



Heriot-Watt University
Research Gateway

Who adopts the culture of ethnic minority groups? A personality perspective on majority-group members' acculturation

Citation for published version:

Kunst, JR, Lefringhausen, K, Skaar, SW & Obaidi, M 2021, 'Who adopts the culture of ethnic minority groups? A personality perspective on majority-group members' acculturation', *International Journal of Intercultural Relations*, vol. 81, pp. 20-28. <https://doi.org/10.1016/j.ijintrel.2021.01.001>

Digital Object Identifier (DOI):

[10.1016/j.ijintrel.2021.01.001](https://doi.org/10.1016/j.ijintrel.2021.01.001)

Link:

[Link to publication record in Heriot-Watt Research Portal](#)

Document Version:

Publisher's PDF, also known as Version of record

Published In:

International Journal of Intercultural Relations

Publisher Rights Statement:

© 2021 The Author(s).

General rights

Copyright for the publications made accessible via Heriot-Watt Research Portal is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

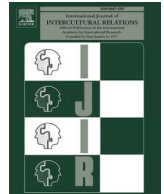
Heriot-Watt University has made every reasonable effort to ensure that the content in Heriot-Watt Research Portal complies with UK legislation. If you believe that the public display of this file breaches copyright please contact open.access@hw.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.



ELSEVIER

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

International Journal of Intercultural Relations

journal homepage: www.elsevier.com/locate/ijintrel

Who adopts the culture of ethnic minority groups? A personality perspective on majority-group members' acculturation

Jonas R. Kunst^{a,c,*}, Katharina Lefringhausen^{b,c}, Sara W. Skaar^{a,c}, Milan Obaidi^{a,b,c}

^a Department of Psychology, University of Oslo, Norway

^b Department of Applied Linguistics, University of Warwick, United Kingdom

^c Centre of Research on Extremism, University of Oslo, Norway

ARTICLE INFO

Keywords:

Acculturation
Immigration
Intercultural contact
Majority-group
Personality

ABSTRACT

Acculturation is commonly conceptualized as a two-way process in which all groups involved in intercultural contact change. Yet, very little is known about the acculturation orientations of majority-group members and the factors that differentiate those who adopt aspects of minority groups' culture from those who reject them. In the present research, we for the first time aimed to answer this question from a personality perspective. A total of 301 White majority-group members living in the U.S. first completed a personality assessment and then indicated the extent to which they maintained their own culture and adopted the culture of ethnic minority groups. Our analytic approach combined top-down variable-centered and bottom-up person-centered analyses. In terms of variable-centered analyses, participants who adopted the culture of minority groups scored lower on conscientiousness and higher on openness. Moreover, adoption of minority-group cultures was positively associated with the personality facets sociability and inquisitiveness, and negatively with modesty and prudence. In terms of person-centered analyses, four acculturation clusters emerged, resembling strategies commonly observed among minority groups: marginalization, separation, integration and a diffuse strategy in which participants scored around the midpoint on own culture maintenance as well as minority culture adoption. Interestingly, especially this diffuse cluster differed from the other clusters on personality traits and facets, with participants tending to be more open than integrated and separated individuals, and less conscientious than separated individuals. The present report suggests that personality traits may help explain how majority-group members acculturate and highlights avenues for future research.

Introduction

Although acculturation is defined as a two-way process in which all groups involved in contact change (Berry, 2008), most research has focused on cultural change among immigrants and ethnic minority groups. Such research has focused on majority-group members' acculturation expectations or prejudice and discrimination (Bourhis, Moïse, Perreault, & Senecal, 1997; Horenczyk, Jasinskaja-Lahti, Sam, & Vedder, 2013; Kunst, Thomsen, & Dovidio, 2019; Piontkowski, Rohmann, & Florack, 2002), rather than how majority-group members acculturate themselves. This lack of research is particularly striking, given that societies around the world are becoming more

* Corresponding author at: Postboks 1094, Blindern, 0317, Oslo, Norway.

E-mail address: j.r.kunst@psykologi.uio.no (J.R. Kunst).

<https://doi.org/10.1016/j.ijintrel.2021.01.001>

Received 14 April 2020; Received in revised form 15 December 2020; Accepted 5 January 2021

Available online 11 January 2021

0147-1767/© 2021 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY license

(<http://creativecommons.org/licenses/by/4.0/>).

ethnically diverse, such that numerical majority-minority asymmetries are attenuated or even predicted to shift in many societies (IOM, 2019; U.S. Census Bureau, 2012). Hence, living in increasingly diverse environments, many majority-group members are frequently exposed to the culture of minority-group members and may adopt aspects of it.

Generally, the two-dimensional model that frequently is used to understand the acculturation of minority-group members (Berry, 1997) also seems applicable to majority groups (Haugen & Kunst, 2017; Lefringhausen & Marshall, 2016). Majority-group members who are engaged in frequent intercultural contact and endorse values of self-transcendence and personal growth have been found to adopt minority groups' culture more, whereas those who perceive threat and discrimination tend to reject it (Haugen & Kunst, 2017; Lefringhausen, Ferenczi, & Marshall, 2019). Moreover, Haugen and Kunst (2017) identified three acculturation strategy clusters among Norwegian majority-group members that partly corresponded to those commonly observed among minority-group members: a separated cluster (i.e., high own culture maintenance and low minority culture adoption), an integrated cluster (i.e., high scores on both dimensions) and a diffuse/undifferentiated cluster in which individuals scored medium to low on both dimensions.

