STEREOTYPES AND INTERCULTURAL RELATIONS: INTERDISCIPLINARY INTEGRATION, NEW APPROACHES, AND NEW CONTEXTS

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STEREOTYPES AND INTERCULTURAL RELATIONS: INTERDISCIPLINARY INTEGRATION, NEW APPROACHES, AND NEW CONTEXTS

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Table of Contents

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EDITORIAL
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Editorial: Stereotypes and Intercultural Relations: Interdisciplinary Integration, New Approaches, and New Contexts

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Editorial on the Research Topic

Stereotypes and Intercultural Relations: Interdisciplinary Integration, New Approaches, and New Contexts

This special issue was inspired by Grigoryev et al. (2019) on ethnic stereotypes and Berry's approach to the psychology of intercultural relations (e.g., Berry, 1998, 2005; Berry et al., 2021; **Figure 1**). Since individual behaviors are shaped in particular cultural contexts, we are interested in what happens when individuals who have developed in different cultural contexts meet and interact in culturally diverse settings. Stereotyping is a cognitive mechanism that underlies all aspects of intercultural processes: the way individuals perceive members of other groups shapes their attitudes and behavior toward them, influencing their various types of intercultural interaction and perspectives.

While many of the papers in this volume incorporate these cognitive functions of stereotypes, they go beyond these basic acts of perception, categorization, attribution, and generalization that give meaning to intercultural interaction and intergroup anxiety. They deal also with the processes of evaluating members of the groups (having general prejudice toward others, and attitudes toward specific groups), and then to acts ranging from discrimination to inclusion as the static and dynamic aspects of intercultural relationships. All these individual psychological processes are embedded in the general sociopolitical group contexts that incorporate the history of intergroup relations, their mutual images, the extant institutional and systemic values, and the established collective practices that may act against some groups but privilege others.

This special issue consists of 13 articles by 46 scholars from 15 countries that address both personal and cultural stereotypes for which insights from the Stereotype Content Model (SCM; Fiske et al., 2002) and Behavior from Intergroup Affect and Stereotypes (BIAS; Cuddy et al., 2007) are mainly used. Each paper focuses on its set of contexts and analyzes contradictory forces of cultural meanings, as socially constructed and emergent, experienced and expressed in intercultural encounters.

The first three articles include an examination of the cognitive sphere of non-dominant groups (sojourners, refugees, and ethnic minorities). Bierwiaczonek et al. using the Reverse Correlation Task investigated visual representations of the host society members held by sojourners as a function of their degree of psychological and sociocultural adaptation. The article reveals the social-cognitive component of adaptation when sojourner adaptation is reflected, at a social-cognitive level, in the valence of outgroup representations. The results demonstrated that the poor adaptation goes along with the more negative representations (visual and valence of stereotype content) of locals in Portugal and the US.

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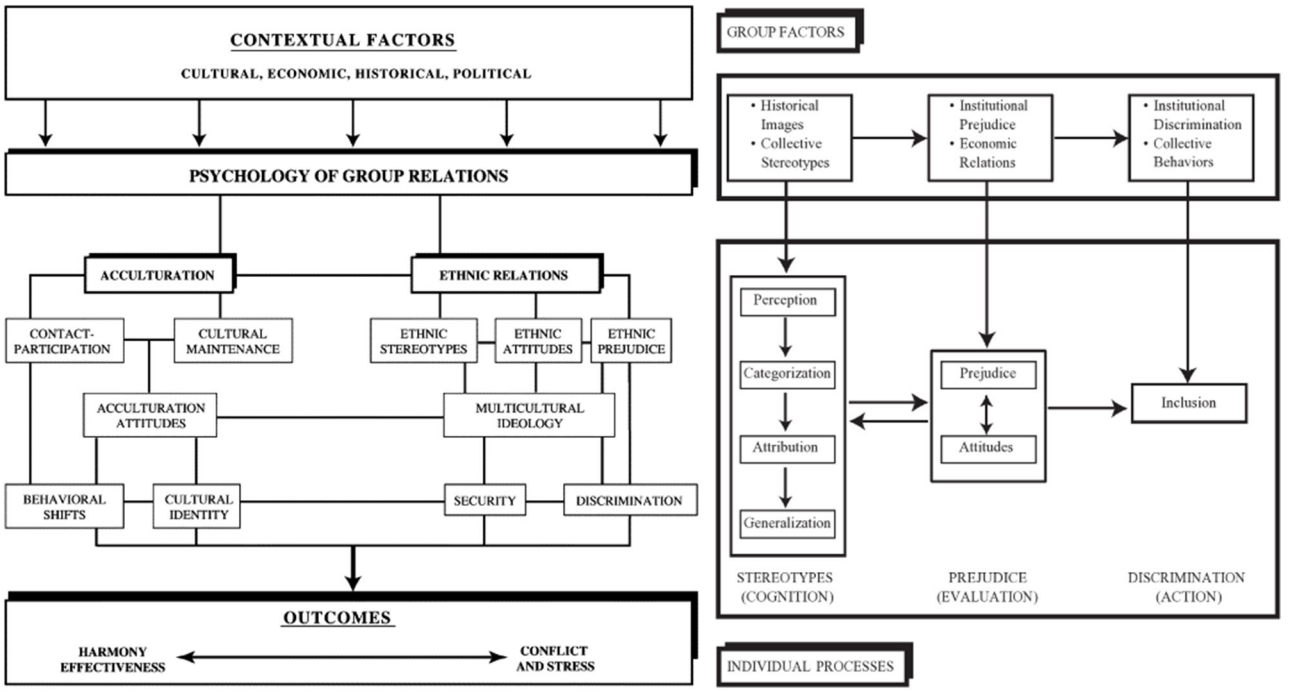

FIGURE 1 | Psychology of intercultural relations: contexts, processes, and outcomes.

Lutterbach and Beelmann addressed personal stereotypes by refugees toward host society members and their perceptions of discrimination provoked by host society members to analyze their associations with the refugees' shared reality and acculturation orientations in Germany. The article claims that contextual and everyday discrimination experiences prevent integration because they reduce the motivation to adopt aspects of the host culture, reduce the perception of shared reality between the cultural groups, and increase the motivation to maintain one's own culture among refugees holding strong positive sociability stereotypes toward the host society members. Hence, increased discrimination experiences are likely to lead to a disillusioning effect included separation acculturation strategies among refugees who actually had the potential to integrate into the host society.

Urbiola et al. investigated the relationships between personal stereotypes and the acculturation preferences of Spanish and Moroccan origin adolescents in Spain. The article claims that it connects the literature of acculturation and intergroup relations in an interactive way instead of studying the predictive role of stereotypes or acculturation perceptions in isolation. For example, stereotypes would play an important role in majority members' acculturation preferences when they perceived that minority youth were not adopting the host culture because it is a more threatening situation than when minority group members are adopting the host culture. Moreover, this work illustrates the importance of the concept of mutuality in the study of acculturation (e.g., Horenczyk et al., 2013; Berry et al., 2021).

The following articles explore various issues related to stereotypes of dominant groups in different cultural settings. Walsh and Tartakovsky through the lens of the SCM using a representative sample of the majority population in Israel examined a model proposing relationships between individual values, positive (i.e., benefits) and negative (i.e., threats) appraisal of immigrants, and contact. The article shows how the relationships between variables differed by immigrant groups based on cultural stereotypes that were related to the social structural characteristics of these groups. The results strengthen a theoretical conceptualization that posits an indirect relationship between individual value preferences and behavior through both positive and negative group appraisal. We find this as a good example of the group-specific approach within the SCM for how, considering threats (and benefits as well) separately, one can form a consistent threat profile for each target group (see also Grigoryev et al., 2019).

Lankester and Alexopoulos suggested a conceptual analysis of the cognitive regulation of prejudice within the context of French norms related to cultural diversity (egalitarian Historic Laïcité and assimilationist New Laïcité) based on the Justification-Suppression Model. The article considers the full path from the ideologies to the expression of stereotypes by investigating how the Laïcité norms can set the stage for specific regulatory strategies: (1) to prevent prejudicial attitudes but which can lead to unexpected consequences on stereotyping within the Historic Laïcité context (i.e., suppression) and (2) to help realize prejudice within the New Laïcité context (i.e., justification). This analysis

expands our understanding of the functioning of intergroup ideologies in specific cultural contexts (see Guimond et al., 2014).

Alcott and Watt investigated the effects of enculturated non-verbal accents which are detected in facial expressions of emotion, hairstyle, and everyday behaviors on categorization and stereotyping in Australia. These preliminary findings reveal subtle effects of non-verbal accent imprinted as the results of enculturation as a cue to cultural group membership and invite further work into the effects of non-verbal accent on person perception and categorization processes.

Nariman et al. used a network approach toward attitude strength on the data of representative surveys from Hungary, Romania, Slovakia, France, and Ireland to explore anti-Roma bias (including personal stereotypes, prejudice, and behavioral tendencies). The results supported their hypothesis that compared to low-attitude-strength networks; high-attitude-strength networks of evaluations had a stronger degree of global connectivity, i.e., the higher connectivity between the evaluations on different aspects of anti-Roma bias (especially affective components).

Javakhishvili et al. applied the SCM and the BIAS map in Georgia (the former Soviet Union republic from the South Caucasus) to evaluate English and German speakers globally. The article shows some features of evaluation of representatives of large and powerful countries by people from small countries, including the implication of a unique set of perceived socio-structural variables (vitality and fear of assimilation) and culturally specific meaning of emotions.

Hakim et al. experimentally examined the stereotype of Muslims as being either moderate or radical to add the findings of these subtyping to the adverse implications of concepts with positive guises. The article claims that the endorsement of these Muslim subtyping (especially among conservatives) can be translated into support for aggressive military and social policies toward Muslims in the US.

The next two articles dealt with methodological aspects of the SCM and the BIAS map. Findor et al. used a representative sample of ethnic Slovaks and two target ethnic minority groups (stigmatized: Roma vs. non-stigmatized Hungarians), whereas, Bye used the data from the Norwegian Citizen Panel and asylum seekers as the target group to experimentally examine the effect of response instruction (individual vs. shared cultural perspective). The results of both highlight the importance of the distinction between cultural stereotypes, which are shared by members of a particular society, and personal stereotypes, which are beliefs of individuals about groups. Social perceivers can recognize a common belief about groups, even if they do not personally endorse it (Jussim et al., 2015).

Further, the methodological contribution continues due to the appeal to an issue of non-Western face perception. Lakshmi et al. developed an Indian Asian face set of normed face stimuli to extend the ethnic and cultural diversity of the database materials in psychological research. Moreover, the study showed that impressions from these faces were to some extent culturally specific in aspects of face categorization (accuracy, typicality, and miscategorization) and systematic patterns of stereotype content and ingroup favoritism.

Finally, Knutson integrated the scientific study of stereotypes within the SCM with a literary-theatrical exploration of stereotyping. The article demonstrates how theater performance can sometimes embody the dynamic for Jew stereotype traced by the BIAS map, from cognition to affect to behavior.

We hope that the collection facilitates wide interest in stereotypes as the heart of intercultural relations and as the ways individuals grapple with the many different kinds of knowledge they have about cultures and of their understandings of communication.

AUTHOR CONTRIBUTIONS

DG wrote the first draft of this paper. JB and AZ reviewed and edited the draft to finalizing it. All the authors approved the submitted version of this paper.

