup>3</sup> Although one item did not load on the expected factor (*Maintaining Values and Traditions*),  
56 Cronbach's alpha got worse (instead of improved) when removing this item from the scale. Therefore, and in  
57 keeping with both Study 1 and the 2011 paper, we retained this item.  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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2  
3 Department of the Doküz Eylül University in Izmir, Turkey. Students volunteered in class time  
4  
5 or during breaks.  
6

**Results.**

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9  
10 **Analytic strategy.** We employed an analytic strategy that resembles the one used in  
11  
12 Study 1. To assess group differences (H1), we conducted an ANOVA that tested differences in  
13  
14 Turkish emotional fit between the different groups in our sample. To assess which personal  
15  
16 factors were associated with heritage culture emotional fit, we again conducted a series of  
17  
18 carefully planned regression analyses in which minorities' emotional fit with the Turkish  
19  
20 patterns was predicted by their exposure to the Turkish context (Regression 1 and 2, testing H2  
21  
22 vs. H2A), by their general level of social contact with Turks (regression 3 testing H3) versus  
23  
24 only by the number of heritage culture friends (regression 3bis testing H3A), and by their  
25  
26 attitudes towards maintain Turkish Values and traditions and Turkish Social Contacts  
27  
28 (Regression 4, testing H4). Again, these regressions consisted of several blocks with Blocks 1  
29  
30 and 2 including our control variables – i.e., the between-subject variables Valence and  
31  
32 Relationship Context (Block 1) and participants' Educational Attainment (Block 2) – Block 3  
33  
34 each time including one predictor of interest and Blocks 4 to 6 testing all two-way and 3-way  
35  
36 interactions.  
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42 To test H5 and thus to assess the influence of the situational factor on heritage culture  
43  
44 emotional fit, we relied on Turkish Belgians' fit scores with both the average Turkish patterns  
45  
46 *and* those with the average Belgian patterns established in previous work (De Leersnyder et al.,  
47  
48 2011). Differently than in Study 1, the (optimised) design of Study 2 allowed us to conduct a  
49  
50 Repeated Measures ANOVA that featured immigrants' emotional fit with the Turkish and the  
51  
52 Belgian average patterns as dependent variables, and the Context of the prompt (home/ family  
53  
54 vs. work/school) as predictor. In this analysis, we could also control for the (expectedly) strong  
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1  
2  
3 valence effects and further explore whether the effects of situational engagement on emotional  
4  
5 fit would differ across first and second generation minorities.  
6

7  
8 **Personal factors: Which aspects of heritage engagement predict Turkish Belgians’**  
9  
10 **heritage emotional fit?** At the group level, we had hypothesized that the Turkish majority  
11  
12 group would have higher fit to the average Turkish emotional patterns than the Turkish Belgian  
13  
14 and Belgian groups (H1). Consistent with this hypothesis, an ANOVA yielded group  
15  
16 differences in emotional fit ( $F_{(3,449)} = 4.099; p = .007, \eta^2 = .027$ ), showing that Turks in Turkey  
17  
18 were significantly more concordant to the Turkish average patterns ( $M = .80; SD = .46$ ) than  
19  
20 both Belgians ( $M = .62; SD = .51; M_{diff} = .175; p = .008, 95\% CI: [.047, .303]$ ) and Turkish  
21  
22 second generation immigrants ( $M = .62; SD = .54; M_{diff} = .175; p = .005, 95\% CI: [.052, .298]$ ).  
23  
24 The fit levels of Turkish first generation immigrants ( $M = .70; SD = .53$ ) were neither  
25  
26 significantly lower than those of Turkish majorities ( $M_{diff} = .104; p = .152, 95\% CI: [-.038,$   
27  
28  $.246]$ ) nor significantly higher than those of second generation minorities and Belgian  
29  
30 majorities (see Figure 1, right panel).  
31  
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33

34  
35 The regressions testing which personal factors of heritage culture engagement predict  
36  
37 heritage culture fit, again pointed to a main effect of Valence (*step 1  $R^2$  change = .53,  $p \leq .001$ ;*  
38  
39 *B ranging from  $-.755$  to  $-.728, p \leq .001$ ; see Table 1, panel B, Regressions 1 - 4*), indicating that  
40  
41 emotional fit was higher in positive than in negative situations. As in Study 1, neither the other  
42  
43 control variables (Context and Educational Attainment), nor any two-way or three-way  
44  
45 interaction were significant; hence, we don’t report on these results here (full details can be  
46  
47 obtained from the first author).  
48  
49

50  
51 Regressions 1 and 2 respectively revealed that neither the number of years spent in  
52  
53 Turkey nor the proportion of life spent in Turkey predicted minorities’ emotional fit with the  
54  
55 Turkish patterns (for the full results, see Table 1, panel B), which supports the alternative H2A  
56  
57 rather than H2.  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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2  
3 Regression 3 that predicted Turkish Belgians' heritage emotional fit from their daily  
4 social contacts with other Turkish (minority) people, found a trending effect of general social  
5 contact with Turks (*step 3 R<sup>2</sup> change* = .008, *p* = .139; *B* = .091, *p* = .139, 95% CI: [-.030,  
6 .212]; see Table 1, panel B). To further explore this finding and test H3A that posited that  
7 heritage emotional fit is only a function of having heritage culture friends, we conducted an  
8 additional series of eight regression analyses in which we separately entered each individual  
9 item of the social contact scale as the predictor of interest. Supporting H3A, only Regression  
10 3bis that included the item referring to friends yielded significant results (see Table 1, panel B):  
11 Speaking Turkish more with friends – as an indirect index of having more Turkish [minority]  
12 than Belgian majority friends – was positively associated with Turkish emotional fit (*step 3 R<sup>2</sup>*  
13 *change* = .029, *p* = .005; *B* = .116, *p* = .005, 95% CI: [.036, .195]; see OSM Table 2A for the  
14 non-significant results on the other social contact items). This effect was still significant after  
15 applying Bonferroni corrections for multiple comparisons ( $\alpha = .05/8 = 0.006$ ). Moreover, it was  
16 corroborated by Regression 3cis that included minorities' explicitly stated number of Turkish  
17 friends as predictor of interest: Again, the more heritage culture friends, the higher minorities'  
18 heritage culture fit (*step 3 R<sup>2</sup> change* = .020, *p* = .016; *B* = .055, *p* = .016, 95% CI: [.011, .100];  
19 see Table 1).

20  
21  
22 Finally, we tested the associations between minorities' acculturation attitudes towards  
23 the Turkish culture and their emotional fit with the Turkish patterns (H4). Mirroring the results  
24 of Study 1, minorities' wish to maintain Turkish values and traditions was unrelated to  
25 emotional fit, but their wish to maintain social contacts with Turks' was marginally significantly  
26 associated, be it for home/family situations only (see Table 1, panel B, Regression 4; *step 4 R<sup>2</sup>*  
27 *change* = .028, *p* = .082). Again, we conducted a post-hoc regression analysis to disentangle  
28 this effect of *desiring* social contact with heritage members from having *actual* contact with  
29 heritage members. Just like in Study 1, however, the effect of *Attitudes towards Maintaining*  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 *Social Contact with Heritage Members* disappeared once we included the variables referring to  
4  
5 *actual* contacts with heritage members.<sup>4</sup> When all three contact-related items were included  
6  
7 (*step 3 R<sup>2</sup> change* = .048,  $p = .004$ ), only Turkish Belgians' use of the Turkish language with  
8  
9 friends significantly predicted their Turkish emotional fit ( $B = .102$ ,  $p = .013$ , 95% CI: [.022,  
10  
11 .182]; see Table 1, panel B). Turkish Belgians' fit to the typically Turkish emotional patterns is  
12  
13 thus only associated with the extent to which they engage in *actual* heritage culture friendships.  
14  
15

16  
17 **Situational factor: Does interacting in Turkish cultural settings afford Turkish**  
18  
19 **Belgians to fit the Turkish emotional patterns better?** To test whether the situational factor  
20  
21 Context shaped Turkish Belgians' emotional fit with their heritage culture (H5), we compared  
22  
23 their fit with the typical Turkish versus typical Belgian emotional patterns in home/family  
24  
25 versus work/school contexts. A Repeated Measures ANOVA with emotional fit scores as  
26  
27 within-subjects variables and Valence, Context and Generation as between-subjects variables,  
28  
29 provided initial support for H5. Confirming the findings reported above, this analysis yielded  
30  
31 i) a significant within-subjects effect of Generation on Emotional Fit (Pillai's Trace = .069  
32  
33  $F_{(1,130)} = 9.665$ ,  $p = .002$ ,  $\eta^2 = .069$ ) such that first generation minorities had a higher fit with the  
34  
35 Turkish ( $M = .68$ ,  $SE = .049$ ) than the Belgian patterns ( $M = .62$ ,  $SE = .046$ ;  $Mean\_diff = -.055$ ,  
36  
37  $SE = .024$ ,  $p = .023$ ), whereas the opposite was true for second generation minorities (Belgian  
38  
39 fit:  $M = .65$ ,  $SE = .039$ ; Turkish fit:  $M = .61$ ,  $SE = .042$ ;  $Mean\_diff = -.042$ ,  $SE = .020$ ,  $p = .038$ ),  
40  
41 and ii) a significant between-subjects effect of Valence ( $F_{(1,130)} = 159.89$ ,  $p \leq .001$ ). No other  
42  
43 within-subject effects were significant, implying that the hypothesized three way interaction of  
44  
45 Emotional Fit\*Context\*Generation also did not reach significance (Pillai's Trace = .003  $F_{(1,130)}$   
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53  
54 <sup>4</sup> Minorities' attitudes toward social contact with Turks were highly correlated with their explicit  
55  
56 statement of having Turkish friends ( $r = .435$ ,  $p \leq .001$ ), but uncorrelated with the more implicit measure of  
57  
58 speaking Turkish among friends ( $r = .061$ ,  $p = .481$ ); the latter two scales were moderately associated ( $r = .171$ ,  $p$   
59  
60 = .047).

1  
2  
3 = .440,  $p = .508$ ,  $\eta^2 = .003$ ). However, as expected, the pattern of pairwise comparisons was  
4  
5 very consistent with the trends observed in Study 1. Turkish first generation minorities were  
6  
7 more concordant to Turkish ( $M = .67$ ,  $SE = .071$ ) than to Belgian ( $M = .61$ ,  $SE = .066$ ) emotional  
8  
9 patterns in home/family contexts ( $Mean\_diff = .063$ ,  $SE_{mean\_diff} = .034$ ,  $p = .070$ , one-tailed  $p =$   
10  
11  $.035$ ; 95% CI:  $[-.005, .130]$ ), but did not differentiate between the patterns in work/school  
12  
13 contexts. In contrast, second generation minorities were more concordant to Belgian ( $M = .68$ ,  
14  
15  $SE = .054$ ) than to Turkish ( $M = .60$ ,  $SE = .058$ ) patterns in work/school contexts ( $Mean\_diff =$   
16  
17  $.071$ ,  $SE_{mean\_diff} = .028$ ,  $p = .013$ , one-tailed  $p = 0.007$ ; 95% CI:  $[.015, .126]$ ), but did not  
18  
19 differentiate between Belgian and Turkish patterns at home (see Figure 2, right panel). Taken  
20  
21 together, this set of results provides further tentative support for the idea that minorities switch  
22  
23 cultural frames in the domain of emotions, but also suggests that the specific condition under  
24  
25 which frame-switching occurs, may differ across first and second generation minorities.  
26  
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28  
29

### 30 **General Discussion**

31  
32  
33 The current research documents which personal and situational factors afford immigrant  
34  
35 minorities to maintain their heritage culture's emotional patterns. It suggests that when  
36  
37 immigrant minorities come to fit the emotional patterns typical of the new mainstream culture,  
38  
39 they do not necessarily 'lose' their emotional concordance to their heritage culture. Rather,  
40  
41 minorities may maintain (and perhaps even cultivate) their heritage emotional patterns through  
42  
43 maintaining friendships with heritage culture members (personal factor) and interacting in  
44  
45 situations that prompt and afford heritage cultural meanings and practices (situational factor).  
46  
47 Specifically, our studies on Korean Americans and Turkish Belgians showed that minorities'  
48  
49 emotional fit with the heritage culture was i) positively associated with their number of Korean  
50  
51 and Turkish friends and ii) higher when interacting at home versus at school/work (although  
52  
53 the latter was most outspoken for first generation minorities). Thus, the current studies  
54  
55 consistently suggest that minorities' heritage culture emotional patterns are maintained (and  
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perhaps even cultivated) through interacting with heritage culture friends and are most prominent (and thus activated) *when* it is most relevant: In contacts with other heritage members.

Before discussing these findings in detail, we will take a closer look at two other results that were not at the core of our research, but that are nevertheless important. Firstly, and replicating other studies on emotional fit with culture (De Leersnyder et al., 2011; Jasini et al., 2019), we found that fit in positive situations is significantly higher than fit in negative situations, and that this result holds true for both majority and minority members. As speculated before (De Leersnyder et al., 2011), this may be due to the fact that negative emotional situations are more complex than positive ones – something that is also reflected by the higher sum of variances of all emotion terms in the negative (73.6 in Study 1 and 79.7 in Study 2) than in the positive situations (51.6 in Study 1 and 49.2 in Study 2). Importantly, however, we found no differences with regard to the *associations* between the various personal factors and emotional fit in positive versus negative situations: None of the interaction effects between Valence and our predictors of interest were significant. The only exception to this was that Korean Americans' friendships with Koreans only contributed to their fit with the typical Korean patterns for negative emotional situations, and not to their fit in positive situations. One potential explanation for this is that whereas positive situations are discussed with many others, negative situations, and especially negative engaging ones (that center around shame) are mainly discussed with close friends (Rimé, Mesquita, Phillipot & Boca, 1991). Therefore, having Korean friends may be especially important for Korean Americans to maintain fit with the typical Korean patterns in negative situations.