Yet, we still know very little about the antecedents of majority-group acculturation. Indeed, although much research has investigated the personality predictors of minority-group members' acculturation (e.g., Kosic, 2006; Ryder, Alden, & Paulhus, 2000; Schmitz & Berry, 2009), corresponding insights are missing for majority groups. This is particularly striking as personality is one of the main individual influences on people's acculturation (Van der Zee, Benet-Martínez, & Van Oudenhoven, 2016). Therefore, the present research investigated how personality traits and facets (i.e., HEXACO; Lee & Ashton, 2004) are associated with majority-group members' acculturation orientations and strategies. Doing so, we combined a variable- and person-centered analytic approach (see Grigoryev & van de Vijver, 2018) to maximize empirical insights into this underdeveloped research area. Variable-centered approaches are well-suited for determining the relative contribution that variables (i.e., personality) have in explaining outcomes (i.e., the acculturation orientations). By contrast, person-centered approaches are well-suited for identifying group patterns in acculturation (i.e., strategies) and the personality profiles associated with them. As such, combining both approaches will provide complementary insights into the novel field of majority-groups' psychological acculturation.

While we generally took an exploratory approach, we had some predictions. In line with acculturation work among minority-group members (e.g., Ryder et al., 2000) and work on tolerance toward people from value-based out-groups (e.g., Brandt, Chambers, Crawford, Wetherell, & Reyna, 2015), we expected that more openness would be related to more adoption of minority-group cultures. Moreover, we expected that a higher emotionality (and in particular its anxiety, fearfulness and sentimentality facets) would be associated with more own culture maintenance, in line with the notion that some U.S. majority-group members feel excluded by multiculturalism (Plaut, Garnett, Buffardi, & Sanchez-Burks, 2011). These assumptions also echo Chen et al. (2016)'s conceptualization of globalization-based acculturation, where holding on to one's cultural norms and practices is understood as a defensive mechanism and learning about the customs and norms of other cultures as a proactive response.

Method

Participants

A total of 308 participants were recruited through Amazon Mechanical Turk and paid equivalent to \$7/hour. Of these, 301 participants who indicated their ethnic background as "White/Caucasian" were retained for analyses. Sample demographics are presented in Table 1.

Instruments

For data and item wordings see https://osf.io/yq3mk/?view_only=cd46fdcc5df4443895aeed6608472825.

Personality traits and facets

On scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), participants completed the 60-item HEXACO inventory (Ashton & Lee, 2009). Each ten items assessed the personality traits honesty-humility, emotionality, extroversion, agreeableness, conscientiousness, and openness to experience. In addition, following Ashton and Lee (2009), four facets were computed for each trait. All reliability estimates are presented in Table 2.¹

Acculturation orientations

Adapting a measure from previous research (Haugen & Kunst, 2017), on scales ranging from 1 (*not important at all*) to 5 (*extremely important*), participants completed six items assessing their own/mainstream culture maintenance (e.g., "How important is it for you to maintain mainstream American traditions?"; $\alpha = .95$) and six corresponding items measuring the adoption of culture from minority-group members (e.g., "How important is it for you to participate in the traditions of ethnic minority-group members?"; $\alpha = .94$). The acculturation domains included way of living, traditions, values, belonging, contact and culture generally. The two-dimensional structure was fully supported by factor analyses that extracted two components (Eigenvalues 5.52 and 3.99; other Eigenvalues $< .64$). All items loaded cleanly ($> .80$) on one of the two components without cross-loadings ($< .16$) in a varimax-rotated

¹ The survey also included measures of violent extremism and dark triad personality traits that were included for a different, pre-registered project (<https://osf.io/nm8da>).

Table 1
Sample demographics.

Variable	Estimate
Age (<i>M</i>)	43.56 (<i>SD</i> = 13.24; <i>Range</i> = 21–76)
Gender (%)	
Man	48.5
Woman	51.5
Place of living (%)	
Countryside	30.2
City	69.8
Education (%)	
Less than high school degree	0.7
High school graduate	9.3
Some college but no degree	20.3
Associate degree in college (2-year)	13.0
Bachelor's degree in college (4-year)	40.2
Master's degree	13.6
Doctoral degree	1.3
Professional degree (JD, MD)	1.7
Income (%)	
Less than \$15,000	7.0
\$15,000 to \$24,999	8.0
\$25,000 to \$34,999	12.3
\$35,000 to \$49,999	15.9
\$50,000 to \$74,999	29.6
\$75,000 to \$99,999	12.3
\$100,000 to \$149,999	11.0
\$150,000 or more	4.0
Political Affiliation (%)	
Republican	27.0
Democrat	43.3
Independent	27.0
Other	1.3
No preference	1.3

solution. Both dimensions were weakly correlated, $r(299) = .17, p = .003$.

Analyses

In terms of variable-centered analyses, we first tested the correlations of the personality traits and facets with acculturation orientations. Next, we ran separate regression models testing the unique influence of (i) all personality traits and (ii) all facets. In terms of the person-centered approach, we conducted *k*-mean cluster analyses with the acculturation variables to identify subgroups of participants within the data. To identify the optimal number of clusters, the *NBClust* package (Charrad, Ghazzali, Boiteau, & Niknafs, 2014) was used in R. This package calculates 30 different indices to identify the optimal number of clusters by rotating different numbers of clusters, distance types, and methods of clustering. Once the optimal clustering solution was determined, the clusters were visualized using the *factoextra* package (Kassambara & Mundt, 2019), and personality differences between the extracted clusters were tested using analyses of variance (ANOVA). To control for Type-1 error inflation, Holm correction was applied to between-cluster comparisons (that is, for mean comparisons between the different acculturation strategies that were identified).

Results

Variable-centered analyses

F-tests and multicollinearity estimates are presented for each model in the Note of Table 2. In terms of traits, adoption of minority-group culture was negatively related to conscientiousness, and positively to openness. By contrast, own culture maintenance was related to more emotionality and extraversion and to less openness.

