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A two-way process? A qualitative and quantitative investigation of majority members' acculturation



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ABSTRACT

Acculturation refers to changes that result from intercultural contact. Although it is commonly defined as a two-way process with changes occurring among both minority members and majority members, surprisingly little research has focused on the acculturation of majority members. Using a combination of qualitative and quantitative data, the present study attempted to fill this gap by exploring how and how much majority members change because of exposure to immigrant cultures. In the first part, using an open-response format, majority members reported positive as well as negative cultural change across a broad range of life domains. Most changes were reported in the private as compared to public sphere, and in terms of behaviours rather than values. Second, based on their responses to quantitative acculturation scales, the majority-group participants could meaningfully be clustered into three acculturation strategies commonly used to describe minority-group members' acculturation, namely a separation, integration and undifferentiated acculturation cluster. No evidence for an assimilation cluster was found. Separated majority members (i.e., who maintain their majority culture but do not adopt immigrant cultures) reported significantly more identity threat and perceived ethnic discrimination, but also higher self-esteem. Interestingly, integrated majority members (i.e., who both maintain their majority culture and adopt immigrant cultures) were three times less likely to live in multi-ethnic neighbourhoods as compared to separated participants. The results of this study offer important insights into majority members' acculturation experiences and their psychological importance. Implications for culturally plural societies and future research are discussed.

Acculturation refers to changes in cultural patterns that result from first-hand contact between different ethno-cultural groups over time (Berry, 1997; Redfeld, Linton, & Herskovits, 1936). While it classically has been defined as a two-way process where changes occur in both groups involved in the contact (and here typically between majority members and immigrants; Berry, 2006b, 2008), research on majority members has so far mostly been limited to their expectations of how immigrants should acculturate (Berry, 2006b; Lefringhausen & Marshall, 2016). Indeed, Dinh and Bond (2008) even note that the lack of research on majority members' acculturation has led to a common misconception that only minority members go through cultural change. Against this background, the present study aimed to provide insights into the process of acculturation among majority members using both qualitative and quantitative data. Central questions that it sought to answer were: Do majority members adopt aspects of immigrant cultures? In which life domains are they influenced? And, does the acculturation strategy of majority members relate to their psychological wellbeing?

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The other (missing) side of the picture: research on majority members' acculturation

In his four-fold model, [Berry \(1997\)](#) proposed that individuals in the process of acculturation vary in how they respond to two issues, namely 1) whether they wish to maintain their original culture and identity, and 2) whether they want to establish and maintain relationships with other cultural groups. The answers to the two questions result in the four well-known acculturation strategies of integration, separation, assimilation and marginalization. When individuals prefer to maintain their culture but also seek contact with other cultures, they choose the *integration strategy*. Individuals preferring the *separation strategy* maintain their culture but want little contact with other cultures. *Assimilated* individuals give up their own group's culture while engaging in contact with other cultures. Finally, *marginalized* individuals see neither value in maintaining their culture nor in engaging in alternative cultures (but see [Kunst & Sam, 2013](#); see also [Debrosse, de la Sablonnière, & Rossignac-Milon, 2015](#)).

Of the four strategies, integration is preferred by most minority members ([Jasinskaja-Lahti, Liebkind, Horenczyk, & Schmitz, 2003](#); [Van Oudenhoven, Prins, & Buunk, 1998](#); [Zagefka & Brown, 2002](#)), and also relates to greater psychological wellbeing within this group ([Nguyen & Benet-Martínez, 2013](#)). However, acculturation strategies are also domain specific and vary with context ([Celenk & van de Vijver, 2011](#); [Navas et al., 2005](#); [Schwartz, Unger, Zamboanga, & Szapocznik, 2010](#)). For instance, minority members can use different acculturation strategies when it comes to behaviours and values ([Miller et al., 2013](#)). They also often report greater adoption of majority culture in public domains such as the workplace, but greater maintenance of their heritage culture in their private lives ([Arends-Tóth & van de Vijver, 2004](#); [Birman, Simon, Chan, & Tran, 2014](#); [Rojas, Navas, Sayans-Jiménez, & Cuadrado, 2014](#)).

Although acculturation is frequently defined as a two-way process in which cultural groups influence each other ([Berry, 2008](#); [Montreuil & Bourhis, 2001](#)), research using Berry's framework to investigate how majority members adapt to immigrant cultures remains scarce ([Berry, 2006b](#); [Lefringhausen & Marshall, 2016](#)). Instead, efforts have mostly been aimed at mapping out their *acculturation expectations*. Acculturation expectations are preferences among majority members for how they would like minority members living in the shared society to acculturate ([Berry, 2006a, 2006b](#)). As a result, acculturation is still mostly framed as change on the part of minority members within this research tradition.

Majority members have mostly been the focus of a separate tradition studying *intergroup relations* ([Horenczyk et al., 2013](#)). This tradition investigates phenomena such as stereotypes, prejudice and discrimination. One attempt to bridge the gap between the two traditions is the studies of multiculturalism ([Berry, 2006b](#)): An ideology that sees cultural diversity as positive for society and individuals. Recent studies have included measures of both multiculturalism ideology and acculturation expectations, making the strands of research come together (for example [Inguglia, Musso, & Karwowski, 2015](#); [Lebedeva, Tatarko, & Berry, 2016](#)). However, what these studies do not fully capture is the extent and nature of cultural change in majority members.

Indeed, to date, only one single study has explicitly focused on acculturative changes among majority members: [Lefringhausen and Marshall \(2016\)](#) adopted acculturation scales typically used to measure minority members' acculturation, to measure how majority members responded to Berry's two issues. Their results provided initial support that Berry's bi-dimensional acculturation model also may be used to understand the acculturation of majority members, but did not identify specific acculturation strategies among majority members. Against this background, the present research aimed to investigate the acculturation of majority members. Before proposing the specific research goals, we will now provide a brief overview over the Norwegian cultural context of the study.

Immigration and cultural diversity in Norway

Compared to many other European countries, Norway has less experience with receiving immigrants ([Brochmann & Kjeldstadli, 2008](#)). Historically, it has been a nation of mass emigration to North-America and it was not until 1967 that net immigration surpassed net emigration ([Brochmann & Kjeldstadli, 2008](#)). At the beginning of 2016, 16.3% of the total population were first or second generation immigrants ([Statistics Norway, 2016](#)). The participants in the present study lived in the capital of Oslo where the number of immigrants is substantially higher than this national average ([Statistics Norway, 2016](#)). In three of the city's eastern suburbs, the proportion of immigrants is higher than 50%, but neighbourhoods are considered to be multi-ethnic, rather than enclaves of particular ethnic groups ([Søholt & Lynnebakke, 2015](#)).

Historians place the governmental policies in Norway half-way between assimilation and integration ([Brochmann & Kjeldstadli, 2008](#)). This is supported by the Multiculturalism Policy Index, which indicates that the country has full or partial policies encouraging multiculturalism only in some areas ([Multiculturalism Policy Index, 2016](#)). The attitudes of the majority population towards multiculturalism are mixed, but have become increasingly positive towards immigrants ([Blom, 2015](#)). In a recent survey of 1202 majority members, 44% agreed that immigrants should strive to become as similar to Norwegians as possible, whereas 40% disagreed ([Blom, 2015](#)). In another survey of 1290 participants, six out of ten people agreed that immigrants can fit in with Norwegian society while keeping the traditions of their heritage culture ([Directorate of Integration and Diversity, 2014](#)).

The aims of the present study

Studying acculturation from the viewpoint of majority members is an entirely new field and we still do not know much about their experiences. The present study therefore sought to give a first description of majority members' acculturation, as well as attempt to measure the extent of cultural change. In the descriptive part, we sought to map out life domains in which majority members notice changes because of the presence of other cultures in a shared society. Are these changes domain specific so that they are different in the value and behavioural domain, or the public and private domain? In examining the data, we also aimed to answer the question

whether this influence was perceived as positive or negative.

Next, we wanted to explore whether majority members systematically vary in how they relate to minority cultures and their own group's culture. Do strategies similar to integration, separation and assimilation also emerge among majority members?