A second finding that was not at the core of our hypotheses, but that can shed important light on the nature of emotional fit with culture, is that immigrant minorities seemed to fit their heritage culture patterns about equally well as they fit their new majority culture patterns (De

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2  
3 Leersnyder et al., 2011), while majority members only fitted to their own and not the other  
4  
5 culture's patterns. To underpin this observation with statistics, we conducted, for each study, a  
6  
7 post-hoc repeated measures ANOVA in which we predicted all participants' level of emotional  
8  
9 fit with both the new mainstream (i.c., European American, Belgian) and the heritage (i.c.,  
10  
11 Korean, Turkish) typical patterns of emotion from their group membership. We found that all  
12  
13 majority groups (Koreans, European Americans, Turks, Belgians) were significantly more  
14  
15 concordant to their *own* than to *another* culture's emotional patterns, but that immigrant  
16  
17 minorities' fitted both patterns about equally well (see Online Supplementary Materials for a  
18  
19 full report). This suggests that for immigrant minorities the new mainstream and heritage  
20  
21 culture's emotional patterns tend to co-exist.  
22  
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24

**Predicting maintenance of heritage culture emotional patterns**

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27  
28 The current research started from the observation that most immigrant minorities engage  
29  
30 in heritage cultural contexts on a daily basis, and clarified which aspects of heritage engagement  
31  
32 are associated with minorities maintaining their heritage emotional patterns. Whether  
33  
34 immigrant minorities have heritage culture friends was the only personal factor that predicted  
35  
36 emotional fit with the heritage culture across both studies. Neither length of time spent in the  
37  
38 country of origin nor age at immigration predicted the emotional fit with the heritage culture –  
39  
40 findings that can be understood from the fact that our minority participants (like so many other  
41  
42 minorities) live in ethnic enclaves that expose them to (a form of) the heritage culture. Also,  
43  
44 participants' general level of social contact with heritage members did not predict heritage  
45  
46 emotional fit, perhaps because there is less meaningful variation in minorities' number of  
47  
48 heritage culture family members and colleagues. The fact that it was a function of one's contact  
49  
50 with heritage culture friends further supports the idea that friendships may play a particularly  
51  
52 important role in the (re)negotiation of emotional meanings while sharing emotional events.  
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3 Future research should further investigate these explanations by, for instance, explicitly  
4 testing to what extent i) these different indicators of heritage culture engagement are associated  
5 with the endorsement of heritage culture meanings and practices and ii) minorities actually  
6 share their emotional experiences much more with heritage culture friends than with family  
7 members, co-workers and neighbours. Relatedly, future research could further examine why  
8 having Korean friends was a predictor of Korean Americans' emotional fit to the Korean  
9 average emotional patterns for negative situations only (Study 1; see above).

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19 Despite these remaining questions, the current research documents which aspects of  
20 minorities' engagement in the heritage culture are associated with their maintenance of heritage  
21 culture patterns and which aspects are not. In this way it contributes to a more complete  
22 understanding of emotional acculturation. The fact that the predictors of mainstream and  
23 heritage cultural fit do not mirror one another perfectly may fuel further research, and shed light  
24 on the group-level findings discussed earlier. If anything, the results show that when immigrant  
25 minorities engage in a new cultural context, they are not 'doomed to lose' their heritage culture  
26 emotional patterns, especially not when they engage in friendships with heritage culture  
27 members.

### 28 29 30 31 32 33 34 35 36 37 38 39 40 **Towards a situated and heterogeneous approach of acculturation**

41  
42 Our findings inform acculturation psychology in several ways. Firstly, studies on  
43 acculturative changes in emotional patterns complement traditional acculturation research that  
44 has focused on minorities' attitudes and cultural identities, which are deliberate, conscious,  
45 articulate, and reflective positions towards the mainstream and heritage cultures (e.g., (Berry,  
46 1997; Phinney, 1990; Sam & Berry, 2010). It calls for a 'cultural psychological' approach to  
47 acculturation (see De Leersnyder, 2014; Mesquita, De Leersnyder, & Jasini, 2019) in which  
48 *all* aspects of people's psychological functioning, such as their self-esteem (Heine & Lehman,  
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3 2004), self-construal (De Leersnyder, 2009), personality (Güngör et al., 2013) and emotional  
4  
5 lives may be subject acculturation.  
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8 Secondly, the finding that emotional fit to the heritage culture was *dissociated* from  
9  
10 minorities' explicit attitudes towards maintaining the heritage culture commends interpreting  
11  
12 emotional concordance as a more implicit reflection of acculturation. Moreover, it calls for a  
13  
14 novel view on acculturation in which different aspects of minorities' psychological functioning  
15  
16 may acculturate at different paces or even in different directions. As found here and elsewhere  
17  
18 (i.c. De Leersnyder et al., 2011; Jasini, et al., 2019), minorities' explicitly held (attitudes,  
19  
20 identities) and implicitly embodied (emotions) cultural affiliations could be more  
21  
22 heterogeneous than previously assumed.  
23  
24

### 25 26 **Cultural frame switching in emotions** 27

28  
29 In addition to providing insight in (emotional) acculturation, our findings also speak to  
30  
31 cultural frame switching (e.g., Hong et al., 2000). By showing that minorities' emotional  
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33 patterns were more concordant with heritage culture patterns in situations that took place at  
34  
35 home/with family, whereas they were more concordant with majority patterns in work/school  
36  
37 situations, the current research provides additional evidence for cultural frame switching in the  
38  
39 domain of emotions. These findings were moderated by minorities' generational status, though,  
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41 with first generation minorities showing more distinct patterns of emotions at home/with family  
42  
43 and second generation minorities showing more distinct patterns at school/work. This may be  
44  
45 so, because first generation minorities – who grew up in the heritage country – may have a more  
46  
47 clear picture of how emotional responses should look like in (heritage culture) family situations  
48  
49 than in (majority) work/school situations, while the opposite may be true for second generation  
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51 minorities who grew up in the new mainstream context – a speculation that needs to be  
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53 addressed in future research.  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 Nevertheless, the current findings go beyond the only other study on emotional frame  
4 switching (Perunovic et al., 2007) in several ways. Firstly, they document cultural frame  
5 switching in the *patterning of emotions* rather than in associations between average levels of  
6 switching in the *patterning of emotions* rather than in associations between average levels of  
7 positive and negative moods. Secondly, and most importantly, they are based on *actually*  
8 *measured* instead of inferred fit between minorities' emotions and those that are typical for the  
9 heritage and mainstream cultures. Of course, future research should address the exact  
10 differences between heritage and new mainstream emotional patterns as well as examine which  
11 contextual cues activate each of these culture's emotional patterns.  
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**Emotions**

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23 Finally, the current studies also speak to our understanding of emotions per se. The  
24 finding that minorities continue to fit emotionally with their heritage culture upon engaging in  
25 heritage culture friendships supports the idea that people's – ongoing and multiple – cultural  
26 engagements shape their experiences to be in line with them (e.g., Mesquita, 2003; Mesquita et  
27 al., 2017). Furthermore, the additional evidence for minorities' frame switching between  
28 heritage and new mainstream patterns of emotion, can be taken as support for the idea that  
29 people construe their emotional experiences *dynamically* and thus 'in the moment' to be in line  
30 with the prevailing cultural context (e.g., Boiger & Mesquita, 2012).  
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**Limitations**

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44 The current research has some limitations. First, the sample size of Study 1 was rather  
45 small, which may have weakened the power of our analyses. Yet, as the results of Study 1 were  
46 replicated in Study 2, we have confidence that the findings can be interpreted, especially given  
47 the fact that the two case studies were maximally different yet theoretical replications from one  
48 another. Second, we calculated emotional concordance for home/family and work/school  
49 contexts as we assumed that the heritage culture is salient in home/family contexts and the  
50 majority culture is pertinent in work/school contexts. In reality, these contexts may be less  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 culturally homogenous, due to people from diverse ethnic backgrounds being present at the  
4  
5 same time, switching between different languages of interaction, and the simultaneous presence  
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7 of cultural symbols that refer to the new and the heritage context. If anything, the dynamics of  
8  
9 emotional acculturation may thus still be more complex than we outlined here.  
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**Conclusion**

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14 In sum, the current research documented the personal and situational factors that afford  
15  
16 immigrant minorities to maintain emotional patterns that are typical for their heritage cultural  
17  
18 context. It suggests that minorities do not lose existing heritage emotional patterns when they  
19  
20 acquire new mainstream emotional patterns, but can continue to maintain these patterns while  
21  
22 interacting with heritage culture friends. In addition, it suggests that minorities may switch  
23  
24 between heritage and new mainstream emotional patterns depending on the context of  
25  
26 interaction: When interacting in heritage cultural settings (at home) they are more concordant  
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28 to typical heritage than to typical majority emotional patterns, while the opposite is true when  
29  
30 interacting in majority cultural settings (at work/school). As such, the current research shows  
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32 that minorities' emotional patterns are not only cultivated, but also activated by their  
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34 interactions in different socio-cultural contexts.  
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Regression 3bis			$\Delta R^2$	$\beta^a$	Regression 3bis			$\Delta R^2$	$\beta^a$
<i>Step 1</i>			.369***		<i>Step 1</i>			.526***	
Valence				-.584***	Valence				-.750***
Engagement				.086	Context				.017
<i>Step 2</i>			.000		<i>Step 2</i>			.001	
Panel A: STUDY 1					Panel B: STUDY 2				
Korean immigrants in the US					Turkish immigrants in Belgium				
DV: Fit with Korean average patterns					DV: Fit with Turkish average patterns				
Predictor					Predictor				
Regression 1			$\Delta R^2$	$\beta^a$	Regression 1			$\Delta R^2$	$\beta^a$
<i>Step 1</i>			.369***		<i>Step 1</i>			.533***	
Valence				-.597***	Valence				-.729***
Engagement				.019	Context				.011
<i>Step 2</i>			.000		<i>Step 2</i>			.001	
Educational att.				.086	Educational att.				.027
<i>Step 3</i>			.038		<i>Step 3</i>			.003	
Proportion life in Korea				-.207.	Proportion life in Turkey				.057
Total $R^2$			.408***		Total $R^2$			.537***	
Regression 2			$\Delta R^2$	$\beta^a$	Regression 2			$\Delta R^2$	$\beta^a$
<i>Step 1</i>			.369***		<i>Step 1</i>			.529***	
Valence				-.589***	Valence				-.728***
Engagement				-.022	Context				.004
<i>Step 2</i>			.000		<i>Step 2</i>			.001	
Educational att.				.078	Educational att.				.031
<i>Step 3</i>			.048†		<i>Step 3</i>			.002	
Number of years in Korea				-.234†	Number of years in Turkey				.045
Total $R^2$			.417***		Total $R^2$			.531***	
Regression 3			$\Delta R^2$	$\beta^a$	Regression 3			$\Delta R^2$	$\beta^a$
<i>Step 1</i>			.369***		<i>Step 1</i>			.533***	
Valence				-.627***	Valence				-.736***
Engagement				.020	Context				.010
<i>Step 2</i>			.000		<i>Step 2</i>			.001	
Educational att.				.010	Educational att.				.053
<i>Step 3</i>			.005		<i>Step 3</i>			.008††	
Social Contacts Koreans				.075	Social Contacts Turks (language social contacts)				.093††
Total $R^2$			.374***		Total $R^2$			.541***	

Table 1.

*Hierarchical Multiple Regression Analyses Predicting Minorities' Emotional Fit with the Heritage Culture's Average Emotional Patterns.*

1	Educational att.	.118		Educational att.	.064
2	<i>Step 3</i>	.006		<i>Step 3</i>	.029**
3	Korean friends	-.299		Turkish friends	.176**
4	<i>Step 4</i>	.132*		(language with friends)	
5	Valence* Korean friends	.454*			
6	Engagement*Korean friends	-.140			
7	Total $R^2$	.507***		Total $R^2$	.556***
8					
9					
10				<b>Regression 3cis</b>	<b><math>\Delta R^2</math></b> <b><math>\beta^a</math></b>
11				<i>Step 1</i>	.534***
12				Valence	-.732***
13				Context	-.011
14				<i>Step 2</i>	.001
15				Educational att.	.039
16				<i>Step 3</i>	.020*
17				Number Turkish	.144*
18				friends (explicit)	
19				Total $R^2$	.554***
20					
21					
22					
23	<b>Regression 4</b>	<b><math>\Delta R^2</math></b>	<b><math>\beta^a</math></b>	<b>Regression 4</b>	<b><math>\Delta R^2</math></b> <b><math>\beta^a</math></b>
24	<i>Step 1</i>	.369***		<i>Step 1</i>	.534***
25	Valence	-.615***		Valence	-.738***
26	Engagement	.081		Context	.002
27	<i>Step 2</i>	.000		<i>Step 2</i>	
28	Educational att.	-.021		Educational att.	.001 .032
29	<i>Step 3</i>	.049		<i>Step 3</i>	.015††
30	Maintenance Val. Trad.	-.010		Maintenance Val. Trad.	-.136
31	Maintenance Soc. Cont.	.242††		Maintenance Soc. Cont.	.386**
32				<i>Step 4</i>	.028†
33				Valence*Maint Val. Trad.	.022
34				Valence *Maint Soc. Cont.	-.088
35				Context*Maint Val. Trad.	.206†
36				Context *Maint Soc. Cont.	-.317**
37					
38					
39					
40					
41	Total $R^2$	.418***		Total $R^2$	.577***
42					
43	<b>Post-hoc regression</b>	<b><math>\Delta R^2</math></b>	<b><math>\beta^a</math></b>	<b>Post-hoc regression</b>	<b><math>\Delta R^2</math></b> <b><math>\beta^a</math></b>
44	<i>Step 1</i>	.369***		<i>Step 1</i>	.526***
45	Valence	-.599***		Valence	-.755***
46	Engagement	.158		Context	.006
47	<i>Step 2</i>	.000		<i>Step 2</i>	.001
48	Educational att.	.063		Educational att.	.075
49	<i>Step 3</i>	.060		<i>Step 3</i>	.048**
50	Maintenance Soc. Cont	.240		Turkish friends (language)	.155*
51	Korean friends	-.360		Turkish friends (explicit)	.077
52				Maintenance Soc. Cont.	.087
53	<i>Step 4</i>	.160*			
54	Valence*Mainten. Soc. Cont	.037			
55	Valence*Korean friends	.502***			
56	Engagement*Mainten. Soc. Cont	.062			
57	Engagement*Korean friends	-.154			
58	Total $R^2$	.590***		Total $R^2$	.575***
59					
60					

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7 *Note.* <sup>a</sup> The  $\beta$ 's presented here are the ones from the final regression model, i.e. the latest step that significantly  
8 contributed to the explained variance. None of the three-way interactions (step 5) and the interactions between  
9 predictors of interest and Educational attainment (step 6) were significant. Therefore, the final models are either  
10 those of step 3 or step 4.  
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16 Regression 1: predictor of interest is *the proportion of life spent in the heritage culture*; Regression 2: predictor  
17 of interest is the *number of years spent in the heritage culture*; Regression 3: predictor of interest is the amount  
18 of *social contact with members from the host group*; Regression 3\_bis: predictor of interest is the extent to which  
19 one's friends are from the heritage culture; Regression 4: predictors of interest are minorities' *attitudes towards*  
20 *the maintenance of values and traditions* and *attitudes towards social contact with people from the heritage*  
21 *cultural group*. Post-hoc Regression: the predictors of interest are both the attitudinal and behavioral measures  
22 referring to having heritage culture friends. The between-brackets term (language) in study 2 refers to scales that  
23 tapped into one's Turkish versus Dutch language use as an indirect indicator of the ethnicity of one's social  
24 contacts.  
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37 ††  $p \leq .150$ ; †  $p \leq .100$ ; \*  $p \leq .050$ ; \*\*  $p \leq .010$ ; \*\*\*  $p \leq .001$   
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RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