To ease interpretation, the bivariate correlations between the personality facets and the two acculturation orientations are visualized in Fig. 1, while exact *p*-values and regression coefficients are presented in Table 2. In terms of the honesty-humility facets, only modesty was negatively related to minority-group culture adoption, but this relationship failed to remain statistically significant in the regression analysis. By contrast, fairness was positively, and greed-avoidance and modesty negatively, correlated with own culture maintenance. Only for modesty did this relationship fail to reach significance in the regression analysis.

Three out of four emotionality facets were positively related to own culture maintenance, whereas no significant relationship was observed with minority culture adoption. Specifically, fearfulness, dependence and sentimentality were each positively related to own culture maintenance in terms of zero-order correlations. However, none of these relationships remained significant in the regression analysis.

Table 2

Scale characteristics for the different personality traits and facets and their correlation- and regression-based associations with the acculturation orientations.

	Scale		Minority culture adoption				Own culture maintenance			
	Items	α/r^a	<i>r</i>	<i>p</i>	β^b	<i>p</i>	<i>r</i>	<i>p</i>	β^c	<i>p</i>
Trait										
Honesty-Humility	10	.80	-.05	.395	-.03	.668	-.01	.878	.01	.841
Emotionality	10	.85	.03	.606	.07	.212	.16	.005	.20	<.001
Extraversion	10	.87	.11	.061	.13	.055	.16	.006	.30	<.001
Agreeableness	10	.81	.04	.517	.01	.851	-.02	.749	-.07	.245
Conscientiousness	10	.83	-.07	.204	-.14	.032	.05	.354	.11	.071
Openness	10	.83	.12	.038	.14	.021	-.26	<.001	-.34	<.001
Honesty-Humility Facets										
Sincerity	3	.73	.03	.576	.12	.064	-.01	.867	.01	.823
Fairness	3	.85	-.01	.909	-.12	.113	.22	<.001	.21	.002
Greed-avoidance	2	.46*	-.01	.909	.02	.778	-.21	<.001	-.18	.003
Modesty	2	.52*	-.11	.050	-.13	.065	-.21	<.001	-.11	.085
Emotionality Facets										
Fearfulness	3	.73	.03	.624	.14	.096	.15	.007	.08	.286
Anxiety	2	.64*	-.09	.121	-.14	.080	-.01	.872	.01	.938
Dependence	2	.48*	.05	.368	-.01	.913	.15	.009	-.03	.616
Sentimentality	3	.71	.09	.126	.06	.439	.18	.002	.10	.158
Extraversion Facets										
Social self-esteem	3	.78	.02	.706	-.04	.659	.09	.099	.04	.590
Social boldness	3	.76	.07	.196	-.11	.185	.08	.165	-.06	.460
Sociability	2	.58*	.20	<.001	.23	.006	.22	<.001	.17	.021
Liveliness	2	.62*	.07	.259	.00	.967	.13	.022	.06	.402
Agreeableness Facets										
Forgiveness	2	.70*	.08	.155	.07	.323	-.02	.760	-.04	.596
Gentleness	3	.69	.02	.772	-.01	.882	-.01	.992	-.02	.809
Flexibility	3	.42	.02	.751	-.09	.211	-.01	.875	-.09	.159
Patience	2	.51*	-.00	.941	.03	.663	-.03	.548	.05	.385
Conscientiousness Facets										
Organization	2	.41*	-.05	.405	.05	.487	.13	.024	.14	.049
Diligence	2	.39*	.01	.822	.00	.990	.07	.202	.07	.316
Perfectionism	3	.54	-.04	.473	-.03	.674	.04	.528	-.10	.182
Prudence	3	.73	-.13	.028	-.11	.186	-.03	.620	-.13	.095
Openness Facets										
Aesthetic appreciation	2	.60*	.08	.156	.01	.880	-.20	<.001	-.09	.186
Inquisitiveness	2	.33*	.13	.026	.21	.005	-.08	.156	.10	.127
Creativity	3	.75	.07	.210	-.03	.671	-.15	.007	-.03	.623
Unconventionality	3	.65	.10	.090	.07	.337	-.35	<.001	-.25	<.001

Note. Significant estimates are presented in bold.

For both own culture maintenance and minority culture adoption, two regression models were conducted.

Variance inflation factors (<1.36 for trait models, <2.72 for facet models) and tolerance estimates (<.91 for trait models, <.70 for facet models) suggested little evidence of multicollinearity.

^a Alpha coefficients are presented for scales with more than two items. Correlation coefficients are presented for two items. **p* < .001.

^b Model with six personality traits as predictors, $F(6, 301) = 10.59, p < .001, R^2 = .17$; Model with all facets as predictors, $F(6, 301) = 5.20, p < .001, R^2 = .30$.

^c Model with six personality traits as predictors, $F(6, 301) = 2.31, p = .034, R^2 = .04$; Model with all facets as predictors, $F(6, 301) = 1.80, p = .014, R^2 = .06$.

In terms of extraversion facets, sociability was positively associated with both types of acculturation orientations. Additionally, liveliness was positively related to own culture maintenance, but this relationship was statistically non-significant in the regression analysis. None of the agreeableness facets were related to any acculturation variable. In terms of conscientiousness, prudence was negatively correlated with minority culture adoption, but this relationship fell below significance in regression analyses. Organization was weakly and positively associated with own culture maintenance. Finally, in terms of openness to experience, inquisitiveness was related to higher levels of minority culture adoption, whereas aesthetic appreciation, creativity and unconventionality were related to less own culture maintenance.