Here, we also explored whether majority members with different acculturation strategies differ in terms of constructs that are well known to vary depending on minority members' acculturation strategies. These constructs were life satisfaction and self-esteem, perceived discrimination, identity threat and social conformity.

First, we investigated the relationship between majority members' acculturation and their well-being. A few recent studies have found a relationship between acculturation expectations and wellbeing among majority members (For example Hui, Chen, Leung, & Berry, 2015; Inguglia et al., 2015; Lebedeva et al., 2016). Even more relevant to the present study, Lefringhausen and Marshall (2016) found that maintenance of majority culture was associated with greater life satisfaction, while adoption of minority cultures was associated with less acculturative stress among majority members. Extending this research, the present study specifically tested which acculturation strategy (i.e., combination of own culture maintenance and minority culture adoption) would be associated with the most life satisfaction and the highest self-esteem.

Second, we tested whether majority members who chose different acculturation strategies would report different level of discrimination. Perceived discrimination is the subjective experience of being treated unfairly because of one's group membership (Flores et al., 2008) and tends to relate consistently to less successful psychological adaptation (Schmitt, Branscombe, Postmes, Garcia, & Hinshaw, 2014), greater maintenance of heritage culture and less involvement in the majority culture among minority members (Berry, Phinney, Sam, & Vedder, 2006; Ramos, Cassidy, Reicher, & Haslam, 2016; but see also Berry & Sabatier, 2010; Juang & Cookston, 2009). However, in acculturation research, little focus has been directed towards perceptions of ethnic discrimination among majority members, despite reports supporting their existence (Alanya, Swyngedouw, Vandezande, & Phalet, 2015). The present study therefore aimed at testing whether perceived ethnic discrimination would lead majority members to distance themselves from minority group cultures by choosing a separation strategy.

Third, we investigated whether majority members' acculturation profiles are associated with different levels of perceived threat. Feeling that one's cultural identity is threatened often predicts less involvement in the culture that is seen as the source of the threat (Phalet, Baysu, & Van Acker, 2015; Shelton, Richeson, & Vorauer, 2006). When changes in demographics occur as a result of immigration, the cultural identity of the group that was already living in the region may be challenged by the presence of opposing cultural values (Finley, 2010; Horenczyk et al., 2013). The present study therefore tested whether identity threat would make majority members more likely to separate.

Fourth, we tested the role of conformity for majority members' acculturation. Social conformity represents the tendency to act in accordance to social expectations (Kosic, Mannetti, & Sam, 2006; Lennox & Wolfe, 1984; Snyder & Lanzetta, 1974). Minority members scoring high on conformity tend to place greater value on maintaining their heritage culture (Güngör, 2007; Kosic et al., 2006) and are more negatively affected when this is not possible (Kosic et al., 2006; Roccas, Horenczyk, & Schwartz, 2000). Hence, in the present study we aimed to see if social conformity also is related to maintenance of majority heritage culture among majority members. Finally, we investigated the role of various socio-demographic factors such as intercultural contact and neighbourhood demographics for majority members' acculturation.

To sum up, the aims of the study were to answer the following questions: In what areas of life are majority members influenced by minority cultures? Can acculturation strategies similar to those found among minority members be identified among majority members? If so, how do such strategies relate to psychological variables such as life satisfaction, self-esteem, perceived discrimination, identity threat and social conformity?

Method

Participants

Participants ($N = 185$) were recruited through the University of Oslo's student research pool and through social media ($M_{\text{age}} = 32.00$, $SD_{\text{age}} = 13.27$; females: 71.4%). All participants had two ethnic Norwegian parents and, thus, were majority members. Approximately half of the participants (53%) lived in the culturally diverse eastern parts of Oslo. The study was approved by the Internal Review Board of the Department of Psychology at the University of Oslo.

Procedure

Data was collected using an internet survey that assessed both qualitative and quantitative responses. The qualitative data consisted of short phrases in response to an open-ended question: "Please write in bullet points which areas of your life have been influenced by the cultures of immigrants in Norway." The quantitative data consisted of scores on interval scales. The objective of collecting qualitative as well as quantitative data was to be able to answer both *how* and *how much* majority members adapt to the cultures of immigrants.

In the first part of the study, the qualitative responses were quantified as category frequencies and further classified in light of current theoretical frameworks. In the second part of the study, the scores on the interval scales were analysed to find out how much majority members adopted immigrant cultures relative to the culture of their own group, to identify clusters of participants based on their acculturation attitudes, and to test how these clusters related to a range of psychological variables. Last, we combined the qualitative and quantitative data, analysing whether the acculturation clusters (created based on the quantitative data) reported different types of cultural change (based on the qualitative data). The methods of the study may be described as primarily quantitative, but with a mixed component where qualitative data was quantified (Sandelowski, 2000).

Table 1
Categories and interrater reliability.

| Category | Adjustments to the Acculturation Index | Domains | Frequency | Cohen's Kappa |
|-----------------------------------|---|-------------------|-----------|---------------|
| School | Emergent category | Public | 60.5 | 0.938 |
| Food | Original category | Behaviour/Private | 57.0 | 1.000 |
| Work | Original category (Employment activities) | Public | 43.5 | 0.954 |
| Public spaces | Emergent category | Public | 31.0 | 0.943 |
| Attitudes – no valence | Based on original (Perceptions of out-group) | Values | 28.5 | 0.874 |
| Cultural activity | Original category | Behaviour/Private | 28.0 | 0.931 |
| Friends | Original category | Private | 26.0 | 1.000 |
| Neighbourhood | Original category (Accommodation/residence) | Private | 23.0 | 1.000 |
| Tolerance | Based on original (Perceptions of out-group) | Values/Positive | 22.5 | 0.900 |
| Worry | Emergent category | Negative | 17.0 | 0.919 |
| Hobbies | Original category | Private | 16.0 | 0.928 |
| Politics | Original category (Political ideology) | Public | 14.5 | 0.881 |
| Contact through children | Emergent category | Private | 13.5 | 0.862 |
| Language | Original category | Behaviour/Public | 13.5 | 0.959 |
| Daily life | Emergent category | | 12.5 | 0.957 |
| Diversity | Emergent category | Positive | 11.5 | 0.942 |
| Knowledge | Original category | Positive | 11.0 | 1.000 |
| Media | Emergent category | Public | 11.0 | 1.000 |
| Family | Original category | Private | 10.5 | 0.889 |
| Childhood | Emergent category | Private | 10.0 | 0.884 |
| Social life | Emergent category | Private | 9.5 | 0.945 |
| Lower standard of living | Based on original category (Material comfort) | Negative | 9.0 | 1.000 |
| Customs | Original category | Behaviour/Private | 8.5 | 0.793 |
| Dating | Emergent category | Private | 7.5 | 1.000 |
| Travel | Emergent category | Behaviour/Private | 6.0 | 1.000 |
| Racism | Emergent category | Negative | 4.0 | 1.000 |
| Religion | Original category | Values/Private | 4.0 | 1.000 |
| Prejudice | Based on original (Perceptions of out-group) | Values/Negative | 3.0 | 1.000 |
| Crime | Emergent category | Negative | 3.0 | 1.000 |
| Communication barriers | Emergent category | Negative | 3.0 | 1.000 |
| Clothes | Original category | Behaviour/Private | 3.0 | 1.000 |
| Feeling safe | Emergent category | Positive | 2.5 | 0.797 |
| Critical view of own culture | Based on original (Perceptions of co-nationals) | Negative | 2.0 | 1.000 |
| Gangs | Emergent category | Negative | 2.0 | 1.000 |
| None | Emergent category | | 7.0 | 0.852 |
| Other | Emergent category | | 15.0 | 0.847 |
| Total number of phrases | | | 550 | |
| Average Cohen's Kappa coefficient | | | | 0.944 |

Note: The frequency is the number of phrases coded in each category. Two raters coded all phrases and the frequency listed is the average between the two. Cohens' Kappa values reflect degree of agreement between the raters.