**Study 1:  
Emotional Fit with Korean  
average patterns**

**Study 2:  
Emotional Fit with Turkish  
average patterns**

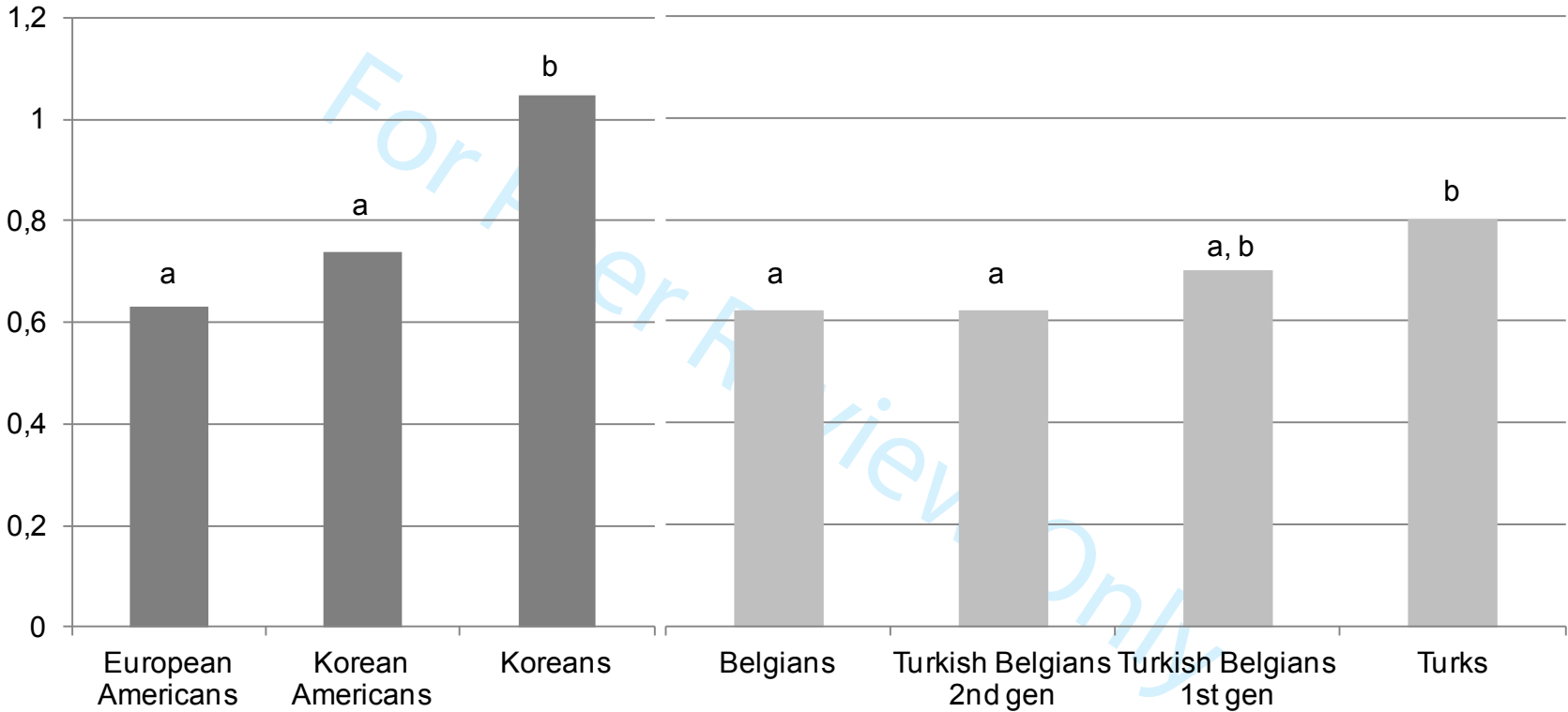
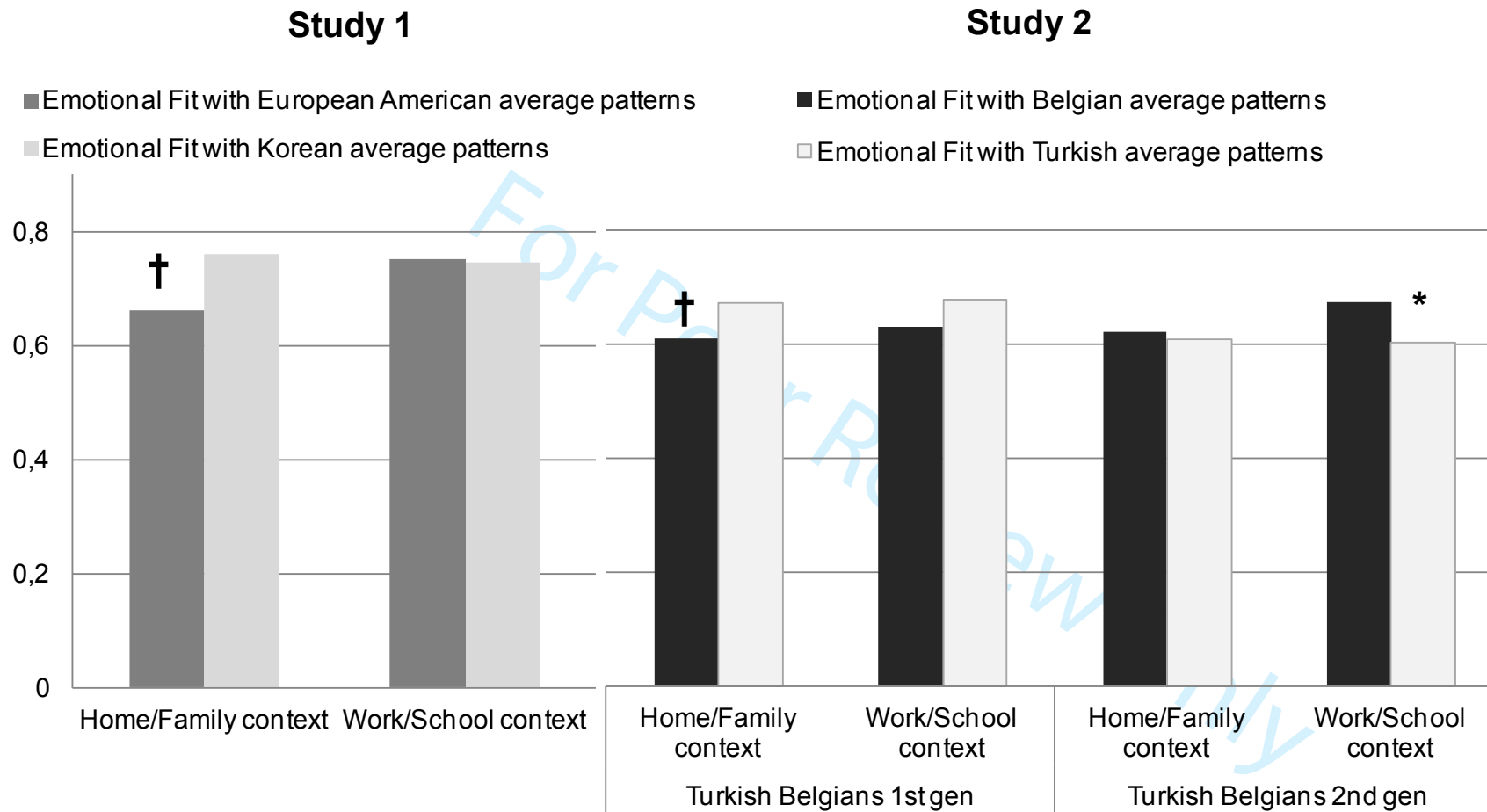


Figure 1. Mean levels of cultural groups' emotional concordance scores to the typical Korean and Turkish patterns of emotion. Within each study, groups with a similar letter did not differ significantly from one another whereas groups with a different letter were significantly different in their emotional fit scores.

## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE



35 *Figure 2.* Mean levels of minorities' emotional concordance scores to the typical emotional patterns of both the heritage and mainstream cultural groups in home  
36 and work contexts. Significant differences between both emotional fit scores within a cultural group are indicated.  
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39 †  $p \leq .07$  \*  $p \leq .05$   
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## My Emotions Belong Here and There:

### Extending the Phenomenon of Emotional Acculturation to Heritage Culture Fit.

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#### 1. Additional Statistics Study 1.

##### 1.1 Detailed description of demographic differences between the samples Study 1 (p. 11)

The Korean majority, Korean American and European American samples were comparable in terms of self-reported social class (measured on a scale from 1 = *lower class*, till 5 = *upper class*;  $Mean_{\text{European American}} = 3.05$ ;  $SD_{\text{European American}} = 1.0$ ;  $Mean_{\text{Korean American}} = 3.17$ ;  $SD_{\text{Korean American}} = 1.2$ ;  $Mean_{\text{Korean}} = 2.88$ ;  $SD_{\text{Korean}} = .76$ ;  $F = 1.594$ ,  $p = .206$ ), level of education (measured by a categorical variable representing 1 = *no or primary education*; 2 = *high school*; 3 = *college*; 4 = *graduate, master, PhD*;  $\chi^2_{(6)} = 9.259$ ,  $p = .160$ ), and gender composition (European American = 40% females; Korean American = 46% females; Korean = 59% females;  $\chi^2_{(2)} = 4.741$ ,  $p = .093$ ). However, they differed in terms of age ( $F = 16.739$ ,  $p \leq .001$ ), with Koreans ( $M_{\text{age}} = 27.9$ ;  $SD_{\text{age}} = 4.3$ ) being younger than both Korean Americans ( $M_{\text{age}} = 38.2$ ;  $SD_{\text{age}} = 12.8$ ;  $M_{\text{diff}} = -10.317$ ;  $t_{(50.96)} = -5.280$ ,  $p \leq .001$ ) and European Americans ( $M_{\text{age}} = 37.6$ ;  $SD_{\text{age}} = 16.6$ ;  $M_{\text{diff}} = -9.762$ ;  $t_{(43.95)} = -3.741$ ,  $p = .001$ ).

##### 1.2. Study 1: Testing the interaction between the situational factor and generational status on Korean American's emotional fit with both the typical Korean and European American patterns , page 19.

To test whether the situational effect on Korean American's emotional fit with the typical Korean and European American patterns differed by generational status, we conducted a repeated measures ANOVA in which participants' four different fit scores were the dependent variables (i.e. fit with Korean pattern at home, fit with European American pattern at home, fit with Korean pattern at work/school, fit with European American pattern at work/school) and

## ONLINE SUPPLEMENTARY MATERIALS: EMOTIONAL FIT WITH THE HERITAGE CULTURE

1  
2  
3 generational status functioned as the independent variable. This analysis did not yield a main  
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5 effect of generational status (*Pillai's Trace* = .044,  $F_{(3,37)} = 1.347$ ,  $p = .642$ ,  $\eta^2 = .044$ ). However,  
6  
7 the pairwise comparisons revealed that the pattern of emotional fit scores looked quite different  
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9 for first than for second or later generation participants, with the only significant difference  
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11 being that first generation minorities fitted the Korean patterns better than the European  
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13 American patterns for situations that had taken place at home or with family members  
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15 (*Mean\_diff* = .154,  $SE_{mean\ diff} = .06$ ,  $p = .014$ ; 95% CI: [.033, .275].  
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## 2. Additional Statistics Study 2.

### 2.1. Detailed description of demographic differences between the samples Study 2 (p. 18)

24  
25 Across the Turkish majority, Turkish Belgian and Belgian majority samples there was  
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27 a significant difference in age: the Turkish majority students ( $M = 20.1$ ,  $SD = 1.47$ ) were  
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29 significantly younger than the first generation minorities ( $M = 34.1$ ,  $SD = 10.85$ ; *Mean diff* =  
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31 14.01,  $t_{(55.46)} = 9.645$ ,  $p \leq .001$ ), the second generation minorities ( $M = 25.59$ ,  $SD = 6.63$ ; *Mean*  
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33 *diff* = 5.53,  $t_{(86.85)} = 7.623$ ,  $p \leq .001$ ) and the Belgian majority participants ( $M = 31.38$ ,  $SD =$   
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35 8.67; *Mean diff* = 11.33,  $t_{(78.40)} = 11.486$ ,  $p \leq .001$ ). Furthermore, the Turkish majority sample  
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37 was characterized by a higher proportion of female participants (67% females) than the other  
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39 three samples (around 50%;  $\chi^2 = 10.338$ ,  $p = .016$ ). As could be expected based on our sampling  
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41 strategy, there was a difference in the level of educational attainment between the community  
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43 samples (Turkish Belgian first and second generation minority and Belgian majority members)  
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45 on the one hand and the student sample on the other hand (Turkish majority;  $\chi^2 = 81.640$ ,  $p \leq$   
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47 .001). Specifically, whereas 23% - 35% of the participants from our community samples held  
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49 a tertiary education degree, none of the Turkish students did, which is quite logical given that  
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51 they were still studying. The three community samples did not differ from one another in terms  
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53 the level of educational attainment ( $\chi^2 = 3.598$ ,  $p = .165$ ).  
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### 3. Additional Statistics Discussion

**Post-hoc analysis on the absolute levels of emotional fit with two culture's typical patterns of emotion in both monocultural majority members (own versus other culture patterns) and immigrant minority members (new mainstream versus heritage culture patterns; p. 29).**

#### 3.1. Study 1

We conducted a repeated-measures ANOVA in which participants' emotional fit with the Korean average pattern and with the European American average pattern functioned as the dependent variables and Culture served as the only predictor. This analysis yielded a strong interaction effect between Culture and the different Types of Emotional Fit (Pillai's Trace = .346,  $F_{(2,163)} = 43.147$ ,  $p \leq .001$ ,  $\eta^2 = .346$ ). Pairwise comparisons revealed that i) Korean Americans' fit with the Korean average emotional pattern ( $M = .74$ ,  $SE = .061$ ) was not different from their fit with the European American average pattern ( $M = .72$ ,  $SE = .054$ ;  $Mean\ diff = .020$ ,  $SE_{mean\ diff} = .036$ ,  $p = .584$ ); that ii) Koreans had significantly higher fit to the Korean average patterns ( $M = 1.05$ ,  $SE = .046$ ) than to the European American average patterns ( $M = .74$ ,  $SE = .040$ ;  $Mean\ diff = .308$ ,  $SE_{mean\ diff} = .027$ ,  $p \leq .001$ ) and that iii) European Americans had significantly higher fit to the European American ( $M = .71$ ,  $SE = .056$ ) than to the Korean average patterns ( $M = .63$ ,  $SE = .063$ ;  $Mean\ diff = .083$ ,  $SE_{mean\ diff} = .037$ ,  $p = .026$ ).

In addition, there was a significant main effect of Type of Emotional Fit (concordance to Korean patterns was overall higher than concordance to European American patterns; Pillai's Trace = .098,  $F_{(1,163)} = 23.126$ ,  $p \leq .001$ ,  $\eta^2 = .098$ , which may be due to the larger sample of Koreans) and a main effect of Culture indicating that Korean majority members had overall a better fit to both average emotional patterns ( $F_{(2,163)} = 5.914$ ,  $p = .003$ ,  $\eta^2 = .068$ ), a finding that made us wonder whether the difference in design could have played a role here.