Person-centered analyses

A comparison of the different cluster solutions indicated most support for four clusters (see Supplementary materials for the R output of the 30 indices). Hence, four clusters were extracted (see Fig. 2). Three clusters were readily interpretable, resembling the strategies separation, integration and marginalization. One “diffuse” cluster was observed in which participants on average scored around the midpoint of both dimensions. Yet, the cluster also included some individuals that seemed rather assimilated to minority-group cultures.

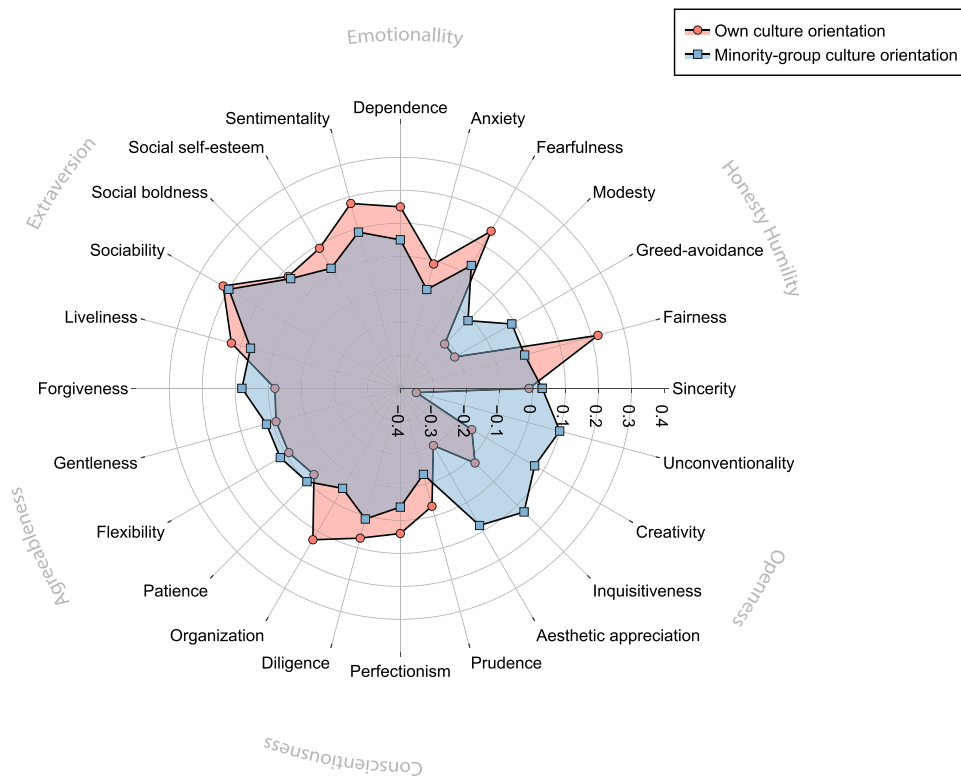


Fig. 1. The zero-order correlations between own culture maintenance and minority culture adoption with the personality facets are displayed. For significance tests, please see Table 2.

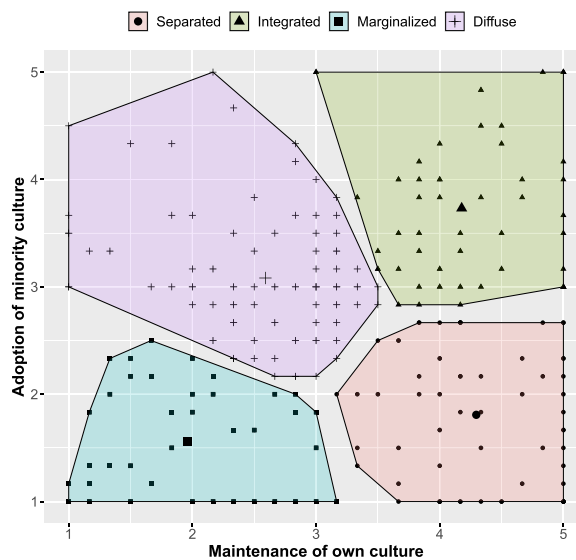


Fig. 2. The four-cluster solution is displayed. Data points represent participants. Large symbols indicate the mean value for the respective cluster.

In terms of traits, participants in the diffuse cluster showed less conscientiousness than in the separated cluster (see Table 3). Moreover, participants in the diffuse cluster showed higher openness than participants in the separated and integrated clusters.

In terms of honesty-humility facets, participants in the marginalized and diffuse clusters showed lower fairness than those in the separated cluster. Next, diffuse participants showed more greed-avoidance than those in the separated and integrated clusters. Marginalized participants showed more modesty than integrated participants.

Only one difference each reached significance for the emotionality and extraversion facets: marginalized individuals showed less

Table 3
Personality traits and facets for the different acculturation clusters.