The qualitative data

In total, participants listed 550 phrases describing influence from immigrant cultures. Examples of the phrases are given in Appendix A in the supplementary online material. We chose to quantify the qualitative phrases by coding them into categories guided by content analysis (Stemler, 2001). The quantitative content analysis was both a priori and emergent. While we used most categories from the Acculturation Index (Ward & Rana-Deuba, 1999), which has been used to measure acculturation in cultural groups across the world (Celenk & van de Vijver, 2011), we also added categories extending this index based on the participants' responses. Moreover, to make the categories of the Acculturation Index more suitable for a sample of majority members, categories that did not occur in the dataset were dropped (e.g., 'self-identity' and 'pace of life'). The final categories are listed in Table 1, which also shows which categories were added to the original index. Two coders coded each statement. To judge interrater reliability, Cohens' Kappa was calculated for each category. The average Kappa coefficient, $K = 0.94$, suggested high interrater reliability.

The quantitative data

In the second part of the survey, six interval scales were used to quantitatively capture attitudes towards maintenance of majority culture and adoption of immigrant cultures,¹ perceived ethnic discrimination, identity threat, social conformity, self-esteem and life satisfaction. Measures of contact with immigrants were also included. Unless stated otherwise, responses were scored on five-point Likert scales ranging from 1 (*totally disagree*) to 5 (*totally agree*).

¹ Acculturation behaviour was also assessed, but the measure yielded an uninterpretable factor structure and was therefore left out of the analysis. Results are available on request from the first author.

Table 2
Acculturation scale.

| Item | <i>M</i> | <i>SD</i> | <i>SE</i> | <i>r</i> | Paired <i>t</i> -test | Cohen's <i>d</i> |
|--|----------|-----------|-----------|----------|-----------------------|------------------|
| How important is it for you to have contact with people with an immigrant background? | 3.23 | 1.26 | 0.09 | | | |
| How important is it for you to have contact with ethnic Norwegians? | 3.66 | 1.21 | 0.09 | −0.10 | 0.002 | 1.10 |
| How important is it for you to adopt the cultural way of life of immigrants? | 2.36 | 1.04 | 0.08 | | | |
| How important is it for you to maintain the Norwegian cultural way of life? | 3.74 | 1.04 | 0.08 | −0.17 | 0.001 | 1.47 |
| How big a part of your life is the culture of people with an immigrant background? | 2.28 | 1.04 | 0.08 | | | |
| How big a part of your life is Norwegian culture? | 3.73 | 0.94 | 0.07 | −0.10 | 0.001 | 1.54 |
| How important is it for you to live according to the values of immigrant cultures? | 2.07 | 1.00 | 0.07 | | | |
| How important is it for you to live according to Norwegian values? | 3.93 | 1.00 | 0.07 | 0.01 | 0.001 | 1.86 |
| How important is it for you to follow the traditions of immigrant cultures? | 1.91 | 0.97 | 0.07 | | | |
| How important is it for you to uphold the traditions of Norwegian culture? | 4.04 | 0.88 | 0.07 | −0.08 | 0.001 | 2.07 |
| How important is it for you to feel you belong in immigrant cultures? | 1.89 | 1.02 | 0.08 | | | |
| How important is it for you to feel you belong in Norwegian culture? | 3.89 | 1.04 | 0.08 | −0.16 | 0.001 | 2.04 |
| How important is it for you to adopt the view on gender roles found in immigrant cultures? | 1.82 | 1.05 | 0.08 | | | |
| How important is it for you to uphold the Norwegian view of gender roles? | 4.30 | 1.06 | 0.08 | 0.02 | 0.001 | 2.57 |

Note: All items in the subscale for maintenance of majority culture had significant higher mean scores than their counter parts in the subscale for adoption of immigrant cultures, $p \leq 0.002$. Bootstrapping was based on 1000 random re-samples.

Acculturation

There has been some variation in how acculturation has been operationalized in previous research (Berry & Sabatier, 2011; Matera, Stefanile, & Brown, 2012; Ward & Kus, 2012). In Berry's original model, the first issue was *maintenance of one's own culture* and the second issue was a *wish to maintain relationships with other groups* (Berry, 1992, 1997). This led some later researchers to define the second dimension as social contact with members of other cultural groups. However, Bourhis et al. (1997) later pointed out that the two issues would correspond better if the second dimension was defined as adoption of other cultures and this definition has also been adopted by Berry (Berry et al., 2006). Accordingly, we followed this conceptualization in the present study.

Moreover, it has been discussed whether acculturation strategies should be directly assessed using the so-called four-statement method or by separately assessing involvement in each cultural sphere and then using techniques such as cluster-analyses to group individuals (Arends-Tóth & van de Vijver, 2006; Rudmin, 2009). As the latter, two-statement measurement method seems to be most reliable (Arends-Tóth & van de Vijver, 2007), it was chosen for the present research. Specifically, in the present study, acculturation was separately measured as how important it was for the participants to 1) maintain their majority culture and 2) how important it was to adopt aspects of immigrant cultures. Here, seven items each measured the two orientations within the domains values, traditions, way of live, identity, sense of belonging, gender roles and contact. Given the lack of scales measuring the acculturation of majority members, these items were based on scales used with minority participants (For example Berry et al., 2006), that were previously used in the Norwegian context (Kunst, Tajamal, Sam, & Ulleberg, 2012). Responses were scored on a Likert scale ranging from 1 (*not important at all*) to 5 (*very important*). An exploratory principal component analysis confirmed a clean two-factor structure of majority culture orientation ($\alpha = 0.86$) and immigrant culture orientation ($\alpha = 0.84$). All scale items are listed in Table 2.

Life satisfaction

The 5-item Satisfaction with Life scale developed by Diener, Emmons, Larsen, and Griffin (1985) was used. A sample item was "In most ways my life is close to my ideal." Cronbach's alpha showed satisfactory reliability, $\alpha = 0.87$.

Self-esteem

Participants' self-esteem was measured with ten items from the Rosenberg Self-Esteem Scale (Rosenberg, 1965). A sample item was "I feel that I am a person of worth, at least on an equal plane with others." The scale showed satisfactory reliability, $\alpha = 0.88$.

Perceived ethnic discrimination

To measure the extent to which majority members experienced ethnic discrimination, six items were adopted from the Discrimination Stress Scale (Flores et al., 2008). A sample item was "How often are you treated rudely or unfairly because of your ethnic Norwegian background?" Responses were scored on a 5-point scale anchored as 1 (*Never*) and 5 (*All of the time*). The scale showed satisfactory reliability, $\alpha = 0.92$.

Identity threat

Six items measured perceptions of threat to cultural identity. A sample item was "Sometimes, I am afraid of losing my Norwegian identity." The scale had satisfactory reliability, $\alpha = 0.90$.

Social conformity

The 9-item ASCI – Attention to Social Comparison Information (Lennox & Wolfe, 1984; Snyder & Lanzetta, 1974) – was used to measure conformity. An example item is "It's important to me to fit in to the group I'm with." After deleting two items with low inter-item correlations, the Cronbach's alpha of the scale was satisfactory, $\alpha = 0.84$.