### 3.2. Study 2

Similar to Study 1, we conducted a repeated measures ANOVA including participants' emotional fit with the Belgian average pattern and with the Turkish average pattern as the dependent variables and Valence, Context and Culture as between-subject variables. It revealed a strong interaction effect between Culture and Type of Emotional Fit (Pillai's Trace = .228,  $F_{(3,433)} = 42.569$ ,  $p \leq .001$ ,  $\eta^2 = .228$ ). Pairwise comparisons further showed that i) Turkish students were much more concordant to the Turkish ( $M = .80$ ,  $SE = .024$ ) than to the Belgian emotional patterns ( $M = .64$ ,  $SE = .021$ ;  $Mean\ diff = -.160$ ,  $SE_{mean\ diff} = .012$ ,  $p \leq .001$ ); that ii) Belgian majority members were markedly more concordant with Belgian average patterns ( $M = .74$ ,  $SE = .039$ ) than with Turkish average patterns ( $M = .66$ ,  $SE = .044$ ;  $Mean\ diff = .081$ ,  $SE_{mean\ diff} = .022$ ,  $p \leq .001$ ); and iii) that these differences between both types of fit were much smaller for the two groups of Turkish Belgians. More specifically, Turkish first generation minorities fitted slightly better with the Turkish ( $M = .68$ ,  $SE = .049$ ) than with the Belgian patterns ( $M = .62$ ,  $SE = .044$ ;  $Mean\ diff = -.055$ ,  $SE_{mean\ diff} = .025$ ,  $p = .029$ ), and Turkish second generation minorities fitting slightly better with the Belgian ( $M = .65$ ,  $SE = .037$ ) than with the Turkish patterns ( $M = .61$ ,  $SE = .041$ ;  $Mean\ diff = .042$ ,  $SE_{mean\ diff} = .021$ ,  $p = .046$ ).

In addition to this strong interaction effect between Culture and Type of Emotional Fit, there were some smaller, yet significant effects. First, there was a main effect of Type of Emotional Fit (Pillai's Trace = .011,  $F_{(1,433)} = 4.863$ ,  $p = .028$ ,  $\eta^2 = .011$ ), indicating that, on average, concordance to the Turkish pattern was somewhat higher than concordance to the Belgian pattern, which may be due to the larger number of Turkish students in this analysis. Second, there was a significant three-way interaction between Type of Emotional Fit, Valence and Culture (Pillai's Trace = .079,  $F_{(1,433)} = 12.375$ ,  $p \leq .001$ ,  $\eta^2 = .079$ ), indicating that the reported effects were more outspoken for negative than for positive situations. Finally, there

## ONLINE SUPPLEMENTARY MATERIALS: EMOTIONAL FIT WITH THE HERITAGE CULTURE

1  
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3 was a significant three-way interaction between Type of Emotional Fit, Context and Culture  
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5 (Pillai's Trace = .025  $F_{(1,433)} = 3.759, p = .011, \eta^2 = .025$ ), suggesting that, with the exception of  
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7 Turkish first generation minorities, the differences between both types of concordance were  
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9 more outspoken in the work context than in the family context.  
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## ONLINE SUPPLEMENTARY MATERIALS: EMOTIONAL FIT WITH THE HERITAGE CULTURE

Table 1A.

*List of emotion items included in the Emotional Patterns Questionnaire.*

Study 1	Study 2
Upset	Upset
Guilty	Guilty
Irritated	Irritated
Ashamed	Ashamed
Afraid	Afraid
Interested	Interested
Proud of myself	Proud of myself
Strong	Strong
Bored	Bored
Ill feelings to another	Ill feelings to another
<b>Jealous</b>	<b>Jealous</b>
Close	Close
Respect	Respect
Indebted	Indebted
<b>Feel like relying on another</b>	Feel like relying on another
Feel resigned	<b>Feel resigned</b>
Helpful	Helpful
<b>Surprised</b>	Surprised
Worthless	Worthless
Embarrassed	<b>Embarrassed</b>

*Note.* Items in bold are those that were found to be *not* structurally equivalent across the immigrant minority and new majority culture's samples (according to a Simultaneous Coponent analysis, see De Leersnyder, Mesquita & Kim, 2011) and that were thus *removed* from the patterns before calculating emotional fit scores.

## ONLINE SUPPLEMENTARY MATERIALS: EMOTIONAL FIT WITH THE HERITAGE CULTURE

Table 2A.

*Hierarchical Multiple Regression Analyses Predicting Immigrants' Emotional Fit with the Heritage Culture's Average Emotional Patterns.*

<b>Panel A: STUDY 1</b>			<b>Panel B: STUDY 2</b>		
<b>Korean immigrants in the US</b>			<b>Turkish immigrants in Belgium</b>		
<i>DV: Fit with Korean average patterns</i>			<i>DV: Fit with Turkish average patterns</i>		
<b>Predictor</b>			<b>Predictor</b>		
<b>Analysis 1: colleagues</b>	<b><math>\Delta R^2</math></b>	<b><math>\beta^a</math></b>	<b>Analysis 1: at work</b>	<b><math>\Delta R^2</math></b>	<b><math>\beta^a</math></b>
<i>Step 1</i>	.355***		<i>Step 1</i>	.524***	
Valence		-	Valence		-.736***
Engagement		.644***	Context		.012
		-.002			
<i>Step 2</i>	.000		<i>Step 2</i>	.002	
Educational att.		-.003	Educational att.		.034
<i>Step 3</i>	.046		<i>Step 3</i>	.000	
Korean colleagues		.376	Turkish language at work		-.103
<i>Step 4</i>	.033		<i>Step 4</i>	.007	
Valence*Korean colleagues		.010	Valence*Turkish lang. at work		.052
Engagement*Korean colleagues		-.241	Context*Turkish lang. at work		.086
Total $R^2$	.434***		Total $R^2$	.533***	
<b>Analysis 2: neighbours</b>	<b><math>\Delta R^2</math></b>	<b><math>\beta^a</math></b>	<b>Analysis 2: neighbours</b>	<b><math>\Delta R^2</math></b>	<b><math>\beta^a</math></b>
<i>Step 1</i>	.369***		<i>Step 1</i>	.521***	
Valence		-	Valence		-.717***
Engagement		.601***	Context		.021
		.023			
<i>Step 2</i>	.000		<i>Step 2</i>	.001	
Educational att.		.001	Educational att.		.048
<i>Step 3</i>	.000		<i>Step 3</i>	.001	
Korean neighbours		-.051	Turkish language neighbours		.023
<i>Step 4</i>	.025		<i>Step 4</i>	.001	
Valence*Korean neighbours		.181	Valence*Turkish lang. neighbours		.030
Engagement*Korean neighbours		-.115	Context*Turkish lang. neighbours		-.010
Total $R^2$	.395***		Total $R^2$	.524***	

## ONLINE SUPPLEMENTARY MATERIALS: EMOTIONAL FIT WITH THE HERITAGE CULTURE

Table A2. *continued*

<b>Panel A: STUDY 1</b> <b>Korean immigrants in the US</b> <i>DV: Fit with Korean average patterns</i>	<b>Panel B: STUDY 2</b> <b>Turkish immigrants in Belgium</b> <i>DV: Fit with Turkish average patterns</i>		
<b>Predictor</b>	<b>Predictor</b>		
	<b>Analysis 3: partner (if appl.)</b>	<b><math>\Delta R^2</math></b>	<b><math>\beta^a</math></b>
	<i>Step 1</i>	.593***	
	Valence		-.772.***
	Context		.031
	<i>Step 2</i>	.000	
	Educational att.		.011
	<i>Step 3</i>	.013††	
	Turkish language with partner		.225†
	<i>Step 4</i>	.005	
	Valence*Turkish lang. partner		-.034
	Context*Turkish lang. partner		-.112
	Total $R^2$	.611***	
	<b>Analysis 4: siblings (if appl.)</b>	<b><math>\Delta R^2</math></b>	<b><math>\beta^a</math></b>
	<i>Step 1</i>	.538***	
	Valence		-.731***
	Context		.001
	<i>Step 2</i>	.000	
	Educational att.		.028
	<i>Step 3</i>	.012†	
	Turkish language siblings		.259*
	<i>Step 4</i>	.020†	
	Valence*Turkish lang. siblings		-.199*
	Context*Turkish lang. siblings		-.014
	Total $R^2$	.570***	
	<b>Analysis 5: children (if appl.)</b>	<b><math>\Delta R^2</math></b>	<b><math>\beta^a</math></b>
	<i>Step 1</i>	.579***	
	Valence		-.764***
	Context		.047
	<i>Step 2</i>	.001	
	Educational att.		-.007
	<i>Step 3</i>	.001	
	Turkish language children		.122
	<i>Step 4</i>	.019	
	Valence*Turkish lang. children		-.195
	Context*Turkish lang. children		.086
	Total $R^2$	.599***	

## ONLINE SUPPLEMENTARY MATERIALS: EMOTIONAL FIT WITH THE HERITAGE CULTURE

Table A2, *continued*

<b>Panel A: STUDY 1</b> <b>Korean immigrants in the US</b> <i>DV: Fit with Korean average patterns</i>	<b>Panel B: STUDY 2</b> <b>Turkish immigrants in Belgium</b> <i>DV: Fit with Turkish average patterns</i>		
<b>Predictor</b>	<b>Predictor</b>		
	<b>Analysis 6: street</b>	<b><math>\Delta R^2</math></b>	<b><math>\beta^a</math></b>
	<i>Step 1</i>	.520***	
	Valence		-.723.***
	Context		.011
	<i>Step 2</i>	.001	
	Educational att.		.044
	<i>Step 3</i>	.001	
	Turkish language in street		.036
	<i>Step 4</i>	.000	
	Valence*Turkish lang. street		-.018
	Context*Turkish lang. street		.003
	Total $R^2$	.522***	
	<b>Analysis 7: shops</b>	<b><math>\Delta R^2</math></b>	<b><math>\beta^a</math></b>
	<i>Step 1</i>	.515***	
	Valence		-.712***
	Context		.012
	<i>Step 2</i>	.001	
	Educational att.		.042
	<i>Step 3</i>	.000	
	Turkish language in shops		-.054
	<i>Step 4</i>	.003	
	Valence*Turkish lang. shops		-.007
	Context*Turkish lang. shops		.079
	Total $R^2$	.519***	

*Note.* <sup>a</sup> The  $\beta$ 's presented here are the ones from the fourth regression model, i.e. the one that included the interaction effects between Valence and the predictor of interest and Engagement (Study 1) or Context (Study 2) and the predictor of interest. We chose to present this model as none of the models including step 3, 4, 5, or 6 reached significance and this fourth model does allow to infer the simple main effects (see  $\beta$ 's presented in step 3) and two-way interactions (step 4), while avoiding complex three-way interactions that did not reach significance anyway (step 5 and 6 are not shown). Full results of all other types of models can be obtained upon request from the first author.

††  $p \leq .150$ ; †  $p \leq .100$ ; \*  $p \leq .050$ ; \*\*  $p \leq .010$ ; \*\*\*  $p \leq .001$



RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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Words: ~~9661~~9855

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The data and SPSS-syntax that support the findings of these studies are available from the corresponding author, [JDL], upon reasonable request.

**Abstract**

When immigrant minorities engage in a new cultural context, their patterns of emotional experience come to change – a process we coined *emotional acculturation* (De Leersnyder, Mesquita, & Kim, 2011). To date, research on emotional acculturation focused on the antecedents and consequences of changes in minorities' fit with the new culture. Yet, most minorities also continue to engage in their *heritage* culture. Therefore, the current research investigated which personal and situational factors afford minorities to maintain emotional fit with their heritage culture. Two studies compared the emotional patterns of Korean Americans ( $n = 49$ ) with those of Koreans in Korea ( $n = 80$ ), and the emotional patterns of Turkish Belgians ( $n = 144$ ) with those of Turks in Turkey ( $n = 250$ ), respectively. As expected, we found that although minorities did not fit the heritage emotional patterns as well as participants in their home countries, spending time with heritage culture friends and interacting in heritage culture settings explained within-group differences in minorities' heritage culture fit. Therefore, the current research shows that minorities' emotional patterns are not only cultivated, but also activated by their interactions in different socio-cultural contexts. Moreover, it provides **initial** **further** evidence for cultural frame-switching in the domain of emotion.

Words: 200

Keywords: Emotional acculturation; emotion; culture; acculturation; cultural frame switching, cultural fit

### **My Emotions Belong Here *and* There:**

#### **Extending the Phenomenon of Emotional Acculturation to Heritage Culture Fit.**

*Emotional acculturation* refers to the process of changes in one's emotional life that are due to sustained contact with another culture (De Leersnyder, 2017). Indeed, the more immigrant minorities engage in a new culture, the more their patterns of emotion come to fit with the typical patterns of that culture (Consedine, Chentsova-Dutton, & Krivoshekova, 2014; De Leersnyder, Mesquita, & Kim, 2011; Jasini, De Leersnyder, Phalet, & Mesquita, 2019) – fit that is positively associated with well-being (Consedine et al., 20014; De Leersnyder, Kim, & Mesquita, 2015; De Leersnyder, Mesquita, Kim, Eom, & Choi, 2014). However, since many (if not most) immigrant minorities not only engage in their *new* socio-cultural environment, but also continue to be part of social networks and communities that represent their *heritage* culture (van den Broek & van Ingen, 2008), emotional acculturation may not only pertain to adopting a new culture's emotional patterns, but also to preserving one's heritage culture's patterns.

To date, no studies have investigated minorities' emotional fit with their heritage culture. Therefore, the current research addresses which personal and situational factors foster Korean Americans (Study 1) and Turkish Belgians (Study 2) to maintain their heritage culture's emotional patterns. As personal factors, we investigated which specific aspects of minorities' engagement in the heritage culture predict their heritage culture emotional fit. Is it a matter of having been exposed to the heritage cultural context? Or rather a matter of having heritage culture friends? As situational factor, we tested if the cultural setting of interaction matters for emotional fit. Do minorities have a higher fit with heritage emotional patterns when they interact in heritage culture settings, such as at home?

By addressing these questions, the current research aims to contribute to our understanding of emotional acculturation as a multi-dimensional and context-dependent process of emotional adaptation. Simultaneously, it aims to contribute to our understanding of

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3 emotion itself. For instance, if we were to find that minorities' emotional fit with their heritage  
4 culture is a function of their heritage culture engagement, this would provide further support  
5 for the idea that people's cultural engagements shape their emotional experiences (Mesquita,  
6 2003; Mesquita, Boiger, & De Leersnyder, 2017). Furthermore, if minorities would fit heritage  
7 emotional patterns better in heritage culture settings, this would suggest that people construct  
8 their emotional experiences 'in the moment' to be in line with the prevailing cultural context  
9 (Boiger & Mesquita, 2012; Mesquita, Boiger, & De Leersnyder, 2016).