	Majority-Group Acculturation Clusters								F	p	η_p^2
	Marginalized		Diffuse		Separated		Integrated				
	M	SD	M	SD	M	SD	M	SD			
Personality Trait											
Honesty-Humility	3.57	.72	3.53	.70	3.65	.69	3.41	.79	1.15	.330	.01
Emotionality	2.99	.79	3.18	.75	3.27	.87	3.14	.71	1.54	.204	.02
Extraversion	3.14	.80	3.12	.78	3.30	.76	3.42	.84	2.34	.073	.02
Agreeableness	3.29	.76	3.26	.60	3.37	.78	3.34	.61	.35	.788	.00
Conscientiousness	3.90	.55	3.67^a	.65	4.05^a	.60	3.88	.65	5.45	.001	.05
Openness	3.72	.68	3.82^{b,c}	.72	3.50^b	.72	3.47^c	.83	4.01	.008	.04
Honesty-Humility Facets											
Sincerity	3.55	.99	3.45	.91	3.60	.93	3.43	.96	.53	.663	.01
Fairness	3.47^d	1.21	3.43^e	1.16	4.11^{d,e}	1.11	3.65	1.21	5.14	.002	.05
Greed-avoidance	3.20	1.10	3.34^{f,g}	.93	2.86^f	.99	2.80^g	1.04	5.30	.001	.05
Modesty	4.12^h	.68	3.98	.89	3.82	1.02	3.66^h	1.02	3.13	.026	.03
Emotionality Facets											
Fearfulness	3.07	.98	3.05	.94	3.19	1.16	3.27	.90	.83	.478	.01
Anxiety	3.38	1.17	3.50	1.04	3.53	1.25	3.20	1.13	1.11	.345	.01
Dependence	2.43	1.02	2.82	.98	2.78	1.02	2.76	1.02	2.30	.077	.02
Sentimentality	3.02ⁱ	.85	3.35	.96	3.51ⁱ	.99	3.23	.82	3.38	.019	.03
Extraversion Facets											
Social self-esteem	3.71	.91	3.53	.98	3.87	.81	3.82	.98	2.24	.083	.02
Social boldness	3.00	1.02	2.97	.93	2.95	1.01	3.15	.97	.57	.636	.01
Sociability	2.37^j	1.01	2.67	1.04	2.68	1.15	3.03^j	1.08	4.19	.006	.04
Liveliness	3.27	1.03	3.15	1.08	3.57	1.00	3.60	1.06	3.47	.017	.04
Agreeableness Facets											
Forgiveness	3.01	1.18	3.11	.93	3.10	1.16	3.19	1.10	.31	.816	.00
Gentleness	3.26	.92	3.17	.87	3.36	.95	3.28	.91	.67	.568	.01
Flexibility	3.22	.72	3.18	.71	3.23	.85	3.22	.82	.08	.970	.00
Patience	3.74	1.06	3.68	.93	3.83	.93	3.75	.86	.35	.790	.00
Conscientiousness Facets											
Organization	3.91	.76	3.73^k	.87	4.27^k	.79	4.03	.85	6.17	<.001	.06
Diligence	4.04	.70	3.88^l	.87	4.23^l	.75	4.07	.78	2.76	.043	.03
Perfectionism	3.76	.70	3.49	.72	3.76	.78	3.75	.73	3.07	.028	.03
Prudence	3.94	.70	3.67^m	.84	4.07^m	.73	3.78	.93	3.80	.011	.04
Openness Facets											
Aesthetic appreciation	3.71	1.11	3.86	1.07	3.61	1.21	3.39	1.16	2.35	.072	.02
Inquisitiveness	3.77	.96	3.91	.92	3.82	.97	3.89	.93	.38	.768	.00
Creativity	3.68	1.04	3.70	.93	3.49	1.01	3.41	.99	1.53	.206	.02
Unconventionality	3.73ⁿ	.71	3.84^{n,o}	.75	3.24^{n,o}	.85	3.32^p	1.03	10.02	<.001	.09

Note. Means that differ significantly compared to at least one other mean are presented in bold. All contrasts present p-values that are Holm-corrected for six comparisons.

^a $t(297) = -3.90, p < .001, d = .61.$

^b $t(297) = 2.70, p = .037, d = .45.$

^c $t(297) = 2.89, p = .025, d = .45.$

^d $t(297) = -3.17, p = .009, d = .55.$

^e $t(297) = -3.70, p = .002, d = .60.$

^f $t(297) = 3.02, p = .014, d = .50.$

^g $t(297) = 3.37, p = .005, d = .55.$

^h $t(297) = 2.84, p = .029, d = .53.$

ⁱ $t(297) = -3.04, p = .015, d = .53.$

^j $t(297) = -3.55, p = .003, d = .63.$

^k $t(297) = -4.21, p < .001, d = .65.$

^l $t(297) = -2.83, p = .030, d = .43.$

^m $t(297) = -3.15, p = .011, d = .51.$

ⁿ $t(297) = 3.46, p = .003, d = .57.$

^o $t(297) = 4.63, p < .001, d = .75.$

^p $t(297) = 3.92, p < .001, d = .58.$

sentimentality than separated individuals, and less sociability than integrated individuals. No differences were observed for the agreeableness facets, mirroring the lack of findings in the variable-centered analyses (compare Tables 2 and 3).

In terms of conscientiousness facets, participants in the diffuse cluster scored lower than separated individuals on organization, diligence and prudence. Finally, in terms of openness facets, participants in the separated cluster showed less unconventionality than participants in the marginalized and diffuse clusters. Moreover, participants in the integrated cluster showed less unconventionality than participants in the diffuse cluster.

Discussion

Although acculturation commonly is defined as a process of mutual accommodation (Berry, 2008), very little is known about the acculturation of majority-group members. The present research aimed to address this gap, focusing on the role of personality. Results from the variable-centered analyses showed that majority-group members in the U.S. who scored high on openness reported more adoption of minority-group cultures, which is in line with some research among minority-group members. For instance, Ryder et al. (2000) showed that minority-group members' adoption of the mainstream culture was related to more openness (also see Ramdhoney & Bhowon, 2012; Zhang, Mandl, & Wang, 2010). Hence, openness may generally predict more adoption of other cultures than one's own, regardless of whether one belongs to the societal majority- or a minority-group.