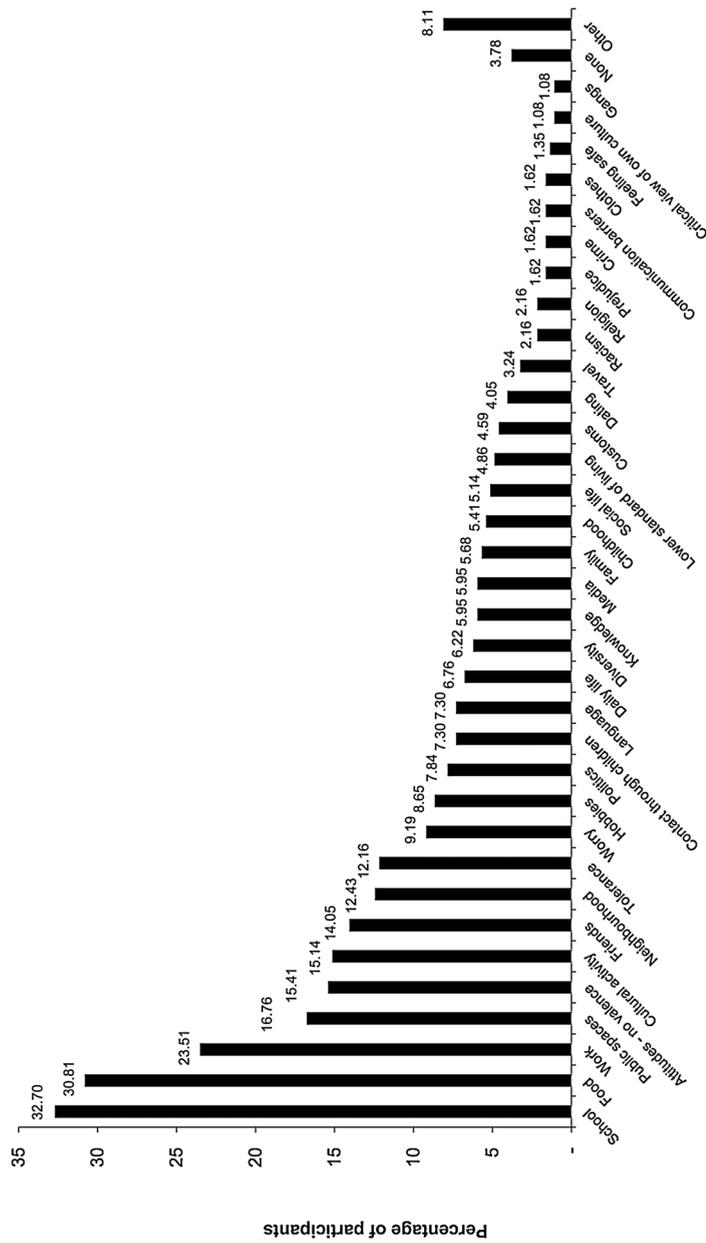


Fig. 1. Percentage of participants mentioning categories.

Table 3
Differences between domains.

| Domains | Occurrence | Hypothesis | Chi-square χ^2 | p-value |
|--------------------|------------|------------|---------------------|--------------|
| Behaviours | 116.00 | 87.00 | | |
| Values | 58.00 | 87.00 | 19.33 | 0.000 |
| Private domain | 222.50 | 198.25 | | |
| Public domain | 174.00 | 198.25 | 5.94 | 0.014 |
| Positive influence | 47.50 | 44.25 | | |
| Negative influence | 43.00 | 44.25 | 0.23 | 0.600 |

Note: Values in **boldface** are statistically significant using a critical value of $\chi^2(1) > 3.841$ (2-tailed) as cut of, $p = \leq 0.05$ (Field, 2013, p. 898).

Contact with immigrants

Contact was assessed in several ways. First, participants reported where in the city they lived to measure contextual forms of contact. The responses were reduced to two categories: the culturally diverse eastern part and all other parts of the city. Second, they reported the percentage of immigrants living in their neighbourhoods. Third, they reported how many of their friends, acquaintances and romantic partners had immigrant backgrounds, as in (Navarrete et al., 2009). The latter three numbers were computed into a formative index.

Results

Results from the qualitative data

The first part of this study – based on the open-ended responses – sought to answer the question: In which life domains are majority members influenced by the cultures of immigrants? Fig. 1 shows the percentage of participants mentioning a phrase in the different categories.

Analytic strategy for the qualitative data

After arriving at the frequency counts through quantitative content analysis, we were left with thirty-six categories covering a broad range of acculturative domains. In order to facilitate the interpretation of these results, categories were then grouped into domains according to three distinctions.

Two of these distinctions were theory-driven and based on current minority research. The third distinction emerged out of the content. The first distinction was between adopting values versus behaviours (Miller et al., 2013; Schwartz et al., 2010). The second distinction was between adoption of immigrant cultures in the private versus the public domain (Arends-Tóth and van de Vijver, 2004; Arends-Tóth, van de Vijver, & Poortinga, 2006; Navas et al., 2005). A third distinction between positive and negative experiences emerged out of the material because some phrases clearly reflected negative or positive evaluations of changes due to immigration. Table 1 gives an overview of how the different categories were grouped into these broader classifications.

All categories were separately considered in light of each of the three distinctions, as they are theoretically separate constructs. The opposing ends of the dimensions were considered to be mutually exclusive, so that categories were either considered private or public, either behaviour or values, and either positive or negative.

Behaviour and value distinction

According to Miller et al. (2013), acculturation behaviour refers to preferences for language use, adherence to social norms in interactions with others and daily life habits. Examples of daily life habits are preferences for food, entertainment, recreational activities and customs. Values include belief systems, worldviews and political ideologies (Miller et al., 2013). The phrases that most clearly reflected such acculturation behaviour were those that fell into the categories “Food” (mentioned 57 times), “Cultural activity” (28), “Language” (13.5), “Customs” (8.5), “Travel” (6) and “Clothes” (3). The category “Hobbies” was not considered part of acculturation behaviours as this category mainly contained the phrase *soccer*, which is not considered specific to the culture of any of the immigrant groups living in Norway, but also is an inherent part of Norwegian majority culture. Phrases reflecting changes in the value domain were found in the categories “Tolerance” (mentioned 22.5 times), “Prejudice” (3) and “Attitudes – no valence” (28.5). “Religion” (4) was also included in the value domain; however, “Politics” was excluded.²

In total, 21.09% of all phrases were classified as behaviours and 10.55% were classified as values. In order to explore if the difference in frequency was meaningful, a chi-square goodness of fit test was calculated. The hypothesis was that due to chance alone both domains should occur equally often. A significant deviation from the hypothesized value was found, $\chi^2(1) = 9.88$, $p < .001$, signalling that behavioural changes were reported more than value changes. All chi-square results are provided in Table 3.

Private and public domains

Minority members have been found to use different acculturation strategies in the public and private domains (Arends-Tóth & van de Vijver, 2004, 2007; Arends-Tóth et al., 2006; Ozer, 2013). A challenge in applying this distinction in the present study is that previous authors

² Despite containing some phrases referring to personal political views, the category “Politics” largely contained phrases such as *society*. It was therefore thought to mostly reflect perceived changes at a societal level, rather than unambiguously capturing changes in the value domain.

Table 4
Correlations between quantitative variables.

| | <i>M</i> | <i>SD</i> | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------------------------|----------|-----------|---------|---------|--------|---------|--------|---------|
| 1 Maintenance of majority culture | 3.90 | 0.76 | | | | | | |
| 2 Adoption of immigrant cultures | 2.22 | 0.75 | −0.24** | | | | | |
| 3 Perceived ethnic discrimination | 1.55 | 0.65 | 0.35** | −0.24** | | | | |
| 4 Identity threat | 1.84 | 0.92 | 0.43** | −0.30** | .76** | | | |
| 5 Life satisfaction | 3.52 | 0.79 | 0.16* | 0.09 | −0.17* | −0.27** | | |
| 6 Self-esteem | 3.75 | 0.67 | 0.27** | −0.14 | 0.06 | 0.01 | 0.54** | |
| 7 Social conformity | 3.29 | 0.64 | −0.05 | 0.17* | −0.15 | −0.09 | −0.14 | −0.38** |

Note: Bias-corrected accelerated bootstrapping with 1000 random re-samples was performed because of skewed distributions of scores. The distribution of maintenance of majority culture, life satisfaction and self-esteem were skewed towards higher scores. Adoption of immigrant cultures, perceived ethnic discrimination and identity threat had skewed distributions towards lower scores. ** The correlation was statistically significant at the specified level of $p = \leq 0.01$ in a two tailed test. * The correlation was significant at the level of $p = \leq 0.05$

have used different definitions of what constitutes the public and private domains. For instance, food, social contact and friendship have been placed in the public domain by some but in the private domain by others (see for example Arends-Tóth et al., 2006; Phalet et al., 2000; Rojas et al., 2014; Sapienza, Hichy, Guamera, & Nuovo, 2010). To solve this issue, a theoretical definition of public and private borrowed from sociology was applied instead (Bojer et al., 1993; Sheller & Urry, 2003). Historically, private areas were seen as those the bourgeois wanted to protect from the interference of the state (Habermas, 1984). Thus, private life is characterized by some degree of freedom of choice. As a majority member, you cannot choose whether your workplace should employ immigrants because anti-discrimination laws (at least in Norway) regulate that, but you can choose whether you want to socialize with them after work. You can also choose what food to cook and which films to watch. In contemporary use, the word private is also an antonym to professional (Stevenson, 2010).