### 19 **Cultural differences in emotional patterns**

21 The main starting point for research on emotional acculturation are the well-documented  
22 and systematic cultural differences in people's emotional experiences (Kitayama, Mesquita, &  
23 Karasawa, 2006; Mesquita, 2003; Tsai, Knutson, & Fung, 2006). For instance, experiences like  
24 pride, anger, or irritation that afford autonomy and independence and that have been called  
25 *socially disengaging* or *autonomy-promoting* emotions (De Leersnyder, Koval, Kuppens, &  
26 Mesquita, 2018) tend to be most prevalent and intense in cultural contexts that value  
27 independence and autonomy, such as European American middle class contexts. In contrast,  
28 experiences like feeling close, ashamed or indebted that encourage relatedness and  
29 interdependence and that have been called *socially engaging* or *relatedness-promoting*  
30 emotions, tend to be most prevalent and intense in cultural contexts that value interdependence  
31 and relatedness, such as in Japanese and Mediterranean contexts (e.g., Boiger, Mesquita,  
32 Uchida, & Barrett, 2013; Boiger, Güngör, Karasawa, & Mesquita, 2014; Kitayama et al., 2006;  
33 Markus & Kitayama, 1991; Rothbaum, Pott, Azuma, Miyake, & Weisz, 2000). Thus, emotions  
34 that match a culture's central goals and values tend to be experienced more frequently and  
35 intensely than emotions that do not.

56 Building on these findings, we may expect that different cultural contexts are  
57 characterized by different 'typical' patterns of emotional experience and that individuals who  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 engage in the *same* cultural context – and, therefore, are exposed to the *same* meanings and  
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5 practices – experience more similar patterns of emotion than people who engage in different  
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7 cultural contexts. Furthermore, we may expect that the emotional patterns of immigrant  
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9 minorities may be initially different from those that are typical for their new majority culture,  
10  
11 yet come to be aligned with them upon increased engagement in the majority culture – that is,  
12  
13 that people’s emotional patterns may *acculturate*.  
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**Emotional acculturation towards the new majority culture patterns of emotion**

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19 There is now strong evidence for emotional acculturation, with several large scale  
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21 studies on different minority groups in both the United States and Belgium that documented  
22  
23 that minorities’ engagement in a new cultural context is positively associated with their  
24  
25 emotional fit to that context (Consedine et al., 2014; De Leersnyder et al., 2011; Jasini et al.,  
26  
27 2019). Firstly, whereas first generation immigrants had significant lower emotional fit with the  
28  
29 majority culture than majority members themselves, fit levels seemed to increase for each later  
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31 generation. This finding was most outspoken for negative situations and resonates with the  
32  
33 general observation that emotional fit tends to be higher in (typically more straightforward)  
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35 positive than in (typically more complex) negative situations (see De Leersnyder et al., 2011  
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37 for a discussion on this issue).  
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43 Secondly, minorities’ emotional fit (in both positive and negative situations) was higher  
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45 to the extent they were more exposed to the majority culture (i.e. were younger at the time of  
46  
47 migration; have spent more years) and had more social interactions with majority members.  
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49 Zooming in on this latter link, a recent large-scale social network study on immigrant minority  
50  
51 youth showed that although their emotional fit with the majority was predicted by both outgoing  
52  
53 and incoming ties with majority peers, it was most strongly predicted by *bi-directional ties*,  
54  
55 which signal reciprocity and thus ‘true friendship’ (Jasini, De Leersnyder, Kende, et al.,  
56  
57 submitted). This latter finding suggests a potential special function of close friends in learning  
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3 and maintaining emotional patterns: It is perhaps in the (safe and open) context of friendships  
4 that people mostly share emotional episodes with one another and that they get reinforced or  
5  
6 questioned about the meanings and experiences they associate with these episodes.  
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10 Finally, minorities' emotional fit with the majority culture was unrelated to their  
11 attitudes towards adopting the majority culture's values and traditions (De Leersnyder et al.,  
12 2011; Jasini, et al., 2019). Though counterintuitive at first sight, this finding is in line with the  
13 ideas that i) "explicit beliefs [attitudes] may be quite independent of implicit psychological  
14 tendencies [emotions]" (Kitayama & Imada, 2010, p. 186), and that ii) different domains may  
15 acculturate at a different pace or even in different directions (Mesquita, De Leersnyder, &  
16 Jasini, 2019; Schwartz, Unger, Zamboanga, & Szapocznik, 2011; Snauwaert, Soenens,  
17 Vanbeselaere, & Boen, 2003). Taken together, past research thus suggests that minorities'  
18 emotional fit with the typical majority patterns is a function of their *actual* rather than their  
19 desired engagement in the majority culture.  
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### 33 **Emotional acculturation and heritage culture patterns of emotion**

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35 Notwithstanding the importance of minorities' fit with the majority culture, we may not  
36 lose sight of the potential multi-dimensional nature of the emotional acculturation process. As  
37 mentioned above, most immigrant minorities not only engage in majority contexts, but continue  
38 to engage in heritage contexts on a daily basis, be it through family members, friends, or the  
39 ethnic composition of their neighbourhood (van den Broek & van Ingen, 2008). If emotional  
40 experiences, then, are a function of socio-cultural engagements, both majority *and* heritage  
41 culture engagement should shape emotional patterns. Moreover, and grounded in research that  
42 showed minorities' potential for simultaneous endorsement of positive attitudes towards *both*  
43 the majority and heritage cultures (Berry, 1997; Ryder, Alden, & Paulhus, 2000), it may well  
44 be that they can come to fit the emotional patterns of the new majority culture without losing  
45 fit with the heritage culture. If so, minorities may furthermore alternate between majority and  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 heritage emotional patterns depending on their context of interaction, just like they do in the  
4 domains of identity and cognition (e.g., LaFromboise, Coleman, & Gerton, 1993; Hong, Morris,  
5 Chiu, & Benet-Martinez, 2000). Thus, to gain insight into the (complexities of the) process of  
6 emotional acculturation, it may be fruitful to study minorities' heritage culture fit and, more  
7 specifically, to identify both the personal and situational factors that foster this fit.  
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14 **Personal factors.** To identify personal factors associated with minorities' heritage  
15 culture fit, we build on the studies on majority culture fit reviewed above. Firstly, we expect  
16 group differences in people's emotional fit to the heritage culture (H1), such that this is highest  
17 for majority members living in the home country (i.c., Koreans in Korea, Turks in Turkey),  
18 lowest for majority members from the *new* majority context who are unlikely to have spent time  
19 in minorities' home country (i.c., European Americans and Belgians), and somewhere 'in  
20 between' for immigrant minority groups, with first generation minorities having slightly higher  
21 fit to the heritage culture than later generation minorities.  
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33 Secondly, we expect that minorities' heritage culture fit is positively associated with  
34 their direct exposure to the heritage culture (H2) as measured by i) the number of years spent  
35 in the heritage culture and ii) the percentage of time spent in the heritage versus new majority  
36 context.  
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42 Thirdly, we expect that minorities' emotional fit with the heritage culture is a function  
43 of their social contacts with heritage culture members (H3) as measured by composite scores  
44 of i) the number of colleagues, friends and neighbours that have a heritage cultural background,  
45 (which is a direct index of the ethnicity of one's social contacts), and/or ii) whether one speaks  
46 one's heritage language with family members, colleagues, friends, neighbours, etc., (which is  
47 an indirect index of whether one interacts with heritage versus majority culture members).  
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55 Finally, we expect that minority members' explicitly formulated attitudes towards the  
56 heritage cultural values and traditions will *not* predict heritage culture fit (H4), because  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 emotional fit – as a rather implicit measure of minorities’ cultural affiliation – may change at a  
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5 different pace, or even in a different direction, than explicitly endorsed attitudes.  
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8 However, since most immigrant minorities live in ethnic enclaves, and the participants  
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10 of this research were no exception to this, we may think of two *alternative hypotheses* that do  
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12 not mirror the findings on majority culture fit. Firstly, since ethnic enclaves expose their  
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14 residents to (a form of) heritage cultural ideas and practices on a daily basis, the time or  
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16 proportion spent in the country of origin may not substantially add to minorities’ exposure to  
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18 the heritage culture (H2A). Secondly, minority groups may be very homogenous in the extent  
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20 to which they have contact with heritage culture family members, colleagues and neighbours,  
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22 which lowers their predictive value. Therefore, only social contact with heritage culture friends,  
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24 which already have a special status in relation to (re)shaping emotional experience (Jasini, et  
25  
26 al., submitted), may be the best (if not the only) personal factor predicting heritage culture  
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28 emotional fit (H3A). The current research will explore which one of these two sets of  
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30 hypotheses fit the data best.  
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35 **Situational factor.** The second aim of this research is to test if immigrant minorities’  
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37 emotional patterns depend on the situation and, more specifically, the socio-cultural context in  
38  
39 which they are experienced. Indeed, biculturals may display different psychological tendencies  
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41 and behaviours when being primed with their heritage versus new majority culture – a  
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43 phenomenon that is commonly referred to as *cultural frame switching* (Hong, Morris, Chiu, &  
44  
45 Benet-Martínez, 2000) and that has been extensively documented in various psychological  
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47 domains (e.g., Hong et al., 2000; Ramírez-Esparza, Gosling, Benet-Martínez, Potter, &  
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49 Pennebaker, 2006; Briley, Morris, & Simonson, 2005), except for emotion. In fact, evidence is  
50  
51 limited to one study (Perunovic, Heller, & Rafaeli, 2007) showing that East Asian Canadians’  
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53 momentary positive and negative moods were less (rather than more) negatively correlated after  
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55 having spoken an Asian language or having identified with their heritage culture, which is in  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 line with an Asian (rather than Western) dialectical emotional style. Therefore, we hypothesize  
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5 that when minorities report emotional patterns that took place in heritage culture settings, like  
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7 one's home, these will be more concordant to the typical heritage cultural patterns than those  
8  
9 that were experienced in majority settings, like one's school or workplace (H5).

**Current studies**

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15 **Data.** To investigate the above outlined hypotheses, we extend previous research on  
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17 immigrants' adoption of the new culture's emotional patterns (De Leersnyder et al., 2011), by  
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19 studying the same immigrant groups in terms of their maintenance of heritage culture emotional  
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21 patterns. These previous studies focused on (mainly first generation) Korean Americans (Study  
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23 1) and first and second generation Turkish Belgians (Study 2), each time comparing their  
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25 emotional patterns to those of their respective majority cultural groups (European Americans  
26  
27 and Belgians). In the current research, we collect new data to compare minorities' emotional  
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29 patterns to those of their *heritage* cultural groups, i.e. Korean and Turkish majority members in  
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31 Korea and Turkey, respectively. Hence, the here reported analyses are novel and in no sense  
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33 similar to what we have analysed and reported in previous work.  
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38 **Cultural groups under study.** We chose the target minority and majority groups on  
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40 the basis of two criteria. First, and to maximize the prospect of observing acculturative shifts in  
41  
42 minorities' emotional patterns, we chose majority and minority groups that differ in their typical  
43  
44 emotional patterns (see Kitayama et al., 2006; Mesquita, 2001). Second, and to maximize the  
45  
46 potential for analytic inference from these case studies to a more general theory on emotional  
47  
48 acculturation, we selected two minority groups that are very different in their socio-economic  
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50 statuses, migration histories and diversity contexts.<sup>1</sup> Hence, Study 1 and Study 2 are theoretical  
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54  
55 <sup>1</sup>Korean Americans are more highly educated and better employed than Turkish Belgians (FOD  
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57 Werkgelegenheid, 2009; Terrazas, 2009) and face a racial rather than a religious 'divide' whereas the opposite is  
58  
59 true for Turkish Belgians (Alba, 2005; Yoo & Chung, 2009). Moreover, both groups navigate very different  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 replications of one other, enabling us to be more confident in drawing conclusions about the  
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5 personal and situational factors that afford minorities to maintain their heritage culture patterns  
6  
7 of emotion.  
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### 10 Study 1

11  
12 Study 1 was designed to test our hypotheses in a sample of Korean Americans. To  
13  
14 calculate their emotional concordance to their heritage culture's typical patterns of emotional  
15  
16 experience, we collected data from Koreans in South Korea.  
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18

#### 19 Method.

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21 **Participants.** Participants were 49 Korean Americans, of whom 37 were first generation  
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23 immigrants who had spent about half of their lives in Korea ( $M_{\text{proportion\_life\_Korea}} = 0.54$ ,  $SD =$   
24  
25  $0.34$ ), and 44 European Americans; both were available from earlier research (De Leersnyder  
26  
27 et al., 2011). For the purpose of this research, we additionally sampled 80 Koreans living in  
28  
29 South Korea. The three samples were comparable in terms of self-reported social class,  
30  
31 education and gender composition (See Online Supplementary Materials for full statistics), but  
32  
33 Koreans were younger ( $M_{\text{age}} = 27.9$ ;  $SD_{\text{age}} = 4.3$ ) than both Korean Americans ( $M_{\text{age}} = 38.2$ ;  
34  
35  $SD_{\text{age}} = 12.8$ ;  $M_{\text{diff}} = -10.317$ ;  $t_{(50.96)} = -5.280$ ,  $p \leq .001$ ) and European Americans ( $M_{\text{age}} = 37.6$ ;  
36  
37  $SD_{\text{age}} = 16.6$ ;  $M_{\text{diff}} = -9.762$ ;  $t_{(43.95)} = -3.741$ ,  $p = .001$ ).  
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42 Controlling for Gender, Age, Class, or Educational Attainment did not alter the results.  
43  
44 Yet, in order to keep the current series of analyses consistent with those on minorities' adoption  
45  
46 of *new majority* emotional patterns, (De Leersnyder et al., 2011), we excluded one Korean  
47  
48 American who had received none or only primary education and controlled for Educational  
49  
50 Attainment in our analyses (dummy coded as 0 = "secondary education"; 1 = "tertiary  
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52 education"). We further excluded two Korean Americans who failed to report situations that  
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acculturation environments because immigration patterns, discourses, institutions and policies differ substantially between the United States and Belgium (Kosic & Phalet, 2006; Van Acker, 2012).

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2  
3 matched the valence of the prompts, which prevented us from calculating their emotional fit  
4  
5 (see below).  
6  
7

8 **Materials. Emotional Patterns Questionnaire (EPQ).** To capture people's emotional  
9  
10 fit with culture, we administered the EPQ (De Leersnyder et al., 2011), which asks participants  
11  
12 to describe a recently experienced emotional situation that matches a prompt. Prompts vary on  
13  
14 the dimensions of valence (positive vs. negative), social engagement (socially  
15  
16 disengaging/autonomy-promoting vs. socially engaging/relatedness-promoting) and relational  
17  
18 context (home/family vs. work/school). For example, the prompt for positive disengaging  
19  
20 situations in work/school contexts read: "Please think about an occasion at work or at school in  
21  
22 which you felt good for yourself. For example, you felt superior, proud, top of the world". After  
23  
24 describing such a situation, participants were asked to rate the intensity (from 1 = "Not at all"  
25  
26 to 7 = "Extremely") of their experience in that situation on a set of 20 emotion scales that cover  
27  
28 the emotional domain in terms of valence and social engagement (see Online Supplementay  
29  
30 Materials Table 1A). These data constitute a participant's emotional pattern for a given  
31  
32 situation.  
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37 To calculate emotional fit with the heritage culture, we took the following steps. Firstly,  
38  
39 we removed three emotion items from participants' emotional patterns because a Simultaneous  
40  
41 Component Analysis (De Roover et al., 2012) had indicated that only the 17 other items were  
42  
43 structurally equivalent across Korean and European American samples (see De Leersnyder et  
44  
45 al., 2011 for full results).<sup>2</sup> Secondly, we established the average Korean emotional patterns for  
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51  
52 <sup>2</sup> In both Study 1 and Study 2 we employed a Simultaneous Component Analysis (SCA; De Roover et al., 2012)  
53 to assess structural equivalence of the emotion data. This analysis provides insight into i) whether one common  
54 factor solution can be used across the different samples under study and ii) which items load on different factors,  
55 implying that they are *not* structurally equivalent and hence, differently understood across the cultural groups. For  
56 instance, in Study 2, "feeling resigned" loaded on the negative autonomy-promoting emotion component in the  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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2  
3 each type of prompt (e.g., for positive autonomy-promoting situations at work/school) by  
4  
5 averaging the emotion ratings from all Korean majority members who had responded to that  
6  
7 prompt. As such, we obtained eight different Korean average patterns of emotion, one for each  
8  
9 type of prompt. Thirdly, we calculated Korean American's and European Americans' *emotional*  
10  
11 *concordance* or *fit* to the average Korean patterns by correlating each individual's pattern to the  
12  
13 corresponding (i.e., same situation-type) Korean average pattern. To calculate Korean majority  
14  
15 members' fit with their own culture's average patterns, we correlated each individual's pattern  
16  
17 of emotion to a pattern that consisted of all *other* Koreans' scores and thus *excluded* the  
18  
19 participants own score from the average. In this way, we avoided an artificial inflation of  
20  
21 Koreans' concordance scores; individuals' patterns are never correlated to an average pattern  
22  
23 they have contributed to themselves. Fourthly, we transformed all correlation scores into Fisher-  
24  
25 z scores to ensure linearity, which is required for further analyses.