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BRIEF RESEARCH REPORT
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Anti-roma Bias (Stereotypes, Prejudice, Behavioral Tendencies): A Network Approach Toward Attitude Strength

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The Roma have been and still are a target of prejudice, marginalization, and social exclusion across Europe, especially in East-Central European countries. This paper focuses on a set of stereotypical, emotional, and behavioral evaluative responses toward Roma people selected as representing the underlying components of anti-Roma bias. Employing network analysis, we investigated if attitude strength is associated with stronger connectivity in the networks of its constituent elements. The findings from representative surveys carried out in Hungary, Romania, Slovakia, France, and Ireland supported our assumption, as high attitude strength toward the Roma resulted in stronger connectivity in all pairs of high- versus low-attitude-strength networks. Our finding yields a solid theoretical framework for targeting the central variables—those with the strongest associations with other variables—as a potentially effective attitude change intervention strategy. Moreover, perceived threat to national identity, sympathy, and empathy were found to be the most central variables in the networks.

Keywords: anti-roma bias, attitude strength, network connectivity, network analysis, intervention

INTRODUCTION

The Roma are among the most disenfranchised, socially unaccepted, and morally vilified ethnic minority groups in Europe and especially in East-Central European countries (Fraser, 1995; Ladányi, 2001; Pogány, 2006; Tileagă, 2006). As a culturally and linguistically diverse group, Roma people are portrayed as beggars, criminals, profiteers, and lazy, being a target of marginalization and social exclusion, as well as perpetual discriminatory and violent practices on an interpersonal, institutional, and national level (van Baar, 2011; Feischmidt et al., 2013). School segregation of Roma students in Hungary, the Czechia, and Slovakia (Messing, 2017), violent vigilante activities in Hungary and Romania, and forced eviction of the Roma in Romania, France, Italy, and Slovakia are all strikingly telling cases in point (see, e.g., Amnesty International Report, 2013).

Empirical research shows that anti-Roma stereotypes revolve around criminality, laziness, and receiving undeserved benefit from the state (e.g., Enyedi et al., 2004; Kende et al., 2017, 2020; Villano et al., 2017). Moreover, drawing on the stereotype content model (SCM, Fiske et al., 2002), the Roma

are perceived to be low in both warmth and competence (e.g., Stanciu et al., 2017; Grigoryev et al., 2019). Further, research shows that the Roma are perceived as both dangerous and derogated (e.g., Imhoff and Bruder, 2014; Bilewicz et al., 2017; Hadarics and Kende, 2019), which also indirectly implies that they are both rejected from the perspective of threatening conventional norms and looked down upon as a low-status group—being low in both dimensions of the model.

Needless to say, intervention efforts are needed to combat anti-Roma bias. However, one practical challenge is to identify the most effective attitude change interventions considering that anti-Roma stereotypes are historically rooted and strong in most societies. Previous intervention efforts, in general, have not been successful in dampening intergroup bias (Paluck and Green, 2009). Mainstream intergroup bias research is often engaged with parsimonious models investigating relationships between a limited number of variables, which does not ensure identifying the most influential stereotypical and prejudicial evaluations. In the current study, we attempt to fill this gap by employing a network approach in the anti-Roma stereotype context. Our main objective is to examine whether the network approach would be a theoretically justified method to be employed for intervention purposes in an anti-Roma bias context in future research. Drawing on the literature on attitude strength and network analysis, we test the *connectivity hypothesis* proposed by Dalege et al. (2018) in the networks of stereotypical, emotional, and behavioral evaluations toward the Roma estimated from representative samples collected in Hungary, Romania, Slovakia, France, and Ireland.

The five countries included are the three Eastern European countries with the largest indigenous Roma minority (with 8% of the Romanian population, 7% in Hungary, and 9% in Slovakia) and two Western European countries (Ireland and France) where Roma have immigrated in the last 20 years and that also have their own indigenous Roma population groups (i.e., Irish Travelers in Ireland and Sinti in France). While their visible economic disadvantages may be the strongest in Eastern Europe, where they form a large (often the largest) ethnic minority group, their treatment in Western Europe is often inhumane and goes against EU norms and regulations (Mahoney, 2011; European Commission, 2015; Gould, 2015).

Network Analysis

Network analysis is a relatively novel approach to modeling individual differences in psychological constructs by representing the direct interactions between their underlying components. Representing stereotype structures through network models has also recently received attention from researchers in the field (e.g., Sayans-Jiménez et al., 2018; Grigoryev et al., 2019). Modeling the direct and unique interrelations between a relatively higher number of variables as a network can be an advantageous method to render possible picturing of a more comprehensive representation of stereotype dynamics. Having a variety of stereotypes and negative attitudes estimated as a network can help us in finding variables with the highest degree of interrelations with other variables that can be the most favorable candidates to be wagered on for intervention purposes. With a latent approach, for instance, this cannot be possible, since all the items are treated as equivalent measures of the latent construct (Schmittmann et al., 2013).

Nodes and edges are the two most basic constituent elements of a network; nodes are the number of entities, and edges, the direct interrelationships between every possible pair of nodes. In psychological networks, nodes are a set of observed variables, and edges, the statistical associations between them (Epskamp et al., 2018). Connectivity is another basic property of a network that refers to the overall level of interrelations among all the nodes and the degree of causal interdependencies between them. The higher the connectivity between nodes within a given network, the more likely it is that changes to one node will also be mirrored by changes in other nodes within that network (Scheffer et al., 2012). Moreover, global connectivity, as a measurement of network connectivity, is the sum of all absolute values that every edge in the network possesses. Hence, the number of connections and the magnitude of the edge weights determine the connectivity of a network.

Network Connectivity as Related to Attitude Strength

Proposing the Causal Attitude Network (CAN) model, Dalege et al. (2018) integrated the general notion of network connectivity with attitude networks and proposed the *connectivity hypothesis*, which refers to the higher connectivity between the evaluations on different aspects of an attitude object for those who hold a stronger attitude toward that attitude object.

As mentioned above, identifying the nodes with the highest degree of direct interactions with the other nodes in a network of stereotypical evaluations would be a highly beneficial means for intervention purposes. To consolidate this approach, in the current study, we employ the connectivity hypothesis. We argue that the connectivity between different stereotypical, emotional, and behavioral evaluations toward the Roma estimated as a network, to be found also as a measurement of attitude strength, would yield a firm theoretical linchpin for intervention aims. For if nodes with the highest interrelations with the others rendered at odds with the other nodes, the need for cognitive consistency as a factor indispensable to attitude strength (e.g., Simon et al., 2004; Monroe and Read, 2008) would lead the system to regain the compatibility between all its components.

By definition, attitude strength is "the extent to which attitudes manifest the qualities of durability and impactfulness" (Krosnick and Petty, 1995, p. 3). Durability refers to attitude stability over time and resistance to change, and impactfulness, to its influence on information processing and behavior. Strong attitudes, therefore, acquire these attributes to a greater extent in comparison with weak attitudes. Krosnick and Petty (1995) propose several features of attitude strength such as extremity, importance, and accessibility inter alia. Dalege et al. (2018) found that in a network of a number of evaluations on the presidential candidates, the network connectivity is higher for those who hold a stronger attitude concerning political campaigns. Moreover, they showed that network connectivity is also an expression of other basic properties of attitude

strength. They estimated correlation coefficients between feeling thermometer items toward the presidential candidate measured before and after the election (as a measure of attitude stability) and found that network connectivity is significantly associated with attitude stability over time. Moreover, they also showed that network connectivity predicts the biserial correlations between the feeling thermometer item toward the presidential candidate before the election and the respondents' actual voting decision (see Dalege et al., 2018).

In the current research, we test the connectivity hypothesis in the context of anti-Roma bias. In line with previous findings of the CAN model, we assume that high-attitude-strength networks of a number of stereotypical, emotional, and behavioral evaluations toward the Roma will possess a significantly stronger degree of global connectivity compared to those of low-attitude-strength networks.

METHOD

Twenty-seven stereotypical, emotional, and behavioral evaluative responses toward the Roma (for an overview of the underlying components of an attitude, see McGuire, 1990) were used to examine their connectivity in the networks of high versus low attitude strength for each country. Four steps of network data analysis were performed: network estimation, network comparison, network inference, and network stability, recommended by Fried et al. (2018). Moreover, an additional check section was added to report the results of pathway analyses.

Participants

Nationally representative survey data were collected through online participant pools across five countries; Hungary (N = 1,039, M_{age} = 47.99, SD_{age} = 14.84, 52.7% women), Romania (N = 1,044, M_{age} = 42.11, SD_{age} = 15.80, 48.2% women), Slovakia (N = 1,033, M_{age} = 44.06, SD_{age} = 16.10, 52.7% women), France (N = 975, M_{age} = 42.10, SD_{age} = 13.30, 54% women), and Ireland (N = 1,000, M_{age} = 44.91, SD_{age} = 15.72, 51.5% women).

Based on simulation studies (Epskamp, 2016), a moderate-size network with 24 nodes for continuous data is recommended to be estimated from at least 250 respondents approximately. The number of participants for all networks was sufficient (Hungary: N_{high} = 511, N_{low} = 512; Romania: N_{high} = 467, N_{low} = 463; Slovakia: N_{high} = 516, N_{low} = 517; France: N_{high} = 472, N_{low} = 498; Ireland: N_{high} = 476, N_{low} = 469). Moreover, 16 respondents from the Hungarian sample, 114 respondents from the Romanian sample, 5 respondents from the French sample, and 55 respondents from the Irish sample did not respond on the feeling thermometer scale and were removed from the analysis.

Data were collected by professional opinion poll companies in each country, working with the IRB approval of Eötvös Loránd University. The surveying companies used a multiple-step, proportionally stratified, probabilistic sampling method of an online participant pool, resulting in a sample demographically similar to the respective population in terms of age, gender, and type of settlement. Note that the French sample was representative only regarding age and gender. (See **Supplementary Material** for the demographic similarities between each sample and the corresponding population).

Measures

Twenty-seven items of stereotypes, emotions, and collective action tendencies toward the Roma were selected for the network estimations from the omnibus surveys. A 14-item revised Attitudes Toward Roma Scale[1] (original ATRS; Kende et al., 2017), with three subscales, was used. Six items of ATRS measured Blatant Stereotyping (e.g., "There are very little proper or reasonable Roma people."), five items measured Undeserved Benefits (e.g., "The real damage is caused by organizations which offer an undeserved advantage to Roma people."), and three items measured Cultural Difference ("The Roma can be proud of their cultural heritage."). Four discreet intergroup emotions were measured, each with a single item: empathy ("I feel empathy with Roma people"), sympathy ("I feel sympathy with Roma people."), anger ("I feel anger about the treatment of Roma people."), and hope ("I feel hopeful about the future of Roma people."). Collective action intentions with a pro-Roma orientation were measured by six items, including items on engagement in traditional forms of collective action, such as signing petitions [e.g., "I would participate in some form of action (e.g., signing a petition) defending the rights of the Roma."] as well as items about offering donations and volunteerism (e.g., "I would donate clothing, school supplies or toys for Roma families."). Lastly, three items measured perceived threat to national identity [e.g., "Roma people are a threat to (country) culture."]. All the items were measured on a seven-point scale (1 = strongly disagree; 7 = strongly agree).