Viewing these strands of reasoning together, the private life domain in the present research was considered to include all areas with a large degree of choice where people acted outside of their professional roles. This included the family and domestic sphere, but also social relationships and leisure activities. The public life domain was defined as something involving larger society or work and school. To ease this division, only arenas for interaction were considered and not categories containing values, emotions and cognitions. Applying this distinction, the categories “School” (mentioned 60.5 times), “Work” (43.5), “Public spaces” (31), “Politics” (14.5), “Language” (13.5) and “Media” (11) fell within the public domain. The categories “Food” (mentioned 57 times), “Cultural activity” (28), “Friends” (26), “Neighbourhood” (23), “Hobbies” (16), “Contact through children” (13.5), “Family” (10.5), “Childhood” (10), “Social life” (9.5), “Customs” (8.5), “Dating” (7.5), “Travel” (6), “Religion”³ (4) and “Clothes” (3) were considered as part of the private life domain.⁴

In total, 40.45% of all phrases were considered cultural changes in the private domain and 31.64% of all phrases were considered cultural changes in the public domain. A Chi-square goodness-of-fit test showed that significantly more phrases fell within the private domain, $\chi^2(1) = 5.94, p = 0.014$ (see Table 3).

Positive and negative influence

The dataset also reflected that participants experienced both positive and negative influences from immigrant cultures. In terms of influence that could be considered problematic or negative, phrases in the category “Worry” were mentioned 17 times. Increased competition for work, schooling or lower values on their property – all categorized as “Lower standard of living” – were mentioned 9 times. “Racism” was mentioned 4 times and increased “Prejudice” 3 times. A few participants mentioned “Communication barriers” (3 phrases), “Crime” (3), “Gangs” (2) and two phrases reflected a “Critical view of own culture.” In terms of explicitly positive influence, “Tolerance” was mentioned 22.5 times, “Knowledge” 11 times and “Feeling safer” 2.5 times. Observations of “Diversity”, thought to be positive remarks, were made 11.5 times. In total, 8.64% of all phrases were considered positive and 7.82% were considered negative. A chi-square goodness of fit test showed no significant difference between the number of positive and negative cultural changes, $\chi^2(1) = 0.23, p = 0.600$ (see Table 3).⁵

Results from the quantitative data

Generally, participants reported that maintenance of the majority culture was more important to them than adoption of immigrant cultures across all domains, $ps \leq 0.002$ (See Table 2). Table 4 displays the correlations between the main variables. Maintenance of majority culture was negatively, albeit weakly, related to adoption of immigrant cultures. Maintenance of majority culture was also associated with greater identity threat and more perceived ethnic discrimination, as well as greater wellbeing through higher self-esteem and life satisfaction. Adoption of immigrants’ cultures was related to less identity threat and perceived ethnic discrimination, as well as greater social conformity.

³ Religion was included despite perhaps reflecting values because it also represents rituals and provides arenas for interaction and thus can be considered behaviour too. Norway is increasingly secular so participating in a congregation would be considered a part of private life (Taule, 2014).

⁴ “Daily life” was not specific enough to be classified as either public or private. “Gangs” and “Racism” were also difficult to classify because it is not known whether these phrases indicate first-hand experience or impressions through the (public) media.

⁵ As one could argue that participants’ first-mentioned statement was the one, which had the most impact/influence on the participants, we run additional analyses with the first word mentioned only. Chi-square analyses based on this data showed the same pattern of results with significant differences between behaviors and values, but not for the private versus the public domain. These additional analyses can be found in Appendix B of the supplementary online material.

Table 5
Acculturation clusters.

| Cluster name | Participants within cluster % | Majority culture maintenance <i>M</i> | Immigrant culture adoption <i>M</i> |
|------------------|-------------------------------|---------------------------------------|-------------------------------------|
| SEPARATED | 37.2 | 4.52 | 1.60 |
| INTEGRATED | 31.1 | 4.06 | 3.01 |
| UNDIFFERENTIATED | 31.7 | 3.02 | 2.18 |
| Total | 100.0 | 3.90 | 2.22 |

Note: All cluster means were significantly different from each other, $p = \leq 0.001$ with large effect sizes of $\eta^2 = 0.68$ for majority maintenance and $\eta^2 = 0.60$ for adoption of immigrant culture. Two participants were excluded because of missing data.

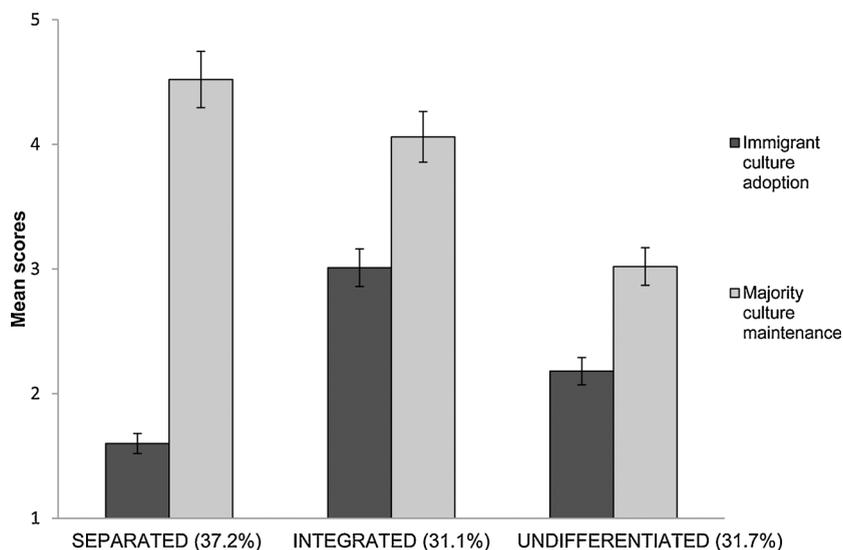


Fig. 2. Cluster profiles based on acculturation scores. ± 1 Standard Error is displayed. Participants with similar combinations of scores on attitude towards majority and immigrant cultures were grouped together using cluster analysis. The participants in the separated cluster strongly valued maintenance of majority culture, but not adoption of immigrant culture. The participants in the integrated cluster valued both cultures, whereas the participants in the undifferentiated cluster only moderately valued maintaining either culture. All mean scores along both dimensions were significantly different between all clusters, $p \leq 0.001$.

Cluster analysis

To see if participants could be meaningfully grouped into distinct acculturation strategies based on their maintenance of the majority culture and adoption of immigrant cultures, we conducted a cluster analysis similar to previous research (Berry et al., 2006; Inguglia et al., 2015; Schwartz & Zamboanga, 2008). One advantage of cluster analysis is that it avoids problems inherent with categorization based on scalar means, medians and midpoints. Using cut-off points can result in the categorization of scores that are close together in opposing categories. In addition, there is always the question of which category the exact midpoint should be assigned to (Arends-Tóth & van de Vijver, 2007; Inguglia et al., 2015). Cluster analysis avoids some of these caveats because it groups participants based on patterns of scores rather than dividing them into a priori defined categories (Rudmin & Candland, 2003; Schwartz & Zamboanga, 2008).

A two-step cluster analysis with the log-linear method identified three clusters using Schwartz's Bayesian Information Criterion, BIC (Schwarz, 1978). When using the two-step clustering function SPSS suggests the optimal number of clusters. The cluster solution was considered good, with a silhouette measure of cohesion and separation above 0.5. This solution was supported by an inspection of the BIC values, and a graphical representation of the steps showed a clear "elbow-point" at the three-cluster stage (Ketchen & Shook, 1996). Further details about the cluster analysis can be found in Appendix C in the supplementary online materials.

The three clusters formed three different acculturation profiles, shown in Table 5 and Fig. 2. All acculturation scores varied significantly between clusters in a post-hoc ANOVA with Bonferroni correction. This underlined the validity and interpretation of the cluster solution, which accounted for 68% of the variation in maintenance of majority culture and 60% of the variation in adoption of immigrant cultures.