On first sight, some of our findings were less consistent with previous research among minority groups. Conscientiousness (including its prudence facet) was negatively related to majority-group members' adoption of minority cultures, which contrasts with Ryder et al. (2000) who found that conscientiousness was positively related to minority-group members' mainstream culture adoption. Yet, this apparent difference may be explained by assimilative norms in the U.S. encouraging minority-group members to adopt the mainstream culture, while arguably discouraging majority-group members from adopting minority cultures (Bourhis et al., 1997; Ward, Fox, Wilson, Stuart, & Kus, 2010). This interpretation would also be in line with research finding a robust correlation between conscientiousness and conformity (Olver & Mooradian, 2003). As such, to follow prevailing norms, conscientious minority-group members may adapt to the mainstream culture more, whereas conscientious majority-group members may adopt minority-group cultures less.

Extraversion and emotionality predicted more and openness less maintenance of majority-group members' own culture. Extraversion has been positively associated with maintenance of one's own culture in some work with minority-group members (e.g., Zhang et al., 2010). Also, for majority-group members, maintaining one's heritage culture seems to be facilitated by a personality that motivates people to actively seek contact with others. Yet, why then did extraversion not predict more adoption of minority-group cultures as well? We can only speculate that the relationship between extraversion and the adoption of cultures from other ethnic groups may be moderated by prejudice, such that this relationship may indeed be positive among individuals with favorable attitudes toward other groups.

The fact that emotionality was related to more own culture maintenance suggests that majority-group members, at least in the U.S., maintain their heritage culture in parts to reduce anxiety and ensure a feeling of belonging. This interpretation echoes work showing that White Americans often feel excluded by multiculturalism (Plaut et al., 2011).

When using a bottom-up cluster approach, four acculturation strategies could be identified similar to Haugen and Kunst (2017): separation, marginalization, integration and diffuse. Interestingly, the diffuse cluster showed the most distinct personality profile, with individuals being more open and less conscientious than participants in one or several of the other clusters. It may be that this diffuse pattern reflects some type of blended or hybrid identity, in which individuals combine aspects of both cultural spheres into something new. Future research should assess this with appropriate measures (e.g., Benet-Martinez & Haritatos, 2005; Ward, Ng Tseung-Wong, Szabo, Qumsey, & Bhowon, 2018). It should also be noted that the diffuse cluster was relatively broad and included a few individuals who could be best described as assimilated to minority-group cultures. Arguably, these individuals may be the most unconventional, but larger datasets are needed to reliably capture this acculturation strategy and its antecedents.

Different to previous work, a marginalization cluster was found, in which individuals on average were less conventional, sentimental and sociable than people in some of the other clusters. On first sight, one may think that these individuals actively chose a strategy of individualism rather than experiencing cultural alienation (Bourhis et al., 1997; Kunst & Sam, 2013). At the same time, it is important to pay attention to the cultural context of investigation when interpreting these results. In the U.S., many majority-group members favor a colorblind approach to diversity, in which the importance of culture is generally downplayed (Dovidio, Gaertner, Ufkes, Saguy, & Pearson, 2016). Hence, the marginalization cluster may reflect this particular stance to cultural diversity.

Given the lack of previous research into majority-group members' acculturation, our work was mostly exploratory. As such, the present findings need to be validated in future confirmatory research. Moreover, although Berry's (1997) model has been validated among majority-group members (e.g., Haugen & Kunst, 2017; Lefringhausen & Marshall, 2016), we agree that the theoretical framework for majority-group members is still underdeveloped. Our research may, thus, provide some basis for future theoretical development.

One may argue that, whereas personality traits are antecedents of acculturation, they likely do not influence it directly but through specific acculturation processes. One such process may be the way people respond to cultural differences. As such, personality traits may lead to different types of intercultural sensitivity, which in turn make people acculturate in different ways. Here, Bennett (1986)'s developmental model of intercultural sensitivity (DMIS) may offer fruitful insights (also see Bennett, 1993; Bennett & Bennett, 2004). This framework ranks intercultural sensitivity on a scale from ethnocentric to ethnorelativist. Applied to our results, it is possible that personality traits such as openness lead majority-group members to more ethnorelativist stages of intercultural sensitivity, which in turn facilitate the adoption of other groups' culture. By contrast, traits such as emotionality may lead to an ethnocentric defensive style that, in turn, makes majority-group members focus primarily on their own culture. Such a finding would be in line with work by Lefringhausen and Marshall (2016) who demonstrated that immigrant culture adoption correlates positively with ethnorelativism and negatively with ethnocentrism.

It should also be noted that some of the DMIS stages can be seen as closely related to the acculturation orientations we identified. For instance, the separation orientation we observed may be driven by a motivation to defend oneself and one's group against cultural differences, whereas integration may be nurtured by a tendency to accept and adapt to cultural differences or possibly even by the development of an ethnorelativist identity. However, frameworks such as the DMIS may arguably offer the most important insights in

terms of the marginalization and diffuse clusters. Does marginalization reflect a tendency to minimize cultural differences or rather reflect a more ethno relativist style such as “constructive marginality” (Bennett, 1986)? Where can the diffuse cluster be located on a spectrum from ethnocentrism to ethno relativism? These are questions that longitudinal research may investigate, for instance, by measuring intercultural sensitivity as well as majority acculturation orientations and strategies. At the same time, given the infancy of research on majority-group members’ acculturation, qualitative and mixed-methods research (see, e.g., Haugen & Kunst, 2017) may offer important insights that are lost by solely taking a quantitative approach.

Notably, our data was correlational and hence cannot speak to causality. Yet, given that about half of the variance in personality traits is heritable (Vukasović & Bratko, 2015), they likely – at least to some extent – causally influence the acculturation of majority-group members. However, a gene-environment interaction perspective would suggest that the effects of personality traits on acculturation orientations of majority-group members likely also depend on people’s upbringing and place of living. Future research could test such interactions statistically, for instance focusing on moderating contextual factors such as relational mobility (Thomson et al., 2018) or tightness/looseness (Gelfand et al., 2011).