As a general measure of attitude, we used a single-item feeling thermometer scale measuring participants' attitudes toward the Roma from 0 (very unlikeable) to 100 (very likeable). Attitude extremity as one feature of attitude strength (see Krosnick and Petty, 1995), was calculated by computing the deviation of the participants' responses from neutrality on the feeling thermometer scale (for operationalizing attitude extremity, see Krosnick and Smith, 1994). First, the absolute difference between each participant's score and the scale mean was calculated. Next, on the new computed item, participants with values from the lowest through the median were selected as low-attitude-strength groups and the rest as the high-attitude-strength group ($Hungary_{median}$: 20.35; $Romania_{median}$: 25.52; $Slovakia_{median}$: 20.42; $France_{median}$: 20.14; $Ireland_{median}$: 22.74). Correlations between the variables, descriptive statistics of all the items, and the items themselves can be found in the **Supplementary Material**.

Network Estimation

For each country, a pair of high- versus low-attitude-strength networks were estimated. Using the Extended Bayesian Information Criterion function EBICglasso from the R package

[1]We improved the original 16-item scale by including reversed items and made the cultural subscale unambiguously about cultural recognition. These revisions were made as part of project PolRom (www.polrom.eu). This paper is the first publication of the new scale.

qgraph (Epskamp et al., 2012), correlation matrices were inverted into partial correlation matrices to obtain unique statistical associations between all possible pairs of nodes. The correlation matrices were computed through pairwise complete observations to keep all the participants with missing values in the analyses. Also, a regularization technique, LASSO (least absolute shrinkage and selection operator), was employed to control the effects of redundant correlations by setting small coefficients to zero (Friedman et al., 2008).

Network Comparison

As the main analysis of this study, we compared global connectivity of all high- versus low-attitude-strength networks for each country using the R package "NetworkComparisonTest" (NCT; van Borkulo et al., 2017). We applied a permutation method with 1,000 iterations to examine if high-attitude-strength networks in each country are significantly more connected in comparison with low-attitude networks. In addition, networks were examined as to whether they are structurally different, meaning, for any pair of networks, if there is any edge weight that is significantly different.

Network Inference

To identify the most influential nodes in high-attitude networks, we computed centrality metrics. Centrality refers to the extent that a node is influential in its interactions with other nodes in a network. Among several centrality metrics, we chose *strength* and *node predictability*. Strength is the sum of all edge weights that a node acquires in relation to all other nodes (Barrat et al., 2004). Using the R package "mgm" (Haslbeck, 2015), we computed the node predictability of each item, which is the proportion of variance for each node explained by all other nodes on average.

Network Stability

Employing R package bootnet (Epskamp et al., 2018), we computed centrality and edge weight accuracy of all networks. A network is considered stable (i.e., the centrality indices are interpretable) if the order of a centrality index is identical after re-estimating the network with a smaller number of participants, that is, if the correlation stability coefficient (CS-coefficient) is preferably higher than 0.5 and no smaller than 0.25. CS-coefficient is the quantification of the maximum proportion of cases dropped, with 95% probability, so that centrality metrics or edge weights of the remaining cases correlate with those of the original network higher than 0.7 (Epskamp et al., 2018). In addition, bootstrapping with 95% confidence intervals around the edge weights was performed for all networks as an indicator of edge weight accuracy.

RESULTS

Network Estimation

Five pairs of high- and low-attitude-strength networks for each sample are depicted in **Figure 1**. Out of 351 possible edges, networks of high attitude strength were found to have a greater number of non-zero edges (Hungary: 166 vs. 160; Romania: 177 vs. 153; Slovakia: 173 vs. 147; France: 184 vs. 145; Ireland: 173 vs. 145).

Network Comparison

The global connectivity of every network of high attitude strength was significantly higher compared to that of their corresponding low-attitude-strength network (Hungary: 12.38 vs. 11.64, $p = 0.03$; Romania: 11.85 vs. 10.46, $p < 0.001$; Slovakia: 12.17 vs. 10.97, $p = 0.005$; France 13.48 vs. 11.77, $p < 0.001$; Ireland: 12.94 vs. 11.59, $p < 0.001$). In addition, none of our network pairs showed a significant difference between their edge weights. This implies that high networks did not structurally differ from their corresponding low networks, and the only difference was in their global connectivity.

As mentioned above, to measure attitude extremity, the absolute difference of each participant's response from the mean value was computed on a feeling thermometer scale. Next, two sub-samples of high and low attitude extremity were created for each country by splitting the datasets by the median of the computed item. As a sensitivity analysis, we split the datasets by 40th–60th as well as 60th–40th percentiles. We ran 10 additional permutation tests. For 8 out of 10 of the comparisons, the effect was still significant. Only in the case of Hungary in the 40th–60th percentile split, we did not find a significant difference, and in the 60th–40th percentile split, the difference was marginally significant ($p = 0.053$).

As another sensitivity analysis, we estimated the networks by a different technique. We binarized all the 27 nodes into zero (from 1 to 4 as not holding the belief) and one (from 5 to 7 as holding the belief) and re-estimated weighted networks with an eLasso technique using the R package IsingFit (van Borkulo and Epskamp, 2015). The eLasso technique regresses all the nodes on all other nodes and regularizes all the regressions controlling for the multicollinearity problem when many variables are regressed on each other (Friedman et al., 2008). Next, the best model fitting the extended Bayesian information criterion is selected (Foygel and Drton, 2010). We then compared all the corresponding high and low networks again by a permutation test with 1,000 iterations. The results were similar to the main analyses, as all of the high-attitude-strength networks showed a significantly higher global connectivity compared to those of low-attitude networks. Moreover, centrality values and network stabilities were also similar to the networks estimated by EBICglasso.

Network Inference

Figure 2 shows the strength centrality values of all the items of the full-size networks (see the **Supplementary Material** for further details of the centrality values of all the full-size as well as high- and low-attitude networks). On average, the most central values were found to be empathy in Hungary, perceived threat to national identity in Romania, and sympathy in Slovakia, France, and Ireland. Regarding node predictability, perceived threat to national identity was predicted by other variables to the highest extent in all the full-size networks. Moreover, the order of centrality values of the full-size networks was

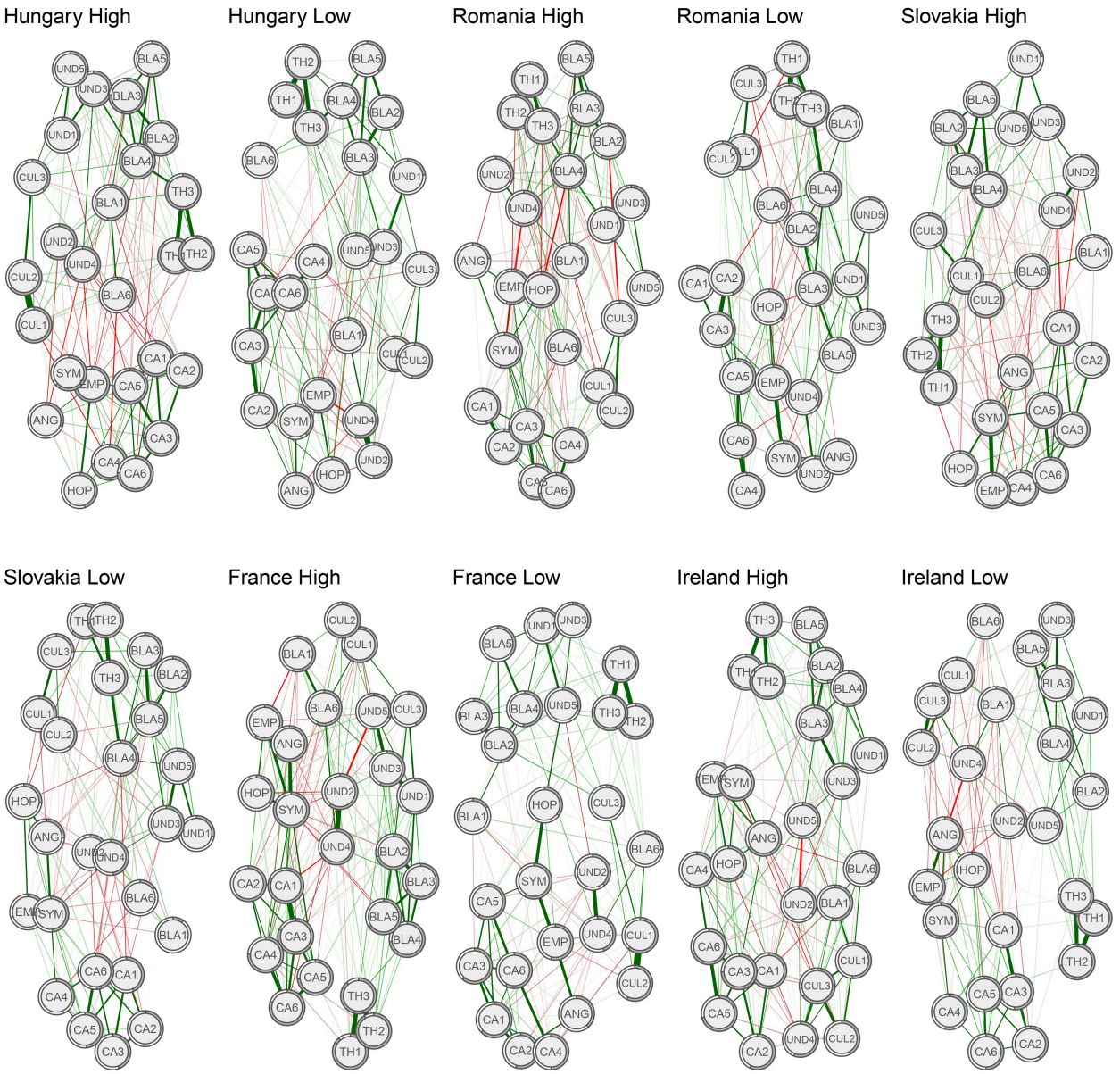

FIGURE 1 | Regularized partial correlation networks of high versus low attitude strength. Node predictability is highlighted by the gray line around each node. Red lines depict negative correlation coefficients, and the thickness of the lines represents the magnitude of partial correlation coefficients. UND1, Undeserved Benefit_1; UND2, Undeserved Benefit_2; UND3, Undeserved Benefit_3; UND4, Undeserved Benefit_4; UND5, Undeserved Benefit_5; CUL1, Cultural Difference_1; CUL2, Cultural Difference_2; CUL3, Cultural Difference_3; BLA1, Blatant Stereotyping_1; BLA2, Blatant Stereotyping_2; BLA3, Blatant Stereotyping_3; BLA4, Blatant Stereotyping_4; BLA5, Blatant Stereotyping_5; BLA6, Blatant Stereotyping_6; CA1, Collective Action_1; CA2, Collective Action_2; CA3, Collective Action_3; CA4, Collective Action_4; CA5, Collective Action_5; CA6, Collective Action_6; EMP, Empathy; SYM, Sympathy; ANG, Anger; HOP, Hope; TH1, Perceived Threat_1; TH2, Perceived Threat_2; TH3, Perceived Threat_3. The green lines represent positive correlations.

highly similar to those of the corresponding high- and low-attitude networks.

Network Stability

Regarding strength centrality, all networks were found to be stable—CS-coefficients were higher than 0.5. Moreover, the edge weights were sufficiently accurate for all networks; the confidence intervals were small enough so that edge weights were interpretable (see **Supplementary Material** for more details).