We named the clusters in a similar fashion to studies among minority members (Berry, 2008; Schwartz & Zamboanga, 2008). In the first cluster, named *separated* ($n = 68$, 37.2%), participants placed hardly any importance on the cultures of immigrants and high importance on their majority culture. The second cluster ($n = 57$, 31.1%) was named *integrated* and was made up of participants who, in relative terms, valued immigrant cultures more than those in the two other clusters while also valuing their majority culture. It is important to note, however, that the cluster mean for adoption of immigrant cultures still only reached 3.01, which was the midpoint of the scale. The participants in the third cluster ($n = 58$, 31.7%) had an immigrant culture adoption score close to the total average score for all the participants ($M = 2.22$, $SD = 0.75$). These participants also placed less importance on the majority culture than those in the other clusters, making them seem only moderately attached to any culture. In Berry's original framework (1997) such an acculturation strategy, in which

Table 6
Descriptive statistics for the clusters.

| Cluster names | SEPARATED (37.2%) | UNDIFFERENTIATED (31.7%) | INTEGRATED (31.1%) |
|---|--------------------------|--------------------------|--------------------------------|
| Demography | | | |
| Gender | | | |
| Female | 75.0% (<i>n</i> = 51) | 62.1% (<i>n</i> = 36) | 78.9% (<i>n</i> = 45) |
| Male | 25.0% (<i>n</i> = 17) | 37.9% (<i>n</i> = 22) | 21.1% (<i>n</i> = 12) |
| Mean age | 35.71 years ^a | 30.55 years | 28.63 years^a |
| Living in East Oslo | 61.8% | 56.9% | 36.8%^b |
| Grown up in East Oslo | 42.4% | 35.1% | 36.4% |
| Immigrants in neighbourhood now | 26.0% | 31.4% | 29.7% |
| Immigrants in neighbourhood past | 23.8% | 19.9% | 15.0% |
| Differences in contact (mean z-scores) | | | |
| Immigrant – majority partners | -0.31^c | 0.33^c | 0.01 |
| Immigrant – majority friends | -0.23 | -0.01 | 0.19 |
| Immigrant – majority acquaintances | -183.55 | -171.81 | -172.82 |
| Total immigrant – majority contact | -0.22^d | 0.10 | 0.11 |
| Psychological measures (mean scores) | | | |
| Identity threat | 2.18^e | 1.60 | 1.69 |
| Perceived ethnic discrimination | 1.75^f | 1.41^f | 1.48 |
| Life satisfaction | 3.57 | 3.38 | 3.59 |
| Self-esteem | 3.96^g | 3.62 | 3.62 |
| Social conformity | 3.17 | 3.32 | 3.41 |
| Qualitative phrases (mean frequencies) | | | |
| Behaviours | 0.54 | 0.83 | 0.55 |
| Values | 0.21 | 0.35 | 0.40 |
| Private | 0.95^h | 1.48 | 1.26 |
| Public | 0.85 | 0.80 | 1.22 |
| Positive | 0.20 | 0.24 | 0.35 |
| Negative | 0.46ⁱ | 0.09 | 0.12 |

Note: **Bold** values indicate a significant main effect of the cluster solution.

^a The age difference was significant between the separated and the integrated cluster in a post-hoc ANOVA, Welch's $F(2188) = 5.11, p = 0.007, \eta^2 = 0.05$.

^b A Chi-square test showed a significant association between cluster membership and location, $\chi^2(2) = 8.459, p = 0.015$. Due to small sample sizes, the Likelihood ratio was reported. The z -test showed that the difference was between the integrated cluster vs the other two. Cramer's V was .21, which indicated a moderate effect size.

^c The undifferentiated cluster reported a smaller difference in immigrant vs majority romantic partners compared to the separated cluster, $F(2178) = 3.65, p = 0.023, \eta^2 = 0.04$.

^d The separated cluster reported a marginally significant difference in contact with immigrants from the other two clusters, $F(2, 180) = 3.60, p = 0.068$ (undifferentiated) and $p = 0.071$ (integrated), $\eta^2 = 0.04$.

^e Participants in the separated cluster experienced significantly more identity threat than both the other clusters, Welch's $F(2, 118.98) = 6.381, p = 0.002, \eta^2 = 0.08$.

^f Mean discrimination score for the separated cluster was significantly different from the undifferentiated cluster, Welch's $F(2, 118.93) = 4.055, p = 0.011$, and marginally significant for the integrated cluster, $p = 0.064, \eta^2 = 0.05$.

^g The separated cluster reported significantly higher self-esteem, $F(2, 151) = 4.892$, than the integrated, $p = 0.026$, and undifferentiated clusters, $p = 0.027, \eta^2 = 0.06$.

^h The separated cluster reported significantly more negative influence than the integrated cluster Welch's $F(2, 111.71) = 3.844, p = 0.031$, and the undifferentiated cluster, $p = 0.013, \eta^2 = 0.05$.

ⁱ The separated cluster reported significantly fewer phrases in the private domain than the undifferentiated cluster, $F(2, 180) = 3275, p = 0.036, \eta^2 = 0.04$.

neither culture is highly valued, was termed marginalization. However, there has been some discussion surrounding the validity of this marginalization strategy (Kunst & Sam, 2013; Montreuil & Bourhis, 2001; Rudmin & Ahmadzadeh, 2001). Because there could be several reasons for the low scores within this cluster, we chose to name it *undifferentiated* (Schwartz & Zamboanga, 2008).

ANOVAs between clusters

Next, we set out to test for differences between the clusters on the psychological constructs that were measured including demographics. Post-hoc ANOVAs were conducted with Bonferroni corrections to account for multiple comparisons. Levene's test of homogeneity of variances was significant for the variables age, identity threat and perceived ethnic discrimination. Welch's adjusted F -values and degrees of freedom are therefore reported for these variables. Descriptions of the clusters are given in Table 6 in terms of demography, contact and psychological measures.

Demography and contact

All clusters consisted of more women than men and the gender proportions did not differ significantly between clusters. The participants in the separated cluster were significantly older ($M = 35.70, SD = 13.47$) than participants in the integrated cluster were ($M = 28.63, SD = 11.79$; see notes of Table 6 for all test statistics).

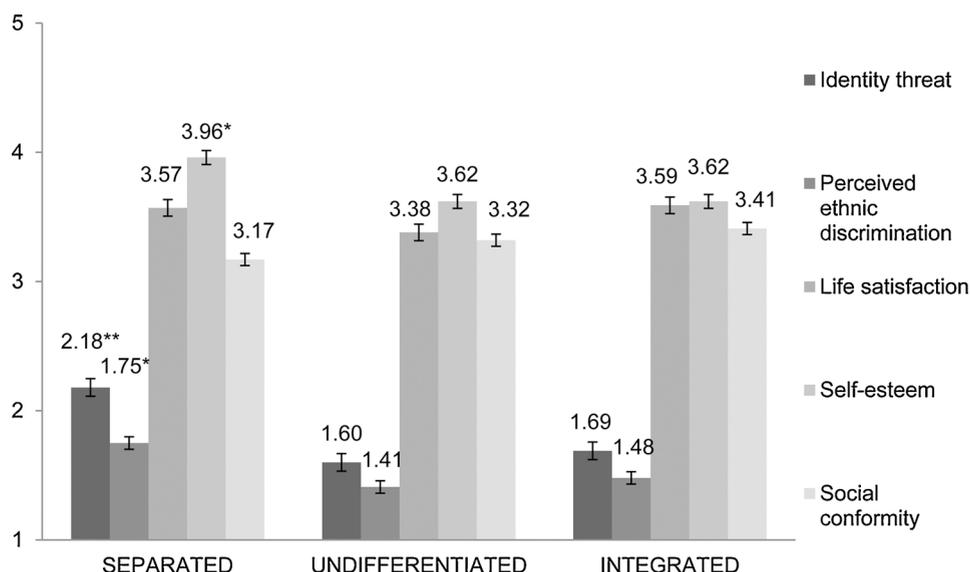


Fig. 3. Mean scores on the psychological measures between the clusters. ± 1 Standard Error is displayed. **The participants in the separated cluster reported more identity threat than the other clusters, $p = 0.002$. *Perceived ethnic discrimination in the separated cluster was significantly higher than in the undifferentiated cluster, $p = 0.01$, and marginally significant for the integrated cluster, $p = 0.06$. They also reported higher self-esteem, $p = 0.03$.