Although we presented both bivariate correlations and regression analyses in the variable-centered approach, and controlled for multiple comparisons for the person-centered approach, the high number of tests statistically increases the chance of false positives. This highlights the need to replicate our findings to test their robustness. Moreover, our study was based on a sample drawn from an online panel that is more representative than convenient samples but still not fully representative (Buhrmester, Kwang, & Gosling, 2011), and was collected in a settler society. Hence, future research is needed to replicate and extend our findings in different cultures and contexts.

Future research could further investigate how personality relates to majority-members’ acculturation by more clearly distinguishing between attitudes and self-reported behavior. This may also simplify the wording of measurement items. Finally, in the present research, we assessed acculturation in terms of the culture of minority-groups more broadly. As acculturation expectations are known to vary for valued and devalued groups (Kunst & Sam, 2014; Safdar, Dupuis, Lewis, El-Geledi, & Bourhis, 2008), it is possible that the adoption of their cultures varies accordingly. As the results of this first investigation suggests, a personality perspective may help elucidate those differences.

References

- Ashton, M. C., & Lee, K. (2009). The HEXACO–60: A short measure of the major dimensions of personality. *Journal of Personality Assessment*, 91(4), 340–345. <https://doi.org/10.1080/00223890902935878>.
- Benet-Martinez, V., & Haritatos, J. (2005). Bicultural identity integration (BII): Components and psychosocial antecedents. *Journal of Personality*, 73(4), 1015–1049. <https://doi.org/10.1111/j.1467-6494.2005.00337.x>.
- Bennett, M. J. (1986). A developmental approach to training for intercultural sensitivity. *International Journal of Intercultural Relations*, 10(2), 179–196. [https://doi.org/10.1016/0147-1767\(86\)90005-2](https://doi.org/10.1016/0147-1767(86)90005-2).
- Bennett, M. J. (1993). Towards ethno relativism: A developmental model of intercultural sensitivity. *Education for the Intercultural Experience*, 2, 21–71.
- Bennett, J. M., & Bennett, M. J. (2004). Developing intercultural sensitivity. In D. Landis, J. M. Bennett, & M. J. Bennett (Eds.), *Handbook of intercultural training* (Vol. 3, pp. 147–165). Sage Publications.
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology*, 46(1), 5–34. <https://doi.org/10.1111/j.1464-0597.1997.tb01087.x>.
- Berry, J. W. (2008). Globalisation and acculturation. *International Journal of Intercultural Relations*, 32(4), 328–336. <https://doi.org/10.1016/j.ijintrel.2008.04.001>.
- Bourhis, R. Y., Moïse, L. C., Perreault, S., & Senecal, S. (1997). Towards an interactive acculturation model: A social psychological approach. *International Journal of Psychology*, 32(6), 369–386. <https://doi.org/10.1080/002075997400629>.
- Brandt, M. J., Chambers, J. R., Crawford, J. T., Wetherell, G., & Reyna, C. (2015). Bounded openness: The effect of openness to experience on intolerance is moderated by target group conventionality. *Journal of Personality and Social Psychology*, 109(3), 549–568. <https://doi.org/10.1037/pspp0000055>.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon’s Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6(1), 3–5. <https://doi.org/10.1177/1745691610393980>.
- Charrad, M., Ghazzali, N., Boiteau, V., & Niknafs, A. (2014). NbClust: An R package for determining the relevant number of clusters in a data set. *Journal of Statistical Software*, 61(6), 1–36. <http://www.jstatsoft.org/v61/i06/>.
- Chen, S. X., Lam, B. C., Hui, B. P., Ng, J. C., Mak, W. W., Guan, Y., et al. (2016). Conceptualizing psychological processes in response to globalization: Components, antecedents, and consequences of global orientations. *Journal of Social and Personality Psychology*, 110(2), 302–331. <https://doi.org/10.1037/a0039647>.
- Dovidio, J. F., Gaertner, S. L., Ufkes, E. G., Saguy, T., & Pearson, A. R. (2016). Included but invisible? Subtle bias, common identity, and the darker side of “we”. *Social Issues and Policy Review*, 10(1), 6–46. <https://doi.org/10.1111/sipr.12017>.
- Gelfand, M. J., Raver, J. L., Nishii, L., Leslie, L. M., Lun, J., Lim, B. C., et al. (2011). Differences between tight and loose cultures: A 33-nation study. *Science*, 332(6033), 1100–1104. <https://doi.org/10.1126/science.1197754>.
- Grigoryev, D., & van de Vijver, F. (2018). Acculturation expectation profiles of Russian majority group members and their intergroup attitudes. *International Journal of Intercultural Relations*, 64, 90–99. <https://doi.org/10.1016/j.ijintrel.2018.03.001>.
- Haugen, I., & Kunst, J. R. (2017). A two-way process? A qualitative and quantitative investigation of majority members’ acculturation. *International Journal of Intercultural Relations*, 60, 67–82. <https://doi.org/10.1016/j.ijintrel.2017.07.004>.
- Horenczyk, G., Jasinskaja-Lahti, I., Sam, D. L., & Vedder, P. (2013). Mutuality in acculturation: Toward an integration. *Zeitschrift für Psychologie*, 221(4), 205–213. <https://doi.org/10.1027/2151-2604/a000150>.
- IOM. (2019). *World migration report 2018*. https://www.iom.int/sites/default/files/country/docs/china/r5_world_migration_report_2018_en.pdf.
- Kassambara, A., & Mundt, F. (2019). *Factoextra: Extract and visualize the results of multivariate data analyses*. <https://CRAN.R-project.org/package=factoextra>.
- Kosic, A. (2006). Personality and individual factors in acculturation. In D. L. Sam, & J. W. Berry (Eds.), *The Cambridge handbook of acculturation psychology* (pp. 113–128). Cambridge University Press.
- Kunst, J. R., & Sam, D. L. (2013). Expanding the margins of identity: A critique of marginalization in a globalized world. *International Perspectives in Psychology: Research, Practice, Consultation*, 2(4), 225–241. <https://doi.org/10.1037/ipp0000008>.
- Kunst, J. R., & Sam, D. L. (2014). “It’s on time that they assimilate” – Differential acculturation expectations towards first and second generation immigrants. *International Journal of Intercultural Relations*, 39, 188–195. <https://doi.org/10.1016/j.ijintrel.2013.10.007>.
- Kunst, J. R., Thomsen, L., & Dovidio, J. F. (2019). Divided loyalties: Perceptions of disloyalty underpin bias toward dually-identified minority-group members. *Journal of Social and Personality Psychology*, 117(4), 807–838. <https://doi.org/10.1037/pspi0000168>.
- Lee, K., & Ashton, M. C. (2004). Psychometric properties of the HEXACO personality inventory. *Multivariate Behavioral Research*, 39(2), 329–358. https://doi.org/10.1207/s15327906mbr3902_8.