Additional Check

As an additional check, we also tested if the structure of anti-Roma bias fits with the intergroup bias structure proposed by Fiske (2015)—social structure predicting stereotypes, which predict emotional prejudice, which in turn predicts behavioral

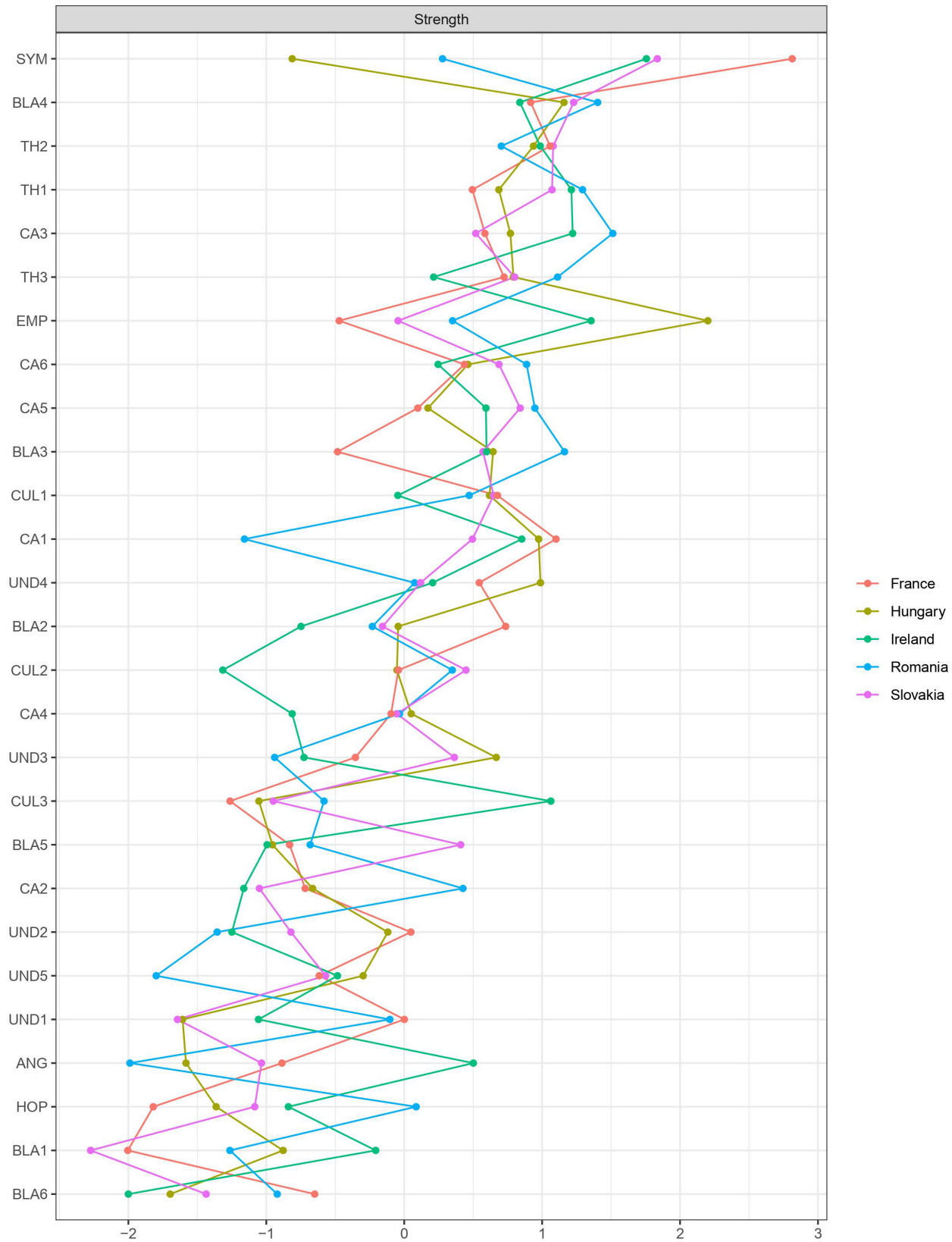

FIGURE 2 | Strength centrality plot of the full-size regularized networks showing standardized *z*-score values of strength centrality. Strength measures the sum of all the regularized partial correlation coefficients for each node.

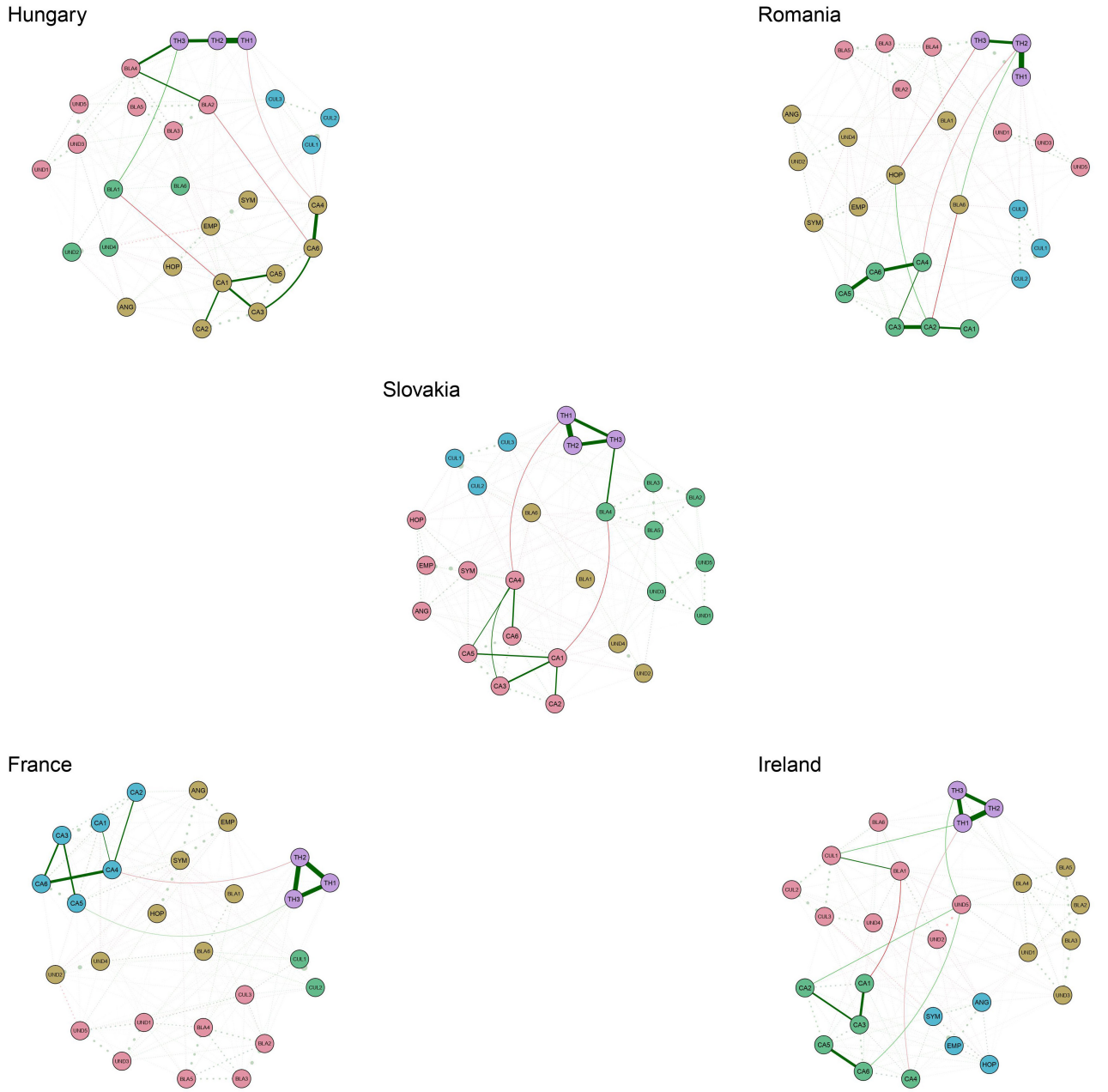

FIGURE 3 | Shortest pathways from perceived threat to national identity to collective action tendencies in the full-size networks. The solid lines depict the edges that belong to the shortest paths. The same colored circles belong to the same community.

tendencies. We examined the shortest paths from perceived threat to national identity nodes (considered as social structure) to collective action tendency nodes (considered as behavioral tendencies). In all the full-size networks, using the R package EGAnet (Golino and Christensen, 2019), we estimated the number of dimensions, and with the pathways function from the R package qgraph (Epskamp et al., 2012), we examined the shortest paths. **Figure 3** shows that there are several shortest paths going from perceived threat to national identity nodes to collective action tendency nodes through the nodes on stereotypical evaluations, while there are also direct paths. However, we do not see the role of emotions in the pathways. The reason should be due to the nature of the intergroup emotions measured in this study, which are prosocial emotions such as hope and empathy as opposed to prejudicial emotions such as contempt and disgust. Overall, the pathways seem to be more or less consistent with the theoretical framework suggested by Fiske (2015). Similar pathway analyses for both high- and low-attitude-strength networks are visualized in the **Supplementary Material**.

Discussion

The CAN model (Dalege et al., 2018) was used to examine network connectivity in terms of the evaluative responses on the presidential candidates and found that network connectivity predicts the extent to which individuals are interested in political campaigns. In the current study, we supplemented the connectivity hypothesis by testing it in the context of anti-Roma bias. Using a network approach, we investigated if attitude strength would significantly be associated with stronger connectivity in the networks of a set of stereotypical, emotional, and behavioral reactions toward the Roma people. The findings supported our assumption in all pairs of high versus low networks estimated from the nationally representative samples collected in Hungary, Romania, Slovakia, France, and Ireland. That is, for those who hold a stronger attitude toward the Roma, relevant stereotypical, emotional, and behavioral evaluations are causally interrelated to a significantly higher extent. Moreover, we went beyond the previous research by framing network connectivity as a theoretical justification for future intervention-based research in the context of anti-Roma bias in particular and intergroup relations in a broader scope.

Due to the cross-sectional nature of the study, however, we did not examine the other two empirical findings of the CAN model: the relationship between network connectivity and stability of the attitude in time and its impact on actual behavior. Employing longitudinal designs, future research should consider if this would also be the case with regard to stereotypical evaluations. Moreover, we measured attitude strength by computing the participants' deviations from neutrality on a feeling thermometer scale. However, extreme responses might not necessarily be due to the strength of the attitude but, rather, the individuals' response styles. Future research should consider other features and/or measurements and operationalizations of attitude strength. Further, in the current research, we measured behavioral intentions through collective action tendencies; future research could include different measurements such as the preference for contact with Roma people.

Previous research shows that cognitive consistency is a sine qua non factor in configuration of an attitude and the process of its change (e.g., Simon et al., 2004; Monroe and Read, 2008). We also know that the need for cognitive consistency would increase as the attitude strength toward an object increases (see Howe and Krosnick, 2017). By showing that network connectivity is a proxy measurement of attitude strength with regard to anti-Roma evaluations as well, the practical implication of our findings would be to identify and target the most central nodes in anti-Roma attitude networks. This would be a useful means for intervention efforts to combat anti-Roma bias, as in case the most central nodes are at odds with the others, the system should tend to retain consonance, as the connectivity between the nodes is an expression of attitude strength and its related properties such as consistency and stability. This requires further empirical investigations, concerning research on stereotype dynamics, of whether interventions based on the variables with the highest degree of centrality would actually render the most favorable results.