Interestingly, participants within the integrated cluster were less likely to live in areas of Oslo with a high density of immigrants compared to the separated and undifferentiated clusters. Indeed, participants in the separated cluster were almost three times more likely to live in the more culturally diverse eastern parts of Oslo than those in the integrated cluster, odds ratio = 2.79. Also, participants in the undifferentiated cluster were twice as likely to live in the eastern parts of Oslo compared to the integrated cluster, odds ratio = 2.28. In contrast, there were no significant cluster differences in terms of where participants had grown up. To get a better picture of participants' neighbourhoods, they were also asked to estimate the percentage of immigrants living there. They did this both for their current neighbourhood and the area where they had lived most of their lives. No significant differences were found between clusters on these estimates.

In addition to looking at neighbourhoods, intercultural contact was measured with a formative index of three items assessing number of immigrant partners, friends and acquaintances, and three items assessing the same type of contact with majority members. Scores on all items were standardized and a difference score was calculated subtracting the mean standardized values for contact with majority members from the mean contact with immigrants. Hence, high scores meant more relative contact to immigrants. While cluster type had a significant main effect on contact, post-hoc comparisons found only marginally significant differences between the separated cluster and the undifferentiated cluster, $F(2, 180) = 3.60$, $p = 0.068$, and the integrated cluster, $p = 0.071$, possibly due to the conservative Bonferroni correction. Yet, it seemed as if participants in the separated cluster had less contact with immigrants than those in the other clusters.

Psychological differences

Fig. 3 shows the mean cluster scores for the psychological variables. Participants in the separated cluster reported greater identity threat than those in the other clusters, Welch's $F(2, 118.98) = 6.381$, $p = 0.002$. Participants in the separated cluster also reported higher perceived ethnic discrimination than those in the undifferentiated cluster, Welch's $F(2, 118.93) = 4.055$, $p = 0.011$, and marginally higher than those in the integrated cluster, $p = 0.064$. In terms of psychological wellbeing, there was no significant difference between the three clusters when it came to life satisfaction, $ps > 0.373$. However, the separated cluster had significantly higher self-esteem than the other two clusters, $F(2, 151) = 4.892$, $p = 0.026$ (integrated) and $p = 0.027$ (undifferentiated). There were no significant differences in social conformity, $ps > 0.114$.

Combining the qualitative and the quantitative data

To obtain further insight into the acculturation patterns of the participants, we conducted analyses combining the quantitative and qualitative data. Specifically, we tested whether participants within the different clusters would to different degrees report acculturation behaviours and values, cultural changes in the private or public domains, and positive or negative cultural changes based on the data from the qualitative part of the study. To test this, an ANOVA with Bonferroni correction was conducted. Levene's test of homogeneity of variances was significant for the variables values, positive and negative phrases. Welch's adjusted F -values and degrees of freedom are therefore reported for these variables. Multiple comparisons found that the participants in the separated cluster reported significantly more negative influence than the integrated cluster, Welch's $F(2, 111.71) = 3.84$, $p = 0.031$, and the undifferentiated cluster, $p = 0.013$, see Table 6. The separated participants also reported significantly fewer phrases in the private domain than the undifferentiated cluster, $F(2, 180) = 3.28$, $p = 0.036$.

Discussion

Due to a lack of research on majority members' cultural change, acculturation is commonly misconceived as a process that only influences immigrants and minority members (Dinh & Bond, 2008). The present study challenges this view by empirically demonstrating that majority members are influenced by the cultures of immigrants in several life domains.

Findings from the qualitative data

The first part of the study asked in which life domains the majority members experienced cultural influence from immigrant cultures. The participants reported influence in many areas of their lives, and "School", "Food" and "Work" were the most frequent categories. The high frequency of the category "Food" can have two explanations. In the local context of Oslo, immigrant entrepreneurs seized a great share of the market for restaurants and grocery shops in the 1980s, making previously foreign foods readily available to the city's population at affordable prices (Brochmann & Kjeldstadli, 2008). At the same time, the majority-group participants are also subject to a trend of globalization, meaning that the world is becoming more interconnected (Audretsch, Lehmann, Richardson, & Vismara, 2015). Travel and trade have also made foreign food available to Norwegians. It is therefore difficult to distinguish the influence of immigrant cultures from the general trend of globalization on the eating habits of majority members (Brochmann & Kjeldstadli, 2008). "Work" and "School" are two arenas where many of the participants presumably spend much of their time and are likely to encounter immigrants. This contact might provide exposure to other cultures. Yet, work and school are also the public arenas where immigrants often are expected to adopt the majority culture (Bye, Horverak, Sandal, Sam, & van de Vijver, 2014; Horverak, Bye, Sandal, & Pallesen, 2011; Navas, Rojas, García, & Pumares, 2007; Rojas et al., 2014), so that the relative extent of majority members' adoption of the culture of immigrants remains uncertain here.

The part of the study based on qualitative data also tested whether the cultural influence experienced by the majority participants was domain specific. Support for domain specificity was found. Participants reported significantly more cultural change in terms of behaviours than values. This is consistent with research on minority members, where values have shown to be more resistant to change (Kim, Atkinson, & Yang, 1999; Miller et al., 2013; Szapocznik, Scopetta, Kurtines, & Aranalde, 1978), possibly because behavioural change is most vital to be able to perform the tasks of daily life and to function in surroundings that are culturally plural (Navas et al., 2005).

Interestingly, a reverse pattern was found for the private/public distinction compared to studies with minority participants. Participants reported to be especially influenced by immigrant cultures in the private domain, which is the contrary to minority members who seem to experience cultural change especially in the public domain (Navas et al., 2007; Rojas et al., 2014). One explanation for this may be that majority members have less of a need to adapt in the public domain in order to function and succeed in society (Deaux, 2006) because it is their majority culture that has the most vitality here (Lefringhausen & Marshall, 2016). Converging evidence from the analysis combining the qualitative and quantitative data showed that separated participants, who place little importance on adopting immigrant cultures, also reported fewer phrases in the private domain.

Cultural influence could also be grouped into both positive and negative change. This distinction grew out of the material and is not an exploration of domain specificity as such. However, it adds valuable description to the nature of acculturation in majority members because it shows how majority members are affected by living in a shared society. In terms of positive change, participants primarily reported increased knowledge of, and tolerance for, other cultures. In terms of negative change, they reported crime, worries and lower standards of living. The negative cultural change highlights that majority members also experience acculturative stress, which can be defined as challenges arising out of the meeting between cultural groups (Berry, 2006c). It can manifest itself as language difficulties, incongruent cultural values or other barriers to succeeding in the relevant context (Gil, Vega, & Dimas, 1994; Kim, Hogge, & Salvisberg, 2014; Lantrip et al., 2015; Yu et al., 2014). Some of the phrases participants mentioned fit this definition, such as difficulties communicating with immigrants, racism, discrimination, crime, gangs and worries. Other negative phrases reflected increased competition for work and education and reduced value of property. These phrases can be interpreted as experiences of realistic threat (Stephan and Stephan, 1996). A few participants mentioned that they had reflected around gender roles as a result of immigration, which may indicate that they experienced some level of symbolic threat, as gender roles tends to be an area of debate in Norway (see for example Aure, 2016; NTB, 2016). In the combined analysis of the qualitative and quantitative data, we found that separated participants reported the most negative influence. This indicates that separated majority participants experience more acculturative stress, which is consistent with a recent study by Lefringhausen and Marshall (2016) and ratings on the quantitative measures.