- Lefringhausen, K., & Marshall, T. C. (2016). Locals' bidimensional acculturation model: Validation and associations with psychological and sociocultural adjustment outcomes. *Cross-Cultural Research*, 50(4), 356–392. <https://doi.org/10.1177/1069397116659048>.
- Lefringhausen, K., Ferenczi, N., & Marshall, T. C. (2019). Self-protection and growth as the motivational force behind majority group members' cultural adaptation and discrimination: A parallel mediation model via intergroup contact and threat. *International Journal of Psychology*. <https://doi.org/10.1002/ijop.12620>. Online advance article.
- Olver, J. M., & Mooradian, T. A. (2003). Personality traits and personal values: A conceptual and empirical integration. *Personality and Individual Differences*, 35(1), 109–125. [https://doi.org/10.1016/S0191-8869\(02\)00145-9](https://doi.org/10.1016/S0191-8869(02)00145-9).
- Piontkowski, U., Rohmann, A., & Florack, A. (2002). Concordance of acculturation attitudes and perceived threat. *Group Processes & Intergroup Relations*, 5(3), 221–232. <https://doi.org/10.1177/1368430202005003003>.
- Plaut, V. C., Garnett, F. G., Buffardi, L. E., & Sanchez-Burks, J. (2011). “What about me?” Perceptions of exclusion and Whites' reactions to multiculturalism. *Journal of Personality and Social Psychology*, 101(2), 337–353. <https://doi.org/10.1037/a0022832>.
- Ramdhoney, K., & Bhowon, U. (2012). Acculturation strategies, personality traits and acculturation stress: A study of first generation immigrants from transnational marital context. *Psychology and Developing Societies*, 24(2), 125–143. <https://doi.org/10.1177/097133361202400202>.
- Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of Personality and Social Psychology*, 79(1), 49–65. <https://doi.org/10.1037/0022-3514.79.1.49>.
- Safdar, S., Dupuis, D. R., Lewis, R. J., El-Geledi, S., & Bourhis, R. Y. (2008). Social axioms and acculturation orientations of English Canadians toward British and Arab Muslim immigrants. *International Journal of Intercultural Relations*, 32(5), 415–426. <https://doi.org/10.1016/j.ijintrel.2008.03.002>.
- Schmitz, P., & Berry, J. W. (2009). Structure of acculturation attitudes and their relationships with personality and psychological adaptation: A study with immigrant and national samples in Germany. In F. Deutsch, M. Boehnke, U. Kuhnen, & K. Boehnke (Eds.), *Rendering borders obsolete* (pp. 52–70). IAACP.
- Thomson, R., Yuki, M., Talhelm, T., Schug, J., Kito, M., Ayanian, A. H., et al. (2018). Relational mobility predicts social behaviors in 39 countries and is tied to historical farming and threat. *Proceedings of the National Academy of Sciences*. <https://doi.org/10.1073/pnas.1713191115>.
- U.S. Census Bureau. (2012). *U.S. Census Bureau projections show a slower growing, older, more diverse nation a half century from now*. <https://www.census.gov/newsroom/releases/archives/population/cb12-243.html>.
- Van der Zee, K., Benet-Martínez, V., & Van Oudenhoven, J. P. (2016). Personality and acculturation. In D. L. Sam, & J. W. Berry (Eds.), *The Cambridge handbook of acculturation psychology* (2 ed., pp. 50–70). Cambridge University Press.
- Vukasović, T., & Bratko, D. (2015). Heritability of personality: A meta-analysis of behavior genetic studies. *Psychological Bulletin*, 141(4), 769–785. <https://doi.org/10.1037/bul0000017>.
- Ward, C., Fox, S., Wilson, J., Stuart, J., & Kus, L. (2010). Contextual influences on acculturation processes: The roles of family, community and society. *Psychological Studies*, 55(1), 26–34. <https://doi.org/10.1007/s12646-010-0003-8>.
- Ward, C., Ng Tseung-Wong, C., Szabo, A., Qumseya, T., & Bhowon, U. (2018). Hybrid and alternating identity styles as strategies for managing multicultural identities. *Journal of Cross-Cultural Psychology*, 49(9), 1402–1439. <https://doi.org/10.1177/0022022118782641>.
- Zhang, J., Mandl, H., & Wang, E. (2010). Personality, acculturation, and psychosocial adjustment of Chinese international students in Germany. *Psychological Reports*, 107(2), 511–525. <https://doi.org/10.2466/07.09.11.17.Pr0.107.5.511-525>.