Furthermore, our findings show that regarding the node predictability metric, perceived threat to national identity in all the networks, and regarding the strength metric, empathy in Hungary, perceived threat to national identity in Romania, and sympathy in Slovakia, France, and Ireland were the most central values. Since all the most central values are of an affective nature, our findings suggest that interventions may induce the most favorable impact if the focus were on affective components rather than cognitive components (stereotypes for example) of the social perception of the Roma. This is consistent with the Intergroup Emotions Theory (e.g., Mackie et al., 2008) as well as the Behaviors from Intergroup Affect and Stereotypes (BIAS) Map (Cuddy et al., 2007), which suggest the crucial role of intergroup emotions in predicting relevant behavior. Moreover, our findings also resonate with the literature on intergroup anxiety, proposing the central role of the affective component of intergroup anxiety in prejudice reduction interventions (see Stephan, 2014).

In short, we argue that employing a network approach, by taking network connectivity as a theoretical backbone into consideration, could be a useful tool to depict a complex representation of stereotypical evaluations that have direct and unique connections with each other, to identify values with the strongest associations. Finding the most influential values would enable us to carry out the most effective attitude change interventions. In addition, we propose that the nature and order of central values, as well as other properties of the network dynamic of high-attitude-strength networks, should be taken into account as a perhaps more informative picture for understanding the nature of interconnectedness between different anti-Roma stereotypical evaluations.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Eötvös Loránd University, the approval number is 238/2019. The Ethics Committee waived the requirement of written informed consent for participation.

AUTHOR CONTRIBUTIONS

HS and MH developed the research question. HS carried out the data analyses and wrote the manuscript. MH, AK, BL, XP, MP, MB, AE-V, CB, YM, AO'C, and AM

carried out the data collection and also supervised the research through the critical revision of the manuscript conceptually and analytically. All authors discussed the results and approved the final version of the manuscript to be published.

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SUPPLEMENTARY MATERIAL

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The Impact of Response Instruction and Target Group on the BIAS Map

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Response instructions—inviting participants to respond from a certain perspective—can significantly influence the performance and construct validity of psychological measures. Stereotype Content Model (SCM) and then the BIAS map ("behaviors from intergroup affect and stereotypes") were originally developed as universal measures of shared cultural stereotypes—participants' perceptions of what most of the people in a society think about the target group—and their related social-structural antecedents, emotions and behavioral tendencies. Yet a number of studies have adopted a different response instruction focusing on individual stereotypes—what the participants personally think about the target group. So far, there is little evidence to suggest how these two different response instructions (individual vs. shared cultural perspective) might influence the performance of the BIAS map, especially when applied to target groups that elicit different normative and social desirability concerns. To provide novel evidence, we conducted an experiment with a representative sample of ethnic Slovaks (N = 1269). In a 2 × 2 factorial design, we found response instruction (individual vs. shared cultural perspective) and target group [stigmatized ethnic minority (the Roma) vs. non-stigmatized ethnic minority (the Hungarians)] had significant effects on the BIAS map and their interaction had significant effects on the social structure and behavioral tendencies (but not on stereotypes and emotions) scales. Exploratory analysis also points to partial influence on the mediation hypothesis underlying the BIAS map and minor effects on its scale properties. Our evidence suggests that the difference between individual stereotypes and shared cultural stereotypes partially depends on the target group in question and that they should be treated as two potentially separate constructs.

Keywords: BIAS map, Stereotype Content Model, response instruction, target group, the Roma, the Hungarians

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INTRODUCTION

Response instructions—asking participants to answer from a certain perspective—can have a significant impact on the performance and construct validity of psychological measures (Ployhart and Ehrhart, 2003; Pauls and Crost, 2005; McDaniel et al., 2007). The Stereotype Content Model (SCM) and the BIAS ("behaviors from intergroup affect and stereotypes") map were originally devised to assess stereotypes from a shared cultural perspective—participants' perceptions of what most of the people in their society think about the target group (Fiske et al., 2002; Cuddy et al., 2007; Cuddy et al., 2008). However, many subsequent studies utilizing the SCM and the BIAS map

instructed participants to respond from their individual perspective—what they personally think about the target group. Despite recent concerns about this practice (Bye and Herrebrøden, 2018; Kotzur et al., 2019a) and emerging evidence about the impact of response instruction format on the warmth and competence scales of the SCM (Popper and Kollárová, 2018; Kotzur et al., 2020), little is known about whether instructions inviting responses from individual and shared cultural perspectives influence the BIAS map (including the SCM), especially when applied to target groups that elicit different normative and social desirability concerns, as in Slovakia's intergroup relations context (the Roma—a stigmatized ethnic minority vs. the Hungarians—a non-stigmatized ethnic minority). In order to fill this gap, we seek to provide novel evidence by testing the hypotheses about the impact of response instruction, target group, and their interaction on the BIAS map scores in a factorial between-subject experiment. In addition, we also explore the potential impact of these two factors on scale properties and the mediation hypothesis underlying the BIAS map.

The SCM and the BIAS Map

The SCM (Fiske et al., 2002) has become a universal measure of intergroup perception, describing the content and social-structural antecedents of stereotypical beliefs about diverse categories of people (e.g., societal subgroups based on their gender, ethnicity, or sexual orientation) across America, Europe and Asia (Cuddy et al., 2009; Fiske, 2018). It posits that the perceived socio-economic status and competitiveness of out-group members predict how in-group members evaluate the out-group members along two universal dimensions of social cognition—competence and warmth—which elicit the corresponding affective reactions of admiration, envy, pity and contempt (Fiske et al., 2002; Fiske et al., 2007; Caprariello et al., 2009). The SCM was subsequently developed into a BIAS map framework to include emotions as well as components of behavioral tendencies (Cuddy et al., 2007, 2008). The BIAS map framework integrated the SCM's composite scales—social structure scale (status and competitiveness subscales), stereotypes scale (competence and warmth subscales), emotions scale (contempt, admiration, pity and envy subscales)—with the behavioral tendencies scale (active facilitation, active harm, passive facilitation and passive harm subscales) (Cuddy et al., 2007, 2008). Central to the BIAS map model is the "mediation hypothesis": that the emotional reactions of admiration, envy, pity and contempt mediate the relationship between warmth stereotypes and the behavioral tendencies of active harm (harassing) or active facilitation (helping) and competence stereotypes and the behavioral tendencies of passive harm (neglecting) or passive facilitation (associating). According to the mediation hypothesis underlying the BIAS map (Cuddy et al., 2007), admired target groups perceived as warm and competent evoke both active and passive facilitation tendencies; hated groups perceived as cold and incompetent elicit both active and passive harm tendencies; envied groups perceived as cold and competent prompt passive facilitation and active harm tendencies; and pitied groups perceived as warm and incompetent evoke active facilitation and passive harm tendencies.

Response Instructions in the SCM and BIAS Map

The SCM and the BIAS map instruments adopted identical response instructions that, rather than asking participants about evaluations of target groups from their own *individual perspective*, tapped into their *perceptions* of these evaluations from *a shared cultural perspective*, arguably safeguarding their responses against social desirability bias (Fiske et al., 2002). Originally, both instruments used the group-centered understanding of stereotypes—"beliefs about the predominant cultural view of a group" rather than the individual-centered one—"personal beliefs about the characteristics of a group" (Krueger, 1996, p. 536). In the initial SCM study, "participants were instructed to make the ratings, using 5-point scales (1 not at all to 5 extremely), on the basis of how the groups are viewed by American society. The instruction was, "We are not interested in your personal beliefs, but in how you think they are viewed by others." As in all our studies, this instruction was intended to reduce social desirability concerns and to tap perceived cultural stereotypes" (Fiske et al., 2002, pp. 884–885). This original response instruction, used in the SCM and the BIAS map to investigate perceptions of stereotypes from *a shared cultural perspective,* has been employed in numerous observational and experimental studies asking participants to view the target groups or categories of people through the eyes of "most of the people" in their country or "others in the society," or to consider them in terms of how they are "viewed by the . . . society" or "people like you" (Cuddy et al., 2007; Asbrock, 2010; Cichocka et al., 2015; Bye and Herrebrøden, 2018, Study 1; Cuddy et al., 2009, Study 1; Eckes, 2002; Koenig and Eagly, 2014; Janssens et al., 2015; Froehlich and Schulte, 2019; Grigoryan et al., 2019; Studies 1a, 1b, and 1c; Lee and Fiske, 2006; Sadler et al., 2015; Stanciu, 2015; Stanciu et al., 2017; Kotzur et al., 2019a).

Nonetheless, a number of studies employing the SCM and the BIAS map have used a different response instruction, focusing on participants' evaluations from their own *individual perspective*. Diverging from the original social, group-centered, shared cultural perspective, these studies instructed their participants to express personal stereotypical beliefs, by for instance asking them about "your opinion about a particular group" or "how (e.g., warm) do you think this person is" (Becker and Asbrock, 2012; Koschate et al., 2012; Matthews and Levin, 2012; Durante et al., 2014; Awale et al., 2018; Constantin and Cuadrado, 2019; Kotzur et al., 2019b, Study 2; Sweetman et al., 2013; Ponsi et al., 2016; Sink et al., 2018, Study 2; Ufkes et al., 2012).

Personal Beliefs and Social Norm Perceptions

An abundant evidence in the social psychology literature points to the discrepancy between what people personally think and their perceptions of social norms: what they perceive others think about an issue (Tankard and Paluck, 2016). Pluralistic ignorance occurs when people falsely estimate the majority attitude to be

different from their own (Katz et al., 1931; Prentice and Miller, 1993; Van Boven, 2000) and has been defined as "shared false ideas" by Shamir and Shamir (1997). It can take the form of unawareness, when people believe that everyone else has the same or a different opinion from theirs, or minor bias (Shamir and Shamir, 1997). In relation to intergroup attitudes, false perception of the majority view was often found to follow a typical pattern: people were more open when asked about their own views than when asked about their perceptions of attitudes within their social environment or among the population at large. This special type of pluralistic ignorance, which is typically associated with overestimations of the acceptance of prejudice in society, is called *conservative bias* (Fields and Schuman, 1976).

The relationship between social norm perceptions and individual intergroup attitudes and behavior has also been studied beyond pluralistic ignorance or conservative bias, e.g., Sherif and Sherif's (1953) Group Norm Theory. Crandall et al. (2002) found that people closely follow perceived norms (what other people do and ought to do) when expressing prejudice and also adjust their intended behavior to what they perceive to be acceptable in their in-groups. Moreover, a number of experimental studies have demonstrated that the perceived social consensus (prevalent opinions of other relevant people) regarding the target groups has a validating effect on individuals' personal attitudes, stereotypic beliefs and behaviors toward these target groups (Haslam et al., 1996; Wittenbrink and Henly, 1996; Sechrist and Stangor, 2001; Stangor et al., 2001a,b). This line of research led to the decision to ask about perceptions of others' stereotypical beliefs rather than about the participant's personal stereotypical beliefs in the SCM and BIAS map, in an attempt to "reduce social desirability concerns" (Fiske et al., 2002, pp. 884–885). After all, social desirability bias—"the tendency of research subjects to choose responses they believe are more socially desirable or acceptable rather than choosing responses that are reflective of their true thoughts or feelings" (Grimm, 2010)—stems from the social norms that indicate which attitudes, beliefs or behaviors are perceived as socially acceptable or desirable in the given social context or situation (Nederhof, 1985).