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30 Finally, we aggregated participants' Fischer z-scores to obtain one mean emotional  
31  
32 concordance variable. However, because of logistical reasons, Korean majorities completed  
33  
34 four versions of the EPQ, with each prompt pertaining to a different type of  
35  
36 valence\*engagement within the same relational context (either home/family ( $n = 40$ ) or  
37  
38 work/school ( $n = 40$ )), whereas Korean Americans and European Americans had completed  
39  
40 two versions of the EPQ, with prompts that pertained to same type of valence\*engagement, but  
41  
42 differed across relational contexts (i.e., one in a work/school context; the other in a home/family  
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48 Belgian sample, but loaded on both the negative autonomy-promoting and the positive relatedness-promoting  
49 components in the Turkish Belgian samples. Personal conversations with Turkish Belgian participants explained  
50 that "resigning" can be understood as embracing "kismet" (i.e., the Turkish concept of faith), which has a positive  
51 connotation in the Turkish cultural context. Although these cultural differences are interesting in itself, we removed  
52 items like this from the emotional patterns before calculating 'fit', because any (cultural) difference in intensity on  
53 these items may be due to their different meaning, while 'fit' is about the (cultural) differences in patterns of  
54 intensity across emotions that have similar meanings across the groups under study.  
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context). This implies that Korean majorities' overall emotional fit score was the average of four fit scores, whereas those of Korean Americans and European Americans was the average of only two.

**Personal Factors of Cultural Engagement.** Korean Americans' exposure to Korean culture was captured by the *Number of Years* and their *Proportion of Life* spent in the heritage culture. The scale capturing Korean Americans' degree of *Social Contact with Heritage Culture Members* consisted of three items ( $\alpha = .74$ ) that asked about the ethnicity of their friends, colleagues, and neighbors, respectively (on a scale from 1 = "heritage culture only" to 5 = "Euro-Americans only"). We recoded all items such that higher scores indicated more social contact with Koreans ( $M = 3.01$  ( $SD = 0.88$ )).

Korean Americans' acculturation attitudes were measured by 8 items from the Vancouver Index of Acculturation (Ryder et al., 2000), with scales ranging from 1 (*totally disagree*) to 9 (*totally agree*). A Principal Component Analysis yielded two different factors that formed the basis of two scales: *Attitudes toward the Maintenance of Values and Traditions* (four items,  $\alpha = .78$ ;  $M = 6.28$ ,  $SD = 1.55$ ; Example: "It is important for me to maintain or develop Korean cultural practices") and *Attitudes toward Social Contacts with Heritage Culture Members* (four items,  $\alpha = .77$ ;  $M = 7.29$ ,  $SD = 1.35$ ; Example: "I am interested in having Korean friends"). The two scales were significantly correlated with each other ( $r = .523$ ,  $p \leq .001$ ).

**Situational factor of Cultural Engagement:** Our situational factor is the socio-cultural context in which the situation took place (as specified by the prompt): either at home/with family versus at work/school. We consider the home/family context as representative for the heritage culture since most minorities have family members with a heritage culture background, and consider the work/school context as representative for the new majority culture since most of minorities' colleagues/classmates have a majority cultural background.

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2  
3       **Procedure.** Before participating, participants received, read, and signed an informed  
4 consent (approval granted by the Human Subjects Committee, University of California at Santa  
5 Barbara). Korean Americans and European Americans had been recruited in public places, such  
6 as malls, churches, and coffee shops in Southern California, where Korean Americans live in  
7 immigrant neighbourhoods (see De Leersnyder et al., 2011). Koreans in Korea were recruited  
8 through a Christian mega-church because 91% of Korean Americans self-identify as Christians  
9 (Yoo & Chung, 2009) and we wanted the Korean sample to be similar in this regard. Korean  
10 participants received ₩10,000 (about \$10) for completing the questionnaires in Korean.  
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### 21       **Results.**

22  
23       **Analytic strategy.** To assess how personal factors were associated with heritage culture  
24 emotional fit (i.e., to test H1-H4), we made use of participants' aggregated emotional fit scores  
25 with the Korean typical patterns of emotion. To test group differences in participants' emotional  
26 fit (H1), we conducted an ANOVA that predicted all participants' fit score from their group  
27 membership. To test if minorities' emotional fit with the Korean patterns was predicted by their  
28 exposure (H2) or not (H2A) and general level of social contact with Koreans (H3) versus only  
29 by the number of heritage culture friends (H3A), we conducted a carefully planned series of  
30 hierarchical linear regression analyses. The dependent variable was always Korean Americans'  
31 fit with the typical Korean patterns of emotion, yet separate regressions were run for each  
32 'predictor of interest', resulting in 4 different analyses to test the 4 main hypotheses (i.e.,  
33 Regression 1: *Number of Years in Korea*; Regression 2: *Proportion of Life in Korea*; Regression  
34 3: *Social Contact Koreans*; Regression 4: *Acculturation Attitudes*; see also Table 1) and 3  
35 additional ones to test H3A. The first two blocks of each regression included our control  
36 variables, namely Valence and Engagement as the between-subject variables in our design  
37 (Block 1) and Educational Attainment (Block 2). Block 3 always included our predictor of  
38 interest. Whereas Block 4 tested all two-way interactions between the specific predictor of  
39 interest. Whereas Block 4 tested all two-way interactions between the specific predictor of  
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60 interest.



## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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2  
3 interest (as entered in Block 3) and Valence and Engagement, Block 5 did so for the two way  
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5 interaction between the predictor of interest and Educational Attainment. Finally, Block 6 tested  
6  
7 the 3-way interaction between the specific predictor of interest, Valence, and Engagement.  
8  
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10 To assess the influence of the situational factor on heritage culture emotional fit (H5),  
11  
12 which requires to compare Korean Americans' fit with the Korean versus the European  
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14 American average patterns of experience, we relied on Korean Americans' fit scores with *both*  
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16 the average Korean patterns and those with the average European American patterns established  
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18 in previous work (De Leersnyder et al., 2011). Moreover, because this hypothesis requires a  
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20 comparison at the level of the relational context (home/with family vs. work/school) and this  
21  
22 was a within-subjects factor, we used participants' unaggregated fit scores. Specifically, we ran  
23  
24 two paired-samples t-tests (one for home/family context; the other for work/school context) that  
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26 each time compared Korean Americans' fit with the typical Korean pattern to their fit with the  
27  
28 typical European American pattern.  
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32  
33 **Personal factors: Which aspects of heritage engagement predict Korean**  
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35 **Americans' heritage emotional fit?** At the group level, we had hypothesized that emotional  
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37 fit to the typical Korean patterns would be higher for the Korean majority group than the Korean  
38  
39 American and European American groups (H1). Consistently, an ANOVA yielded group  
40  
41 differences in mean emotional fit ( $F_{(2,163)} = 16.698; p \leq .001, \eta^2 = .170$ ). Pairwise comparisons  
42  
43 showed that Koreans in Korea fitted the typical Korean pattern significantly better ( $M = 1.05;$   
44  
45  $SD = .28$ ) than European Americans ( $M = .63; SD = .50; M_{diff} = .42; p \leq .001, 95\% CI: [.263,$   
46  
47  $573]$ ) and Korean Americans ( $M = .74; SD = .50; M_{diff} = .31; p \leq .001, 95\% CI: [.156, .459]$ ).  
48  
49 The fit scores of Korean Americans fell nicely in between those of Koreans and European  
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51 Americans, yet were not significantly higher than those of European Americans (see Figure 1,  
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53 left panel).  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 At the individual level, we explored the two contrasting sets of hypotheses outlined in  
4 the Introduction. On the one hand, we had hypothesized that engagement in the heritage culture  
5 would predict heritage emotional fit (H2 & H3); on the other hand, the alternative hypotheses  
6 stated that the operationalisations of cultural exposure (number of years and proportion of life  
7 spent in heritage culture) would not be associated with immigrants' emotional fit (H2A) and  
8 that fit would be only predicted by one's number of Korean friends (H3A).  
9

10  
11 As described above, we tested these predictions by conducting a series of four  
12 hierarchical linear regressions to test H2-H4 and three additional ones to test H3A. All  
13 regressions yielded a main effect of Valence (*step 1 R<sup>2</sup> change* = .369,  $p \leq .001$ ; *B*'s ranging  
14 from -.615 to -.580,  $p \leq .001$ ; see Table 1, panel A), indicating that participants had significantly  
15 higher emotional fit in positive than in negative situations. The other control variables (Block  
16 1: Engagement; Block 2: Educational attainment) did not significantly contribute to explaining  
17 variance in immigrants' Korean emotional fit, and Blocks 5 and 6 that tested all two-way and  
18 three-way interactions never yielded significant results; hence, we don't report them here (full  
19 results can be obtained from the first author).  
20  
21

22  
23 Regressions 1 and 2 showed that Korean Americans' emotional fit to Korean patterns  
24 was neither associated with the number of years nor with the proportion of life spent in Korea  
25 (all  $p > .10$ ; for the full results, see Table 1, panel A, Regressions 1 and 2), which renders  
26 support for H2A instead of H2. For minorities in ethnic enclaves (such as the ones we recruited),  
27 time spent in the heritage country does not predict heritage emotional fit, perhaps because it  
28 does not expose minorities to heritage culture's meanings and practices above and beyond what  
29 they are exposed to in their ethnic minority communities in their country of residence.  
30  
31

32  
33 Regression 3, testing the link between heritage culture fit and social contact with  
34 heritage culture members, showed that general social contact was not predictive of emotional  
35 fit (*step 3 R<sup>2</sup> change* = .005,  $p = .592$ , see Table 1, panel A, Regression 3). To test the alternative  
36  
37

## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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2  
3 hypothesis (H3A) that only the number of Korean friends matters, we first ran Regression 3bis  
4 that included the item on having Korean friends as the predictor of interest and then another  
5  
6 that included the item on having Korean friends as the predictor of interest and then another  
7  
8 two analyses that included the item on having Korean colleagues and Korean neighbours,  
9  
10 respectively. Confirming hypothesis 3A, only having Korean friends contributed significantly  
11  
12 to Korean Americans' heritage emotional fit, be it that this effect was moderated by Valence  
13  
14 (*step 4 R<sup>2</sup> change* = .132,  $p = .016$ ,  $B_{\text{Valence} \times \text{KoreanFriends}} = .372$ ,  $p = .015$ , 95% CI [.076, .669], see  
15  
16 Table 1, panel A, Regression 3bis). This effect was still significant after applying Bonferroni  
17  
18 corrections for multiple comparisons ( $p = .015 < \alpha_{.05/3} = .017$ ). Simple slopes indicated that the  
19  
20 number of Korean friends was positively associated with Korean emotional fit in negative  
21  
22 situations (simple slope  $B = .208$ ,  $SE = .114$ ,  $p = .077$ , 95% CI [-.023, .439]), but not in positive  
23  
24 situations (simple slope  $B = -.164$ ,  $SE = .141$ ,  $p = .254$ , 95% CI [-.450, .122]). Analyses on the  
25  
26 number of Korean neighbours and colleagues yielded no significant results (for full results see  
27  
28 Online Supplementary Materials, Table 2A, panel A). Supporting H3A, the only predictor of  
29  
30 heritage culture emotional fit is thus Korean Americans' number of heritage culture friends.  
31  
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33

34  
35 In a final regression, we tested the association between Korean Americans' emotional  
36  
37 fit with the heritage culture and the two scales that tap into their attitudes towards maintaining  
38  
39 their heritage culture (H4). As expected, minorities' emotional fit was unrelated to their  
40  
41 attitudes towards maintaining Korean values and traditions. However, their attitudes toward  
42  
43 maintaining social contacts with Koreans did marginally contribute to the prediction of heritage  
44  
45 emotional fit (see Table 1, panel A, Regression 4). To disentangle whether this is an effect of  
46  
47 *attitudes* per se versus of *actually* having Korean friends, we conducted a post-hoc regression  
48  
49 analysis in which both variables were the predictors of interest. It showed that whereas Korean  
50  
51 Americans' Korean emotional fit was *not* predicted by their attitudes towards social contact  
52  
53 (*step 3 R<sup>2</sup> change* = .060,  $p = .166$ ), it was by their actual number of Korean friends (*step 4 R<sup>2</sup>*  
54  
55 *change* = .160,  $p = .028$ ;  $B = .412$ ,  $p = .007$ , 95% CI [.122, .702]; see Table 1, panel A).  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

**Situational factor: Does interacting in Korean cultural settings afford Korean Americans to fit the Korean emotional patterns better?** Based on the cultural frame switching literature, we had expected that minorities' interactions in home/family contexts would afford emotional experiences that fit the Korean typical patterns better than the European American ones (H5). Hence, we compared, for each context, minorities' fit to the typical European American and to the typical Korean emotional patterns by means of paired samples t-tests. For the home context, we found a marginally significant effect suggesting that Korean Americans' emotional patterns fitted better with the Korean ( $M = .76$ ,  $SD = .62$ ) than European American patterns ( $M = .66$ ,  $SD = .56$ ;  $Mean\_diff = .10$ ,  $SE_{mean\ diff} = .05$ ,  $t_{(42)} = 1.895$ ,  $p = .065$ ; one-tailed  $p = .033$ ; 95% CI: [-.006, .200]). For the work/school context, however, no such difference occurred ( $Mean\_diff = -.01$ ,  $SE_{mean\ diff} = .06$ ,  $t_{(42)} = -.096$ ,  $p = .924$ ; 95% CI: [-.118, .108] see Figure 2 left panel).