Findings from the quantitative data

The second part of the study, using psychometric scales, sought to measure the degree of acculturation among majority participants. The findings suggested that majority members were motivated to adopt aspects of immigrant cultures, but far less than to maintain their heritage culture. This observation mirrors the results of Lefringhausen and Marshall (2016) who also applied Berry's framework to the point of view of majority members. More specifically, we tested whether majority members show acculturation strategies similar to those found among minority members. We found that the degree of maintenance of majority culture and adoption of immigrant cultures varied systematically between individuals. The participants could be divided into three clusters of approximately the same size, representing distinct acculturation profiles. Two of the clusters resembled acculturation strategies outlined in Berry's (1997) bidimensional acculturation framework, namely integration and separation. A third cluster represented a strategy similar to marginalization. Yet, we opted to call this strategy undifferentiated (Berry, 2008; Schwartz & Zamboanga, 2008) as the motivation for choosing such a strategy may be manifold. We will return to a discussion of this cluster in the next section. The fourth strategy in Berry's model, assimilation, was not found. This was not

surprising because giving up one's majority culture while adopting immigrant cultures provides no apparent functional advantage for majority members (Deaux, 2006).

The undifferentiated profile is more challenging to interpret in light of Berry's original framework, than the integrated and separated profiles. There could be multiple reasons for the undifferentiated profile. Perhaps undifferentiated majority members see all people as individuals, rather than members of cultural groups (Bourhis, Moïse, Perreault, & Senécal, 1997). Following such a definition, one could call the third cluster individualization or colorblind (Dovidio, Gaertner, Ufkes, Saguy, & Pearson, 2016). Another explanation is that they value a global identity, or some other form of social identity, rather than ethno-cultural identities (Kunst & Sam, 2013). Yet, it is puzzling that despite reporting lower acculturation attitudes towards immigrant cultures on the psychometric scales, the participants in the undifferentiated cluster mentioned as many or more qualitative phrases reflecting cultural influence than participants in the other two clusters did. They also reported the same social contact with immigrants as the integrated cluster. It is possible that this reflects a difference between actual acculturation behaviour and ideal acculturation measured with attitude scales (Navas et al., 2005; Navas et al., 2007; Ward & Kus, 2012).

The final research question was how the acculturation strategies of majority members related to variables known to co-vary with acculturation in minority research. There were differences between the clusters in terms of age, neighbourhood composition, self-esteem, identity threat and perceived ethnic discrimination that warrant discussion.

The younger the participants were, the more likely they were to choose integration and hence to adopt immigrant cultures. One possible explanation for this could be that younger people have had more experience with other cultures at an earlier age (Chudek, Cheung, & Heine, 2015; Schwartz et al., 2010) since immigration is a rather recent phenomena in Norway (Brochmann & Kjeldstadli, 2008; Westin, 2006). The reported neighbourhood composition, however, somewhat contradicts this explanation. Participants in the integrated cluster, who were also the youngest, were *less* likely to live in areas with more immigrants. This finding may seem counter-intuitive, as one could expect that living in a multi-ethnic neighbourhood would be related to greater cultural adoption through more social contact (Christ et al., 2014). However, the reason for why younger participants were more likely to fall into the integrated cluster may not necessarily be more direct exposure to immigrant cultures, but the fact that they grew up in a time where multiculturalism was put forth as an ideology in Norway. In recent decades, Norwegian immigration policies have moved from assimilationism towards multiculturalism (Brochmann & Kjeldstadli, 2008), such that younger participants were likely to have been socialized into this multicultural climate to larger degree than older participants, making them more open to immigrant cultures.

The fact that the participants in the separation cluster were more likely to live in a neighbourhood with many immigrants can perhaps be explained from a threat perspective. In some neighbourhoods in the eastern parts of Oslo, majority members are currently approaching the tipping point of becoming the numerical minority. Realistic and symbolic threats have been found to be highest among majority members when they live in neighbourhoods where they make up approximately half the population (Kouvo & Lockmer, 2013). It is likely that identity threat is similarly related to the saliency of immigrants in the surroundings. Emerging support for a relationship between relative group size and acculturation comes from a series of experiments by Craig and Richeson (2014). They showed that when majority members perceived their numerical group-size to shrink relative to other cultural groups, they preferred less engagement with members of other ethno-cultural groups (also see Craig & Richeson, 2014; Hehman et al., 2012). Hence, for majority members living in neighbourhoods with many immigrants, separation may be an attempt to maintain and conserve their culture.

The clusters also varied in terms of psychological adaptation. Because of globalization and migration, majority members face changes in their surroundings, and how they cope with them may affect them psychologically. In the present study, the separation strategy appeared to be somewhat problematic for majority members. It was associated with greater identity threat and perceived ethnic discrimination, yet it was also associated with higher self-esteem. This converges with the study by Lefringhausen & Marshall (2016), showing that less engagement with other cultures was related to more perceived discrimination and acculturative stress in their European sample. Convergent support also comes from the qualitative material that showed that the separated cluster mentioned negative phrases more frequently than participants in the other clusters.

The higher self-esteem in the separation cluster perhaps reflects a compensatory response to the adverse experiences of perceived ethnic discrimination and identity threat as explained by the rejection-identification model (Branscombe, Schmitt, Harvey, & Diener, 1999). This model would suggest that separated majority members might have increased their cultural maintenance in order to cope and buffer such negative acculturation experiences.

In sum, we cannot conclude based on our particular sample that the integration strategy was more adaptive for majority participants, but it does seem that both the integration and the undifferentiated strategy was connected with less negative experiences of identity threat, perceived discrimination and acculturative stress than separation was.

Strengths, limitations and future directions

The present study had strengths and limitations that should be mentioned. To start with, one obvious limitation is that the data material was correlational, so that no causal relations between variables could be established. While this is far but an exception in acculturation research, future research is needed to establish the causal relationships between majority members' acculturation and their psychological adaptation.

The present study could also have benefitted from a larger, randomized sample with a more gender-equal distribution. Age, gender and neighbourhood composition have all been suggested as possible influences on the acculturation of minority members (Berry et al., 2006) and as our study suggests they also play a role for majority members' acculturation. Hence, similar research with more balanced samples is vital to further investigate the influence of demographic variables.

The use of an open-ended question format in the qualitative part of the study can be considered a strength. Closed-format

questions run the risk of missing out important aspects of the topic of study. Since little is known about the acculturation of majority members, a qualitative description of the phenomenon was therefore deemed an important starting point. Yet, as the present study quantified the qualitative data, it did not take a qualitative approach beyond the stage of data collection and did therefore not make use of the full potential of qualitative methods. An interview approach would naturally have offered a deeper understanding of the acculturation processes. While this would have exceeded the aim of the present study, future studies could profitably use a mix of qualitative and quantitative methods (Ozer, 2013).

Furthermore, we relied on minority research both methodically and theoretically when selecting relevant scales and measures and this may be criticized as an imposed-ethnic approach (Ozer, 2013). Future research should therefore develop unique scales to measure majority members' experience. We believe that the results of this study may inform the development of such measures.

Societal implications

The present research has important implications for multicultural societies. Conflictual relationships between different ethno-cultural groups are presently a central political challenge in many societies (Audretsch et al., 2015; Koven & Goetzke, 2010; Lowenstein & Phillipson, 2002). Understanding and describing the mechanisms of acculturation can inform policies on how to reduce intergroup conflict. The changes majority members go through because of migration are an important factor in this regard, that has to be taken seriously if intergroup harmony is to be achieved. If engaging with other cultures in larger society is adaptive for both minority and majority members because it is related to less acculturative stress, policies may encourage intercultural encounters and programs leading both minority and majority members to choose integration as an acculturation strategy. Moreover, our results suggest that majority members living in plural neighbourhoods, sometimes even becoming the ethnic minority in them, were especially vulnerable to negative experiences. The worries and experiences of this subgroup of majority members may require particular attention from policy makers.

Conclusions

The present study aimed at investigating whether acculturation is truly a two-way process. Here, it showed that majority members do experience a broad range of cultural change across various domains. This cultural change was primarily found in the private domain and in terms of behaviours rather than values, lending support to a domain specific understanding of acculturation also for majority members. The quantitative results showed that majority members in relative terms prefer to maintain their majority culture over adoption of immigrants' culture. Still, preferences for acculturation strategies similar to those found among minority members could be identified, which differentially related to psychological adaptation. In sum, this study therefore demonstrated that acculturation is indeed a two-way process with cultural change also happening on the part of majority members.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at <http://dx.doi.org/10.1016/j.ijintrel.2017.07.004>.

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