The validating influence of perceived normative consensus and related social desirability concerns suggest a potential convergence between the expression of stereotypes and prejudice from personal and social normative perspectives. However, previous research suggests that it would not apply equally to all target groups (Crandall et al., 2002; Crandall and Eshleman, 2003).

The Impact of Response Instruction on the BIAS Map

Although the relationship between personal beliefs and attitudes on the one hand and perceptions of others' beliefs and attitudes on the other has been extensively described from various theoretical perspectives, there is still a limited empirical evidence on how response instructions prompting an individual vs. shared cultural perspective might influence the performance of the BIAS map measure.

This inconsistency in the use of response instructions in the SCM and the BIAS map and the potential repercussions for the performance and properties of the two measures was highlighted by Kotzur et al. (2019a), who argue for the systematic evaluation of the potential impact of using individual vs. shared cultural perspective response instructions on the SCM. Similarly, Bye and Herrebrøden (2018) assert that the impact of individual vs. shared cultural perspective response instructions on the BIAS map deserves closer scrutiny, especially since this may be one of the factors responsible for the mixed empirical support for the mediation hypothesis proposed by the BIAS map framework.

Emerging evidence suggests that these different response instructions influence the level of reported stereotypes. In cognitive interviews conducted with a convenience sample of secondary school students and adults in Slovakia (N = 24), Popper and Kollárová (2018) found that participants expressed more negative stereotypes about the Roma when they were instructed to answer from the viewpoint of the majority of people in Slovakia than when they were asked to respond from the perspective of people who they are close to or from their own personal perspective. Participants reported that they found responding from their own personal perspective more agreeable and less difficult than responding from the other two perspectives. However, the small number of participants make these findings difficult to generalize. Recently, Kotzur et al. (2020) observed that German participants gave less positive assessment of multiple groups "but only on already depreciated stereotype content dimensions" when instructed to respond from the societal perspective compared to the individual perspective instruction. Moreover, they have argued that the mean level differences in reported stereotypes between different responses instructions might not under all circumstances reflect the relative position of different target groups within the two-dimensional stereotype content space (Kotzur et al., 2020). Even small differences in the mean level of reported stereotypes can be indicative of the distinctive social perceptions and behaviors toward members of different target groups, with some groups (including the Roma) being outliers within their particular SCM quadrant (see e.g., Grigoryev et al., 2019).

Kotzur et al. (2020) recognized the limited scope of their analysis focusing solely on stereotypes scales (warmth and competence) of the SCM and suggested that future research should also investigate other components of the SCM and its extensions (the BIAS map). To answer their call, we seek to extend their evidence to include the potential effects of response instruction, the target group, and their interaction on the performance and properties of the social structure, stereotypes, emotions and behavioral tendencies scales, and the mediation hypothesis of the BIAS map.

The Impact of Target Group on the BIAS Map

The kind of target group being studied may also feed into the effects of the individual vs. shared cultural perspective instructions on participants' responses to the BIAS map. Different target groups are associated with different normative, and more

specifically, social desirability effects on participants' reluctance to express stereotypes and prejudice in self-reported measures. As Crandall et al. (2002) point out, due to the perceived normative consensus, hostility and prejudice against certain target groups is normatively more sanctioned than against other target groups. Prejudice against rapists and child abusers is more justified and its expression is suppressed less than hostility against the elderly and people with hearing loss. Often, it is not even considered prejudice. Social conformity with perceived majority beliefs and attitudes can lead to suppression and under-reporting of forms of prejudice that attract normative disapproval (Crandall and Eshleman, 2003). Perceptions of the majority's view of whether individuals will express stereotypes, prejudices and discrimination therefore depend on the specific target group being investigated. In psychological measures that rely on self-reports, different target groups will attract different normative acceptability and social desirability concerns.

The presumed impact of the target group on the expression of individual stereotypes and perceptions of shared cultural stereotypes is well illustrated by comparing two largest ethnic minorities in Slovakia—Roma and Hungarians. These groups are not commonly studied in the SCM and the BIAS map scholarship. When compared with the Roma, the Hungarian ethnic minority in Slovakia enjoys a higher status, which is reflected in their standard of living that is similar to that of the Slovak majority; in the extensive system of schools with Hungarian language instruction; well-organized Hungarian ethnic political parties that have repeatedly formed part of governing coalitions; and the vigorous political, economic and cultural support of their kin-state—Hungary (Stroschein, 2018). In contrast, the Roma communities in Slovakia suffer from extreme poverty, social exclusion, and spatial segregation (Rochovská and Rusnáková, 2018). They are also subject to stigmatization, marginalization, blatant prejudice and dehumanization (Kteily et al., 2015, Study 4). Evidence suggests that anti-Gypsyism remains "the last acceptable prejudice in Europe" (Kende et al., 2020). Kende et al. (2017) maintain that the normative climate in Slovakia (and Hungary) encourages the expression of anti-Roma prejudice. They consider the hostility against the Roma to be "one of the most severe forms of bias all over Europe" that reflects "socially approved dominant societal norms" (p. 12). Similarly, Cichocka et al. (2015) claim that members of the Roma minority in Poland "are least protected by 'political correctness' norms and are the most frequent target of hate speech in Poland" (p. 796).

However, considering the importance of the cultural and societal context for understanding intergroup relations (Pettigrew, 2018), the role of context must be accounted for when studying the effect of the target group on the individual and shared cultural stereotypes. As Bilewicz (2012) observes, the same ethnic minority group (e.g., the Roma) can be "subtly infra-humanized in Britain" and "still harshly and openly dehumanized in Romania" (p. 428). The same target group can elicit different social desirability concerns engendered by specific cultural and societal intergroup contexts and normative climates. The presumed effect of the target group on the BIAS map is thus category- and context-sensitive in equal measure (Grigoryan et al., 2019).

The Present Research

So far, the design of previous studies on the SCM and the BIAS map makes it difficult to assess the impact of the target group on the performance and properties of these scales. In four studies in Fiske et al. (2002) and two studies in Cuddy et al. (2007) participants rated between 4 and 25 groups simultaneously (in Study 2 of Fiske et al., 2002, the rated groups were split in half and presented in a reversed order). Similarly, in three studies in Kotzur et al. (2020) participants assessed between 6 and 38 groups at once. Since these articles report no random order of the rated groups, their design could allow for the effects of question order on participants' responses due to social comparison and "norm of reciprocity or fairness" (Hyman and Sheatsley, 1950; Oldendick, 2008). Random ordering of scale presentation in these studies could have overcome these potential limitations (Perreault, 1975). To control for these potential effects of question order and explore the impact of the target group, we adopted an experimental design in which participants rate one target group on all dimensions of the BIAS map measure. Following the advice of Crosby et al. (1980) and Crandall et al. (2002) that experiments (compared to surveys) are less obtrusive measures of prejudice (and stereotypes) that better account for social conformity pressures, we chose not to adopt a survey design in which all participants would answer the BIAS measure in all response instruction and target group conditions. Instead, in line with recommendations of Bu and Borgida (2020), we opted for an experimental 2 × 2 factorial design that would allow us to test the anticipated interaction between the effects of response instruction and target group on participants' responses to the BIAS map.

In the present study, we experimentally test the hypothesized impact of the response instruction (individual perspective vs. shared cultural perspective), target group [stigmatized out-group in Slovakia (Roma) vs. non-stigmatized out-group in Slovakia (Hungarian)], and their interaction on the BIAS map scores. Based on the literature (Fields and Schuman, 1976) and previous findings (Popper and Kollárová, 2018; Kotzur et al., 2020), we test the following hypotheses:

H1 (Response instruction effect): Participants instructed to respond from a shared cultural perspective will report less favorable evaluations in the BIAS map scales than participants instructed to respond from their individual perspective.

H2 (Target group effect): Participants instructed to respond about stigmatized target group (Roma) will report less favorable evaluations in the BIAS map scales than participants responding about non-stigmatized target group (Hungarian).

H3 (Interaction effect): Target group interacts with response instruction to influence BIAS map scores such that stigmatized target group (Roma) elicits less favorable evaluations in the BIAS map scales when using a shared cultural perspective (compared to individual perspective) than non-stigmatized target group (Hungarian).

We also explore the potential impact of response instruction and target group on scale properties (skewness and kurtosis of BIAS map subscales, multivariate skewness and kurtosis of BIAS map scales, reliability, scalability) and the mediation hypothesis underlying the BIAS map.

MATERIALS AND METHODS

Participants

Data were collected in October 2017 from 1,393 participants to obtain a quota-representative (gender, age, education, region, and population size of the municipality) sample of a general Slovak population. 21 participants were excluded for exceeding quotas and 103 for failing attention checks (22 participants from the "Roma + shared cultural perspective" condition, 40 from the "Hungarian + shared cultural perspective" condition, 23 from "Roma + individual perspective" condition, 18 from "Hungarian + individual perspective" condition). The final sample comprised 1,269 ethnic Slovak participants (647 women—50.1%; aged 18–65 years, M = 39.6, SD = 13.22), whose gender, age, education and region of residence were representative of the general Slovak population. Sample size was determined *a priori* by rule of thumb: a minimum of 300 participants in each condition; hence we expected at least 1,200 valid responses. A *post hoc* sensitivity analysis for fixed, special, main effects and interactions in ANOVA using G*Power with $\alpha = 0.05$, numerator df = 1 and four groups showed that we had an 80% chance of detecting a main effect as small as $f = 0.08$ ($d = 0.16$). Participants were recruited from a national online panel administered by 2muse agency and received points for completing the questionnaires that could be exchanged for various rewards.

Materials and Procedure

The adaptation and validation of the Slovak version of the BIAS map (Lášticová et al., underv review) was based upon Fiske et al. (2002, Study 1) and Cuddy et al. (2007). Participants were randomly allocated to one of the four conditions in the 2 × 2 factorial design (individual perspective vs. shared cultural perspective) and [the Roma (stigmatized, low status out-group in Slovakia) vs. Hungarians (non-stigmatized, high status out-group in Slovakia)]. In each condition they were instructed to answer on a scale from 1 (*not at all*) to 5 (*extremely*) reflecting how they personally viewed, felt and would behave (individual perspective) or how they thought most people in Slovakia would view, feel or behave (shared cultural perspective) toward the Roma or Hungarians. All participants answered the stereotypes scale [*competence* subscale (competent, capable, skilful), *warmth* subscale (warm, good-natured, friendly)], social structure scale [*status* subscale (living standard, prestigious jobs, social status), *competitiveness* subscale (special breaks, resources, power)], emotions scale [*contempt* subscale (contempt, disgust), *admiration* subscale (admire, proud), *pity* subscale (pity, sympathy), *envy* subscale (envious, jealous)] and behavioral tendencies scale [*active facilitation* subscale (help, protect), *active harm* subscale (fight, attack), *passive facilitation* subscale (cooperate with, associate with), *passive harm* subscale (exclude, demean)]. Participants also answered 10 questions about their motivation to express prejudice (Forscher et al., 2015) and 10 questions assessing their internal and external motivation to respond without prejudice (Plant and Devine, 1998). Subsequently, participants answered 12 questions regarding the quality and quantity of any direct contact they had with members of the target groups ("How often do you come into contact with the Roma/Hungarians? How often do you spend time with the Roma/Hungarians?") and its valence ("How do you feel while doing so?"); extended contact ("How many friends do you have that you know have Romani/Hungarian friends?"); vicarious mass-mediated contact ("How often do you come across media reports about the Roma/Hungarians?") and its valence ("What is the tone of these reports?")[1]. Finally, participants answered socio-demographic questions about their education (only if these data had not been recorded in the online panel), political right–left self-classification, conservative–liberal self-identification on cultural and ethical issues, voting preferences, religion, frequency of attendance of religious services and social status. Due to the large number of items in the questionnaire, participants also answered two attention check questions. Those who provided incorrect answers were automatically excluded from the analysis.