Post-hoc exploratory analyses suggested that the exact pattern of emotional fit levels was different for first versus second or later generation Korean Americans. Specifically, we repeated the t-tests described above, yet now for first and second or later generations separately. For the home context, we found that first generation Korean Americans fitted significantly better with the Korean ( $M = .74$ ,  $SD = .63$ ) than European American patterns ( $M = .60$ ,  $SD = .57$ ;  $Mean\_diff = .15$ ,  $SE_{mean\ diff} = .065$ ,  $t_{(30)} = 2.249$ ,  $p = .032$ ; one-tailed  $p = .016$ ; 95% CI: [.013, .279]), whereas there was no such difference for second or later generation Korean Americans ( $Mean\_diff = -.03$ ,  $SE_{mean\ diff} = .062$ ,  $t_{(11)} = -.488$ ,  $p = .635$ ; 95% CI: [-.169, .108]). In work/school contexts, however, there was a non-significant trend for later generation Korean Americans to fit better with the European American ( $M = .98$ ,  $SD = .49$ ) than the Korean ( $M = .90$ ,  $SD = .57$ ) typical patterns ( $Mean\_diff = -.08$ ,  $SE_{mean\ diff} = .087$ ,  $t_{(10)} = -.947$ ,  $p = .366$ ; 95% CI: [-.277, .112]), but this was not the case among first generation minorities ( $Mean\_diff = .02$ ,  $SE_{mean\ diff} = .069$ ,  $t_{(31)} = .306$ ,  $p = .762$ ; 95% CI: [-.120, .162]). Given the small numbers of

1  
2  
3 participants, and especially the small number of second or later generation minorities ( $n = 12$ ),  
4  
5 conclusions should be treated with extreme caution. Yet, these results provide some initial  
6  
7 support for the idea that situational factors such as the context of the interaction shape  
8  
9 minorities' emotional experiences, at least among first generation minorities.  
10  
11

## 12 Study 2

13  
14 Study 2 was not only a replication of Study 1 in another group of minorities (Turkish)  
15  
16 within a different host culture setting (Belgium), but also overcame several of its limitations.  
17  
18 Concretely, Study 2 consisted of sizable samples of first and second generation minorities,  
19  
20 which allows us to reliably compare them. Furthermore, Study 2 used a similar design of the  
21  
22 EPQ for all groups, thereby ruling out possible design effects when comparing mean emotional  
23  
24 fit scores across samples. Finally, in Study 2 minorities were prompted to report on two  
25  
26 emotional situations that either occurred in the home context or in the work/school context,  
27  
28 thereby ruling out the possibility that any evidence for emotional frame switching can be  
29  
30 accounted for by a contrast-effect that occurs when minorities report on both contexts in the  
31  
32 same questionnaire. All hypotheses were exactly the same as for Study 1.  
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36

### 37 Method.

38  
39 **Participants.** Participants were 144 Turkish Belgian minorities (59 first generation; 85  
40  
41 second generation) and 79 Belgian majorities that were available from earlier research (De  
42  
43 Leersnyder et al., 2011), as well as 250 Turkish majority students from the Döküz Eylül  
44  
45 Universitesi in Izmir, Turkey, who were sampled for the purpose of this study. Across the  
46  
47 samples there were significant differences in age, with Turkish students being significantly  
48  
49 younger ( $M = 20.1$ ,  $SD = 1.47$ ) than first generation ( $M = 34.1$ ,  $SD = 10.85$ ) and second  
50  
51 generation minorities ( $M = 25.59$ ,  $SD = 6.63$ ) as well as majority Belgians ( $M = 31.38$ ,  $SD =$   
52  
53  $8.67$ ; all *Mean diff* were significant at  $p \leq .001$ ). Furthermore, the Turkish majority sample was  
54  
55 characterized by a higher proportion of female participants (67% females) than the other three  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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2  
3 samples (around 50%;  $\chi^2 = 10.338, p = .016$ ) and was less highly educated since none of the  
4  
5 Turkish students held a tertiary education degree yet (see Online Supplementary Materials for  
6  
7 full statistics).  
8  
9

10  
11 However, controlling for Age, Gender, or Educational Attainment did not change the  
12  
13 results. In order to keep them comparable to both Study 1 and our earlier work (De Leersnyder  
14  
15 et al., 2011), we excluded three first generation minorities who had received none or only  
16  
17 primary education and controlled for Educational Attainment in our analyses (dummy coded as  
18  
19 0 = “secondary education”; 1 = “tertiary education”). We further excluded 17 participants who  
20  
21 failed to report a situation that matched the valence of the prompts; the proportion did not differ  
22  
23 across cultural groups ( $\chi^2 = 2.052, p = .562$ ; Excluded: Turkish majority  $n = 10$ , Turkish Belgian  
24  
25 first generation  $n = 2$ , Turkish Belgian second generation  $n = 1$ , Belgian majority  $n = 4$ ).  
26  
27

28  
29 **Materials. Emotional Patterns Questionnaire (EPQ).** The EPQ used in Study 2 was  
30  
31 identical to the one used in Study 1. However, participants from all groups now completed two  
32  
33 versions of the EPQ that pertained to the same Relationship Context (either home/family or  
34  
35 work/school) and Valence (either positive or negative), but differed in terms of Engagement.  
36  
37 In order to calculate emotional fit scores, we followed the exact same procedure as in Study 1,  
38  
39 yet now using the Turkish average emotional patterns as standard of reference with which we  
40  
41 correlated individuals’ patterns. Again, the correlations were based on only those 17 emotion  
42  
43 items for which a Simultaneous Component Analysis indicated cross-culturally equivalence  
44  
45 (see Online Supplementay Materials for the full list of emotions and De Leersnyder et al., 2011  
46  
47 for the full results of the SCA) and were transformed into Fischer z-scores. Participants’ two  
48  
49 z-scores were aggregated into one index of emotional fit with the Turkish average patterns.  
50  
51  
52

53  
54 **Personal Factors of Cultural Engagement.** Similar to Study 1, we operationalised  
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56 Turkish Belgians’ exposure to the heritage culture as the *Number of Years* and *Proportion of*  
57  
58 *Life* spent in the heritage culture. *Social Contact with Heritage Culture Members* was measured  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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2  
3 through an eight item scale that asked participants whether they use to speak only Turkish (1),  
4  
5 only Dutch (3) or both languages (2) when interacting with their partner, siblings, co-workers,  
6  
7 neighbours, friends, etc. (De Leersnyder et al., 2011); Cronbach's  $\alpha = .76$ ). We re-coded the  
8  
9 scale such that higher scores indicate more Turkish (instead of Dutch) language use when  
10  
11 having social contact ( $M = 2.00$ ,  $SD = 0.54$ ). Since majority Belgians do not have any  
12  
13 knowledge of Turkish, this scale is an indirect measure of the degree to which immigrants'  
14  
15 social contacts are with heritage culture members. As an extra check, we directly asked  
16  
17 minorities their agreement with the statement "I have a lot of Turkish friends" (1 = *totally*  
18  
19 *disagree* – 7 = *totally agree*;  $M = 6.09$   $SD = 1.44$ ). We could not combine their answers with  
20  
21 the indirect social contact scale because of the different scales.  
22  
23  
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25  
26 As in Study 1, acculturation attitudes were measured by 8 items of the VIA (Ryder et  
27  
28 al., 2000) that constituted two scales: one referring to *Maintaining Values and Traditions* (four  
29  
30 items,  $\alpha = .73$ ;  $M = 5.59$ ,  $SD = 1.17$ ), the other referring to *Maintaining Social Contacts with*  
31  
32 *Heritage Culture Members* (four items,  $\alpha = .73$ ;  $M = 5.68$ ,  $SD = 1.17$ ). The two scales correlated  
33  
34 substantially ( $r_{(140)} = .68$ ,  $p \leq .001$ ), but nevertheless formed 2 factors in the PCA.<sup>3</sup>  
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38 **Situational factor of Cultural Engagement:** The situational factor was operationalized  
39  
40 in the exact same way as in Study 1, namely by looking at whether the self-reported situations  
41  
42 had taken place at home/with family versus at work/school (as defined by the prompt).  
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46 **Procedure.** Before each study, participants received, read, and signed an informed  
47  
48 consent. The Belgian and Turkish Belgian community samples were recruited through centres  
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50 for adult education and though flyers being distributed in (mainly) Turkish neighbourhoods in  
51  
52 the city of Gent. The Turkish majority sample was recruited at the Educational Studies  
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56 <sup>3</sup> Although one item did not load on the expected factor (*Maintaining Values and Traditions*),  
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58 Cronbach's alpha got worse (instead of improved) when removing this item from the scale. Therefore, and in  
59  
60 keeping with both Study 1 and the 2011 paper, we retained this item.



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3 Department of the Doküz Eylül University in Izmir, Turkey. Students volunteered in class time  
4  
5 or during breaks.  
6

### 7 **Results.**

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10 **Analytic strategy.** We employed an analytic strategy that resembles the one used in  
11  
12 Study 1. To assess group differences (H1), we conducted an ANOVA that tested differences in  
13  
14 Turkish emotional fit between the different groups in our sample. To assess which personal  
15  
16 factors were associated with heritage culture emotional fit, we again conducted a series of  
17  
18 carefully planned regression analyses in which minorities' emotional fit with the Turkish  
19  
20 patterns was predicted by their exposure to the Turkish context (Regression 1 and 2, testing H2  
21  
22 vs. H2A), by their general level of social contact with Turks (regression 3 testing H3) versus  
23  
24 only by the number of heritage culture friends (regression 3bis testing H3A), and by their  
25  
26 attitudes towards maintain Turkish Values and traditions and Turkish Social Contacts  
27  
28 (Regression 4, testing H4). Again, these regressions consisted of several blocks with Blocks 1  
29  
30 and 2 including our control variables – i.e., the between-subject variables Valence and  
31  
32 Relationship Context (Block 1) and participants' Educational Attainment (Block 2) – Block 3  
33  
34 each time including one predictor of interest and Blocks 4 to 6 testing all two-way and 3-way  
35  
36 interactions.  
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42 To test H5 and thus to assess the influence of the situational factor on heritage culture  
43  
44 emotional fit, we relied on Turkish Belgians' fit scores with both the average Turkish patterns  
45  
46 *and* those with the average Belgian patterns established in previous work (De Leersnyder et al.,  
47  
48 2011). Differently than in Study 1, the (optimised) design of Study 2 allowed us to conduct a  
49  
50 Repeated Measures ANOVA that featured immigrants' emotional fit with the Turkish and the  
51  
52 Belgian average patterns as dependent variables, and the Context of the prompt (home/ family  
53  
54 vs. work/school) as predictor. In this analysis, we could also control for the (expectedly) strong  
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3 valence effects and further explore whether the effects of situational engagement on emotional  
4  
5 fit would differ across first and second generation minorities.  
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7

8 **Personal factors: Which aspects of heritage engagement predict Turkish Belgians'**  
9  
10 **heritage emotional fit?** At the group level, we had hypothesized that the Turkish majority  
11 group would have higher fit to the average Turkish emotional patterns than the Turkish Belgian  
12 and Belgian groups (H1). Consistent with this hypothesis, an ANOVA yielded group  
13 differences in emotional fit ( $F_{(3,449)} = 4.099; p = .007, \eta^2 = .027$ ), showing that Turks in Turkey  
14 were significantly more concordant to the Turkish average patterns ( $M = .80; SD = .46$ ) than  
15 both Belgians ( $M = .62; SD = .51; M_{diff} = .175; p = .008, 95\% \text{ CI: } [.047, .303]$ ) and Turkish  
16 second generation immigrants ( $M = .62; SD = .54; M_{diff} = .175; p = .005, 95\% \text{ CI: } [.052, .298]$ ).  
17 The fit levels of Turkish first generation immigrants ( $M = .70; SD = .53$ ) were neither  
18 significantly lower than those of Turkish majorities ( $M_{diff} = .104; p = .152, 95\% \text{ CI: } [-.038,$   
19  $.246]$ ) nor significantly higher than those of second generation minorities and Belgian  
20 majorities (see Figure 1, right panel).  
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35 The regressions testing which personal factors of heritage culture engagement predict  
36 heritage culture fit, again pointed to a main effect of Valence (*step 1*  $R^2$  change = .53,  $p \leq .001$ ;  
37  $B$  ranging from  $-.755$  to  $-.728, p \leq .001$ ; see Table 1, panel B, Regressions 1 - 4), indicating that  
38 emotional fit was higher in positive than in negative situations. As in Study 1, neither the other  
39 control variables (Context and Educational Attainment), nor any two-way or three-way  
40 interaction were significant; hence, we don't report on these results here (full details can be  
41 obtained from the first author).  
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51 Regressions 1 and 2 respectively revealed that neither the number of years spent in  
52 Turkey nor the proportion of life spent in Turkey predicted minorities' emotional fit with the  
53 Turkish patterns (for the full results, see Table 1, panel B), which supports the alternative H2A  
54 rather than H2.  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 Regression 3 that predicted Turkish Belgians' heritage emotional fit from their daily  
4 social contacts with other Turkish (minority) people, found a trending effect of general social  
5 contact with Turks (*step 3 R<sup>2</sup> change* = .008, *p* = .139; *B* = .091, *p* = .139, 95% CI: [-.030,  
6 .212]; see Table 1, panel B). To further explore this finding and test H3A that posited that  
7 heritage emotional fit is only a function of having heritage culture friends, we conducted an  
8 additional series of eight regression analyses in which we separately entered each individual  
9 item of the social contact scale as the predictor of interest. Supporting H3A, only Regression  
10 3bis that included the item referring to friends yielded significant results (see Table 1, panel B):  
11 Speaking Turkish more with friends – as an indirect index of having more Turkish [minority]  
12 than Belgian majority friends – was positively associated with Turkish emotional fit (*step 3 R<sup>2</sup>*  
13 *change* = .029, *p* = .005; *B* = .116, *p* = .005, 95% CI: [.036, .195]; see OSM Table 2A for the  
14 non-significant results on the other social contact items). This effect was still significant after  
15 applying Bonferroni corrections for multiple comparisons ( $\alpha = .05/8 = 0.006$ ). Moreover, it was  
16 corroborated by Regression 3cis that included minorities' explicitly stated number of Turkish  
17 friends as predictor of interest: Again, the more heritage culture friends, the higher minorities'  
18 heritage culture fit (*step 3 R<sup>2</sup> change* = .020, *p* = .016; *B* = .055, *p* = .016, 95% CI: [.011, .100];  
19 see Table 1).