Statistical Analyses

We used Cronbach's α, McDonald's ω (for subscales consisting of at least three items, **Tables 3–5** reported in **Supplementary Material**) and Mokken scale analysis (coefficient H) to assess the properties of the subscales of the BIAS map. Mokken scale analysis is used to investigate psychometric properties of a scale, comparing its actual Guttman errors to expected errors (resulting in scalability score) and assessing "whether each item evaluates the same underlying concept" (Park et al., 2019). When assumptions are violated, the omega coefficient provides a better assessment of the internal consistency (reliability) of a scale than the alpha coefficient does (Dunn et al., 2014). For subscales consisting of two items, we also report Spearman-Brown coefficients (Eisinga et al., 2013). In the Mokken scale analysis (MSA), based on non-parametric item response theory models, we first partitioned the variables into subscales using automated item selection procedure (AISP) and then calculated goodness-of-fit for each of the subscales (Andries van der Ar, 2012). A coefficient H above 0.5 indicates a scale with strong scalability; between 0.4 and 0.5 moderate; between 0.3 and 0.4 weak; and below 0.3 unsatisfactory scalability (Andries van der Ar, 2012).

To analyze the main effect of instruction and target group and their possible interaction we used robust non-parametric analysis of multivariate outcomes in factorial experiments via MANOVA.RM package (Friedrich et al., 2019), which allows for MANOVA-like test, but without assuming multivariate normality. Non-parametric tests are more suitable for data that violate assumptions of normality and equal covariances structure, and also perform better for small to medium samples (Arboretti et al., 2018). To account for the number of tests performed on non-independent data, the 5% threshold alpha for interaction and main effect tests was corrected using the M_{eff} method (Derringer,

[1]We will report the findings about the quantity and quality of the direct contact with the Roma and motivation to express prejudice and respond without prejudice in different paper. We will follow the recommendations of Kirkman and Chen (2011) and Colquitt (2013) to avoid the "data slicing" concerns. All other measures, manipulations and exclusion are disclosed and reported. The methods section details how the final sample size was determined. No data were collected after the analysis.

2018). Using the meff function provided by Derringer (2018) we estimated a corrected effective number of tests for the set of 12 BIAS map subscales (M_{eff} = 10.39). The standard α threshold of 0.05 was then divided by M_{eff} to obtain the level of corrected α = 0.0048.

To test the mediation hypotheses, we computed four parallel multiple mediator models using the *mediate* function from the psych package (Revelle, 2019). To evaluate the presence or absence of a mediating relationship, we used bootstrapped (10,000 samples) indirect effects.

RESULTS

In this section we firstly report the descriptive statistics of the BIAS map subscales, focusing on the differences between the scores obtained in the experimental groups. Secondly, we analyse the scalability and reliability properties of the BIAS map. Thirdly, we examine the measurement invariance of the BIAS map. Fourthly, we explore the relationship between the response instruction (individual vs. shared cultural perspective), target group (stigmatized vs. non-stigmatized out-group), and the mediation hypothesis underlying the BIAS map. Finally, we report the hypothesized impact of response instruction, target group, and their interaction on the BIAS map scales. Outcome variables can be visually inspected in **Figures 1**, **2** with respective boxplots and distributions.

Descriptives

Following recommendations by Ho and Yu (2015) and Cain et al. (2017), we focus on the multivariate skewness and kurtosis of the BIAS map scales (see **Tables 1**, **2**). We report means, standard deviations, skewness and kurtosis of the respective subscales in **Supplementary Material**. Multivariate skewness and kurtosis follow the same logic as univariate, but compare the joint distribution of multiple variables against a multivariate normal distribution (Cain et al., 2017). For both multivariate skewness and kurtosis, a test statistic and *p*-value were computed. A *p*-value smaller than 0.05 indicates a non-normal distribution of the joint population. Out of all the BIAS map scales (social structure, stereotypes, emotions and behavioral tendencies), only the social structure scale produced non-significant results when multivariate skewness was analyzed. Formally, this indicates a lack of evidence for the distribution's departure from normality (Cain et al., 2017, p. 1718), but only in two out of the four experimental groups. In one case, the experimental group of "Hungarian + shared cultural perspective," the finding overlaps with a non-significant result of the multivariate kurtosis test, suggesting a multivariate normal distribution. No other combination of scale and experimental condition produced non-significant results for multivariate skewness and for kurtosis. These results suggest that statistical tests that rely on normality assumptions could be negatively influenced by the underlying data. Descriptive statistics and visualizations, including distributions, means, SD and correlations are reported in **Supplementary Material**.

Reliability and Scalability

Stereotypes

Automated item selection procedure (AISP) from the *mokken* package (Andries van der Ar, 2012) showed that the perceived competence and warmth items fit into the respective subscales in all four experimental conditions (see **Table 3** for details about the scalability of all scales). The *H* coefficients did not indicate any systemic problems with the scalability of the subscales, neither did the results of the reliability analysis using Cronbach's α and McDonald's ω coefficients (see **Supplementary Tables 3–5**). In all four experimental conditions was reliability of stereotypes subscales above 0.8 for Cronbach's α, with the lowest score in the "Roma + shared cultural perspective" condition for competence subscale (Cronbach's α = 0.8), not indicating any issues with the measures.

Social Structure

The Mokken scale analysis of the two subscales (status, competitiveness) using the AISP algorithm showed that the items form a joint scale in all four experimental conditions. Scalability was below 0.5 in both social structure subscales in one experimental condition ("Roma + shared cultural perspective"), indicating moderate scalability. Cronbach's α and McDonald's ω coefficients were acceptable in all conditions and subscales. Reliability of social structure subscales ranged from 0.64 and 0.71 (Cronbach's α) in the "Roma + shared cultural perspective" condition to 0.83 and 0.84 (Cronbach's α) in the "Hungarian + individual perspective" condition.

Emotions

Automated item selection procedure of emotions subscales showed that they can form individual scales; however, there was variation in scalability between the experimental conditions. Scalability ranged from 0.35 (weak scalability) for contempt in the "Roma + shared cultural perspective" condition to 0.75 (strong scalability) for envy in the "Hungarian + individual perspective" condition. A similar pattern was present in the other emotions subscales, with the exception of pity, which showed comparable scalability across conditions. Regarding the reliability of emotions subscales, subscales in the "Roma + shared cultural perspective" condition showed the lowest reliability (ranging from 0.46 to 0.7 Cronbach's α), while data from the "Hungarian + individual perspective" condition produced the highest reliability (ranging from 0.59 to 0.81 Cronbach's α).

Behavioral Tendencies

The Mokken scale analysis showed that active harm was not scalable in the "Roma + shared cultural perspective" condition (H = 0.14). In the other experimental conditions, active harm showed relatively low scalability, compared to the other behavioral tendencies subscales. Active harm had the lowest reliability of the measures, ranging from a mere Cronbach's α = 0.22 for active harm subscale in the "Roma + shared cultural perspective" condition to acceptable levels above the 0.6 threshold for all 4 subscales in the "Hungarian + individual perspective" condition.

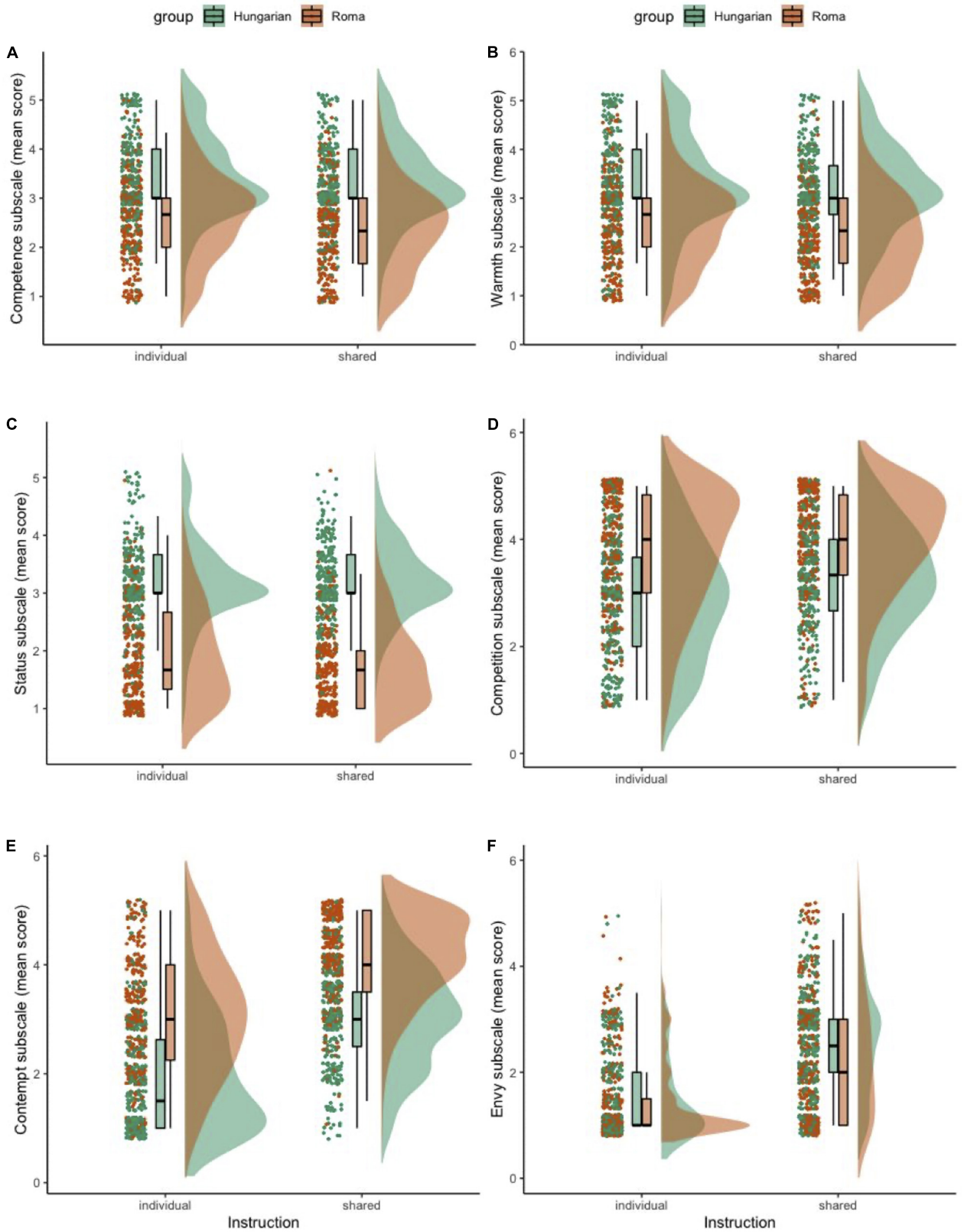

FIGURE 1 | Individual responses for the BIAS map subscales per experimental factors, boxplots and distributions: competence **(A)**, warmth **(B)**, status **(C)**, competition **(D)**, contempt **(E)**, envy **(F)**.