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21  
22 Finally, we tested the associations between minorities' acculturation attitudes towards  
23 the Turkish culture and their emotional fit with the Turkish patterns (H4). Mirroring the results  
24 of Study 1, minorities' wish to maintain Turkish values and traditions was unrelated to  
25 emotional fit, but their wish to maintain social contacts with Turks' was marginally significantly  
26 associated, be it for home/family situations only (see Table 1, panel B, Regression 4; *step 4 R<sup>2</sup>*  
27 *change* = .028, *p* = .082). Again, we conducted a post-hoc regression analysis to disentangle  
28 this effect of *desiring* social contact with heritage members from having *actual* contact with  
29 heritage members. Just like in Study 1, however, the effect of *Attitudes towards Maintaining*  
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3 *Social Contact with Heritage Members* disappeared once we included the variables referring to  
4  
5 *actual* contacts with heritage members.<sup>4</sup> When all three contact-related items were included  
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7 (*step 3 R<sup>2</sup> change* = .048,  $p = .004$ ), only Turkish Belgians' use of the Turkish language with  
8  
9 friends significantly predicted their Turkish emotional fit ( $B = .102$ ,  $p = .013$ , 95% CI: [.022,  
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11 .182]; see Table 1, panel B). Turkish Belgians' fit to the typically Turkish emotional patterns is  
12  
13 thus only associated with the extent to which they engage in *actual* heritage culture friendships.  
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17 **Situational factor: Does interacting in Turkish cultural settings afford Turkish**  
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19 **Belgians to fit the Turkish emotional patterns better?** To test whether the situational factor  
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21 Context shaped Turkish Belgians' emotional fit with their heritage culture (H5), we compared  
22  
23 their fit with the typical Turkish versus typical Belgian emotional patterns in home/family  
24  
25 versus work/school contexts. A Repeated Measures ANOVA with emotional fit scores as  
26  
27 within-subjects variables and Valence, Context and Generation as between-subjects variables,  
28  
29 provided initial support for H5. Confirming the findings reported above, this analysis yielded  
30  
31 i) a significant within-subjects effect of Generation on Emotional Fit (Pillai's Trace = .069  
32  
33  $F_{(1,130)} = 9.665$ ,  $p = .002$ ,  $\eta^2 = .069$ ) such that first generation minorities had a higher fit with the  
34  
35 Turkish ( $M = .68$ ,  $SE = .049$ ) than the Belgian patterns ( $M = .62$ ,  $SE = .046$ ;  $Mean\_diff = -.055$ ,  
36  
37  $SE = .024$ ,  $p = .023$ ), whereas the opposite was true for second generation minorities (Belgian  
38  
39 fit:  $M = .65$ ,  $SE = .039$ ; Turkish fit:  $M = .61$ ,  $SE = .042$ ;  $Mean\_diff = -.042$ ,  $SE = .020$ ,  $p = .038$ ),  
40  
41 and ii) a significant between-subjects effect of Valence ( $F_{(1,130)} = 159.89$ ,  $p \leq .001$ ). No other  
42  
43 within-subject effects were significant, implying that the hypothesized three way interaction of  
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45 Emotional Fit\*Context\*Generation also did not reach significance (Pillai's Trace = .003  $F_{(1,130)}$   
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54 <sup>4</sup> Minorities' attitudes toward social contact with Turks were highly correlated with their explicit  
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56 statement of having Turkish friends ( $r = .435$ ,  $p \leq .001$ ), but uncorrelated with the more implicit measure of  
57  
58 speaking Turkish among friends ( $r = .061$ ,  $p = .481$ ); the latter two scales were moderately associated ( $r = .171$ ,  $p$   
59  
60 = .047).

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3 = .440,  $p = .508$ ,  $\eta^2 = .003$ ). However, as expected, the pattern of pairwise comparisons was  
4  
5 very consistent with the trends observed in Study 1. Turkish first generation minorities were  
6  
7 more concordant to Turkish ( $M = .67$ ,  $SE = .071$ ) than to Belgian ( $M = .61$ ,  $SE = .066$ ) emotional  
8  
9 patterns in home/family contexts ( $Mean\_diff = .063$ ,  $SE_{mean\_diff} = .034$ ,  $p = .070$ , one-tailed  $p =$   
10  
11  $.035$ ; 95% CI:  $[-.005, .130]$ ), but did not differentiate between the patterns in work/school  
12  
13 contexts. In contrast, second generation minorities were more concordant to Belgian ( $M = .68$ ,  
14  
15  $SE = .054$ ) than to Turkish ( $M = .60$ ,  $SE = .058$ ) patterns in work/school contexts ( $Mean\_diff =$   
16  
17  $.071$ ,  $SE_{mean\_diff} = .028$ ,  $p = .013$ , one-tailed  $p = 0.007$ ; 95% CI:  $[.015, .126]$ ), but did not  
18  
19 differentiate between Belgian and Turkish patterns at home (see Figure 2, right panel). Taken  
20  
21 together, this set of results provides further tentative support for the idea that minorities switch  
22  
23 cultural frames in the domain of emotions, but also suggests that the specific condition under  
24  
25 which frame-switching occurs, may differ across first and second generation minorities.  
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### 30 **General Discussion**

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33 The current research documents which personal and situational factors afford immigrant  
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35 minorities to maintain their heritage culture's emotional patterns. It suggests that when  
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37 immigrant minorities come to fit the emotional patterns typical of the new mainstream culture,  
38  
39 they do not necessarily 'lose' their emotional concordance to their heritage culture. Rather,  
40  
41 minorities may maintain (and perhaps even cultivate) their heritage emotional patterns through  
42  
43 maintaining friendships with heritage culture members (personal factor) and interacting in  
44  
45 situations that prompt and afford heritage cultural meanings and practices (situational factor).  
46  
47 Specifically, our studies on Korean Americans and Turkish Belgians showed that minorities'  
48  
49 emotional fit with the heritage culture was i) positively associated with their number of Korean  
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51 and Turkish friends and ii) higher when interacting at home versus at school/work (although  
52  
53 the latter was most outspoken for first generation minorities). Thus, the current studies  
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55 consistently suggest that minorities' heritage culture emotional patterns are maintained (and  
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perhaps even cultivated) through interacting with heritage culture friends and are most prominent (and thus activated) *when* it is most relevant: In contacts with other heritage members.

Before discussing these findings in detail, we will take a closer look at two other results that were not at the core of our research, but that are nevertheless important. Firstly, and replicating other studies on emotional fit with culture (De Leersnyder et al., 2011; Jasini et al., 2019), we found that fit in positive situations is significantly higher than fit in negative situations, and that this result holds true for both majority and minority members. As speculated before (De Leersnyder et al., 2011), this may be due to the fact that negative emotional situations are more complex than positive ones – something that is also reflected by the higher sum of variances of all emotion terms in the negative (73.6 in Study 1 and 79.7 in Study 2) than in the positive situations (51.6 in Study 1 and 49.2 in Study 2). Importantly, however, we found no differences with regard to the *associations* between the various personal factors and emotional fit in positive versus negative situations: None of the interaction effects between Valence and our predictors of interest were significant. The only exception to this was that Korean Americans' friendships with Koreans only contributed to their fit with the typical Korean patterns for negative emotional situations, and not to their fit in positive situations. One potential explanation for this is that whereas positive situations are discussed with many others, negative situations, and especially negative engaging ones (that center around shame) are mainly discussed with close friends (Rimé, Mesquita, Phillipot & Boca, 1991). Therefore, having Korean friends may be especially important for Korean Americans to maintain fit with the typical Korean patterns in negative situations.

A second finding that was not at the core of our hypotheses, but that can shed important light on the nature of emotional fit with culture, is that immigrant minorities seemed to fit their heritage culture patterns about equally well as they fit their new majority culture patterns (De

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3 Leersnyder et al., 2011), while majority members only fitted to their own and not the other  
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5 culture's patterns. To underpin this observation with statistics, we conducted, for each study, a  
6  
7 post-hoc repeated measures ANOVA in which we predicted all participants' level of emotional  
8  
9 fit with both the new mainstream (i.c., European American, Belgian) and the heritage (i.c.,  
10  
11 Korean, Turkish) typical patterns of emotion from their group membership. We found that all  
12  
13 majority groups (Koreans, European Americans, Turks, Belgians) were significantly more  
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15 concordant to their *own* than to *another* culture's emotional patterns, but that immigrant  
16  
17 minorities' fitted both patterns about equally well (see Online Supplementary Materials for a  
18  
19 full report). This suggests that for immigrant minorities the new mainstream and heritage  
20  
21 culture's emotional patterns tend to co-exist.  
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**Predicting maintenance of heritage culture emotional patterns**

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28 The current research started from the observation that most immigrant minorities engage  
29  
30 in heritage cultural contexts on a daily basis, and clarified which aspects of heritage engagement  
31  
32 are associated with minorities maintaining their heritage emotional patterns. Whether  
33  
34 immigrant minorities have heritage culture friends was the only personal factor that predicted  
35  
36 emotional fit with the heritage culture across both studies. Neither length of time spent in the  
37  
38 country of origin nor age at immigration predicted the emotional fit with the heritage culture –  
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40 findings that can be understood from the fact that our minority participants (like so many other  
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42 minorities) live in ethnic enclaves that expose them to (a form of) the heritage culture. Also,  
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44 participants' general level of social contact with heritage members did not predict heritage  
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46 emotional fit, perhaps because there is less meaningful variation in minorities' number of  
47  
48 heritage culture family members and colleagues. The fact that it was a function of one's contact  
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50 with heritage culture friends further supports the idea that friendships may play a particularly  
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52 important role in the (re)negotiation of emotional meanings while sharing emotional events.  
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3 Future research should further investigate these explanations by, for instance, explicitly  
4 testing to what extent i) these different indicators of heritage culture engagement are associated  
5 with the endorsement of heritage culture meanings and practices and ii) minorities actually  
6 share their emotional experiences much more with heritage culture friends than with family  
7 members, co-workers and neighbours. Relatedly, future research could further examine why  
8 having Korean friends was a predictor of Korean Americans' emotional fit to the Korean  
9 average emotional patterns for negative situations only (Study 1; see above).

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Despite these remaining questions, the current research documents which aspects of minorities' engagement in the heritage culture are associated with their maintenance of heritage culture patterns and which aspects are not. In this way it contributes to a more complete understanding of emotional acculturation. The fact that the predictors of mainstream and heritage cultural fit do not mirror one another perfectly may fuel further research, and shed light on the group-level findings discussed earlier. If anything, the results show that when immigrant minorities engage in a new cultural context, they are not 'doomed to lose' their heritage culture emotional patterns, especially not when they engage in friendships with heritage culture members.

### **Towards a situated and heterogeneous approach of acculturation**

Our findings inform acculturation psychology in several ways. Firstly, studies on acculturative changes in emotional patterns complement traditional acculturation research that has focused on minorities' attitudes and cultural identities, which are deliberate, conscious, articulate, and reflective positions towards the mainstream and heritage cultures (e.g., (Berry, 1997; Phinney, 1990; Sam & Berry, 2010). It calls for a 'cultural psychological' approach to acculturation (see De Leersnyder, 2014; Mesquita, De Leersnyder, & Jasini, 2019) in which *all* aspects of people's psychological functioning, such as their self-esteem (Heine & Lehman,



2004), self-construal (De Leersnyder, 2009), personality (Güngör et al., 2013) and emotional lives may be subject acculturation.

Secondly, the finding that emotional fit to the heritage culture was *dissociated* from minorities' explicit attitudes towards maintaining the heritage culture commends interpreting emotional concordance as a more implicit reflection of acculturation. Moreover, it calls for a novel view on acculturation in which different aspects of minorities' psychological functioning may acculturate at different paces or even in different directions. As found here and elsewhere (i.c. De Leersnyder et al., 2011; Jasini, et al., 2019), minorities' explicitly held (attitudes, identities) and implicitly embodied (emotions) cultural affiliations could be more heterogeneous than previously assumed.

### **Cultural frame switching in emotions**

In addition to providing insight in (emotional) acculturation, our findings also speak to cultural frame switching (e.g., Hong et al., 2000). By showing that minorities' emotional patterns were more concordant with heritage culture patterns in situations that took place at home/with family, whereas they were more concordant with majority patterns in work/school situations, the current research provides initial-additional evidence for cultural frame switching in the domain of emotions. These findings were moderated by minorities' generational status, though, with first generation minorities showing more distinct patterns of emotions at home/with family and second generation minorities showing more distinct patterns at school/work. This may be so, because first generation minorities – who grew up in the heritage country – may have a more clear picture of how emotional responses should look like in (heritage culture) family situations than in (majority) work/school situations, while the opposite may be true for second generation minorities who grew up in the new mainstream context – a speculation that needs to be addressed in future research.



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3 Nevertheless, the current findings go beyond the only other study on emotional frame  
4 switching (Perunovic et al., 2007) in several ways. Firstly, they document cultural frame  
5 switching in the *patterning of emotions* rather than in associations between average levels of  
6 switching in the *patterning of emotions* rather than in associations between average levels of  
7 positive and negative moods. Secondly, and most importantly, they are based on *actually*  
8 *measured* instead of inferred fit between minorities' emotions and those that are typical for the  
9 heritage and mainstream cultures. Of course, future research should address the exact  
10 differences between heritage and new mainstream emotional patterns as well as examine which  
11 contextual cues activate each of these culture's emotional patterns.  
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**Emotions**

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23 Finally, the current studies also speak to our understanding of emotions per se. The  
24 finding that minorities continue to fit emotionally with their heritage culture upon engaging in  
25 heritage culture friendships supports the idea that people's – ongoing and multiple – cultural  
26 engagements shape their experiences to be in line with them (e.g., Mesquita, 2003; Mesquita et  
27 al., 2017). Furthermore, the initial-additional evidence for minorities' frame switching between  
28 heritage and new mainstream patterns of emotion, can be taken as support for the idea that  
29 people construe their emotional experiences *dynamically* and thus 'in the moment' to be in line  
30 with the prevailing cultural context (e.g., Boiger & Mesquita, 2012).  
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**Limitations**

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44 The current research has some limitations. First, the sample size of Study 1 was rather  
45 small, which may have weakened the power of our analyses. Yet, as the results of Study 1 were  
46 replicated in Study 2, we have confidence that the findings can be interpreted, especially given  
47 the fact that the two case studies were maximally different yet theoretical replications from one  
48 another. Second, we calculated emotional concordance for home/family and work/school  
49 contexts as we assumed that the heritage culture is salient in home/family contexts and the  
50 majority culture is pertinent in work/school contexts. In reality, these contexts may be less  
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## RUNNING HEAD: EMOTIONAL FIT WITH THE HERITAGE CULTURE

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3 culturally homogenous, due to people from diverse ethnic backgrounds being present at the  
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5 same time, switching between different languages of interaction, and the simultaneous presence  
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7 of cultural symbols that refer to the new and the heritage context. If anything, the dynamics of  
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9 emotional acculturation may thus still be more complex than we outlined here.  
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**Conclusion**

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14 In sum, the current research documented the personal and situational factors that afford  
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16 immigrant minorities to maintain emotional patterns that are typical for their heritage cultural  
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18 context. It suggests that minorities do not lose existing heritage emotional patterns when they  
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20 acquire new mainstream emotional patterns, but can continue to maintain these patterns while  
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22 interacting with heritage culture friends. In addition, it suggests that minorities may switch  
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24 between heritage and new mainstream emotional patterns depending on the context of  
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26 interaction: When interacting in heritage cultural settings (at home) they are more concordant  
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28 to typical heritage than to typical majority emotional patterns, while the opposite is true when  
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30 interacting in majority cultural settings (at work/school). As such, the current research shows  
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32 that minorities' emotional patterns are not only cultivated, but also activated by their  
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34 interactions in different socio-cultural contexts.  
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