TABLE 1 | Multivariate skewness of the BIAS map scales.

Skew	Roma + shared cultural			Hungarian + shared cultural			Roma + individual			Hungarian + individual		
	b	z	*p*	*b*	z	*p*	*b*	z	*p*	*b*	z	*p*
Social structure	2.10	111.54	<0.001	0.15	7.98	0.092	1.10	59.01	<0.001	0.09	4.89	0.299
Stereotypes	0.42	22.42	<0.001	0.31	16.23	0.003	0.35	18.73	0.001	0.29	15.11	0.004
Emotions	4.61	245.04	<0.001	1.07	55.23	<0.001	6.30	339.03	<0.001	4.68	246.43	<0.001
Behavioral tendencies	1.63	86.58	<0.001	1.26	65.11	<0.001	5.59	300.92	<0.001	9.11	479.57	<0.001

TABLE 2 | Multivariate kurtosis of the BIAS map scales.

Kurtosis	Roma + shared cultural			Hungarian + shared cultural			Roma + individual			Hungarian + individual		
	b	z	*p*	*b*	z	*p*	*b*	z	*p*	*b*	z	*P*
Social structure	10.08	4.63	<0.001	8.25	0.55	0.581	7.45	−1.24	0.217	9.25	2.77	0.006
Stereotypes	8.63	1.41	0.158	10.04	4.50	<0.001	8.33	0.75	0.455	9.97	4.37	<0.001
Emotions	29.06	6.52	<0.001	25.71	2.18	0.029	31.09	9.20	<0.001	27.27	4.20	<0.001
Behavioral tendencies	27.74	4.82	<0.001	29.69	7.24	<0.001	32.27	10.73	<0.001	35.33	14.54	<0.001

Invariance of the BIAS Map

To analyze measurement invariance, we used lavaan (Rosseel, 2012; Cheung, 2015) and semTools (Jorgensen et al., 2020) packages. Due to having an empty category in one of the variables (no participant had chosen the point 4 on a 5-point scale in the "Hungarian + individual perspective" condition for an "envy" questionnaire item), we were not able to use analysis suitable for categorical data, but resorted to using a MLR estimator to obtain robust standard errors and test statistics. CFA model included all 12 BIAS map subscales, defined as latent variables. The model indices [$\chi^2(1{,}136) = 2010.508$, $p < 0.001$, robust RMSEA = 0.051, 90% CI [0.048, 0.055], robust CFI = 0.937, robust TLI = 0.916] suggest a mixed evidence regarding goodness of its fit. The invariance test supported metric invariance of the model, but not scalar, nor mean invariance. Fits of all models are reported in **Table 4**. These results suggest that participants saw the same meaning in the latent constructs across experimental conditions, but absence of full equivalence prevents from directly comparing means without further considerations (Fischer and Karl, 2019).

Differences in the BIAS Map Scales

We visually observed differences in the content of most of the BIAS map scales for participants in both the individual and shared cultural perspectives, as well as in both target group conditions (Roma and Hungarian) (see **Figures 1**, **2**). A *MANOVA.wide* function was used to calculate Wald-type statistics (WTS) and resampled test statistics (1000 iterations for calculating resampled statistics). See **Tables 5–8** for statistical details. For interpretation of statistical tests (interactions and main effects), we used a corrected α level of 0.0048.

Social Structure

A two-way multivariate analysis was conducted that examined the effect of instruction and target group on social structure subscales (status, competition; see **Figures 1C,D**). There was a statistically significant interaction between the effects of the target group and instruction, WTS($df = 2$) = 13.21, $p = 0.001$. Main effects analysis showed an effect of both the instruction [WTS($df = 2$) = 22.19, $p < 0.001$] and target group [WTS($df = 2$) = 1286.9, $p < 0.001$]. Multivariate *post hoc* comparisons using Tukey's all-pairwise comparisons showed statistically significant differences between "Roma + shared cultural perspective" and "Hungarian + shared cultural perspective" ($p < 0.001$, summary effect estimate averaged over all dimensions = −0.75) combination of factors; "Hungarian + individual perspective" and "Hungarian + shared cultural perspective" ($p = 0.017$, effect estimate = −0.45); and between "Roma + individual perspective" and "Hungarian + shared cultural perspective" ($p < 0.001$, effect estimate = −0.71) combinations of factors.

Stereotypes

Examining the effect of experimental factors on stereotypes subscales (competence, warmth; see **Figures 1A,B**), there was a statistically non-significant interaction between the effects of the target group and instruction, WTS($df = 2$) = 4.215, $p = 0.122$. Main effects analysis showed an effect of both the instruction [WTS($df = 2$) = 17.66, $p < 0.001$] and target group [WTS($df = 2$) = 374, $p < 0.001$].

Emotions

There was also a non-significant interaction between the effect of instruction and target group on emotions subscales (contempt, admiration, pity, envy; see **Figures 1E,F**, **2A,B**), WTS($df = 4$) = 8.77, $p = 0.067$. Main effects analysis showed an effect of both the instruction [WTS($df = 4$) = 621.22, $p < 0.001$] and target group [WTS($df = 4$) = 506.25, $p < 0.001$].

Behavioral Tendencies

There was a statistically significant interaction between the effect of instruction and target group on behavioral tendencies subscales (active and passive facilitation, active and passive harm; see **Figures 2C–F**), WTS($df = 4$) = 72.87,

TABLE 3 | Mokken *H* coefficients for respective experimental conditions and the BIAS map subscales.

Subscale	Roma + shared cultural		Hungarian + shared cultural		Roma + individual		Hungarian + individual	
	H	*SE H*	*H*	*SE H*	*H*	*SE H*	*H*	*SE H*
Competence	0.62	0.04	0.71	0.03	0.69	0.03	0.79	0.79
Warmth	0.66	0.04	0.71	0.03	0.72	0.04	0.79	0.02
Status	0.41	0.05	0.5	0.04	0.52	0.04	0.68	0.04
Competition	0.49	0.05	0.59	0.04	0.62	0.04	0.65	0.03
Contempt	0.35	0.07	0.6	0.05	0.56	0.05	0.71	0.05
Admiration	0.41	0.09	0.57	0.06	0.66	0.05	0.70	0.04
Pity	0.57	0.06	0.58	0.06	0.66	0.05	0.52	0.06
Envy	0.54	0.06	0.66	0.04	0.56	0.07	0.75	0.05
Active harm	0.14	0.07	0.41	0.06	0.41	0.08	0.67	0.07
Passive harm	0.44	0.06	0.56	0.05	0.47	0.07	0.75	0.05
Active facilitation	0.55	0.06	0.51	0.07	0.66	0.05	0.69	0.05
Passive facilitation	0.47	0.07	0.51	0.07	0.56	0.06	0.59	0.05

TABLE 4 | Model indices for measurement invariance across experimental conditions.

Model	*df*	χ^2	*p*	CFI scaled	RMSEA scaled
Configural	1,136	2,174		0.932	0.049
Metric	1,184	2,272	0.19	0.931	0.049
Scalar	1,232	2,931	<0.001	0.887	0.061
Mean	1,268	4,657	<0.001	0.767	0.086

TABLE 5 | Results of the non-parametric multivariate MANOVA-like test, including *post hoc* pairwise comparisons, for social structure subscales (status, competitiveness).

Predictors	WTS test statistic	*df*	*p*	Resampled *p*
Instruction	22.193	2	< 0.001	<0.001
Group	1286.909	2	< 0.001	<0.001
Instruction:group	13.211	2	0.001	0.001
Factor pairwise comparison	**Contrast *p***	**Estimate**	**CI lower**	**CI upper**
Individual Roma – shared Hungarian	<0.001	−0.712	−1.106	−0.318
Individual Roma – shared Roma	0.994	0.036	−0.362	0.434
Individual Roma – individual Hungarian	0.374	−0.265	−0.683	0.153
Individual Hungarian – shared Hungarian	0.017	−0.447	−0.838	−0.056
Individual Hungarian – shared Roma	0.208	0.301	−0.094	0.696
Shared Roma – shared Hungarian	< 0.001	−0.748	−1.117	−0.379

TABLE 6 | Results of the non-parametric multivariate MANOVA-like test, including *post hoc* pairwise comparisons, for stereotypes subscales (competence, warmth).

Predictors	WTS test statistic	*df*	*p*	Resampled *p*
Instruction	17.665	2	<0.001	<0.001
Group	373.992	2	<0.001	<0.001
Instruction:group	4.215	2	0.122	0.124
Factor pairwise comparison	**contrast *p***	**Estimate**	**CI lower**	**CI upper**
Individual Roma – individual Hungarian	<0.001	−1.543	−2.055	−1.031
Individual Roma – shared Roma	0.016	0.557	0.069	1.045
Individual Roma – shared Hungarian	<0.001	−1.348	−1.836	−0.860
Individual Hungarian – shared Hungarian	0.770	0.195	−0.309	0.699
Individual Hungarian – shared Roma	<0.001	2.100	1.596	2.604
Shared Roma – shared Hungarian	<0.001	−1.905	−2.385	−1.425

TABLE 7 | Results of the non-parametric multivariate MANOVA-like test, including *post hoc* pairwise comparisons, for emotion subscales (contempt, admiration, pity, envy).

Predictors	WTS test statistic	*df*	*p*	Resampled *p*
Instruction	621.219	4	<0.001	<0.001
Group	506.249	4	<0.001	<0.001
Instruction:group	8.772	4	0.067	0.072
Factor pairwise comparison	**Contrast *p***	**Estimate**	**CI lower**	**CI upper**
Individual Roma – individual Hungarian	0.307	0.416	−0.208	1.040
Individual Roma – shared Roma	<0.001	−1.538	−2.140	−0.936
Individual Roma – shared Hungarian	<0.001	−1.693	−2.306	−1.080
Individual Hungarian – shared Hungarian	<0.001	−2.109	−2.729	−1.490
Individual Hungarian – shared Roma	<0.001	−1.954	−2.563	−1.345
Shared Roma – shared Hungarian	0.910	−0.155	−0.753	0.443

TABLE 8 | Results of the non-parametric multivariate MANOVA-like test, including *post hoc* pairwise comparisons, for behavioral tendencies subscales (active and passive harm, active and passive facilitation).

Predictors	WTS test statistic	*df*	*p*	Resampled *p*
Instruction	1754.081	4	<0.001	<0.001
Group	310.037	4	<0.001	<0.001
Instruction:group	72.865	4	<0.001	<0.001
Factor pairwise comparison	**Contrast *p***	**Estimate**	**CI lower**	**CI upper**
Individual Roma – individual Hungarian	0.030	−0.620	−1.197	−0.043
Individual Roma – shared Hungarian	<0.001	−3.649	−4.202	−3.096
Individual Roma – shared Roma	<0.001	−3.928	−4.494	−3.362
Individual Hungarian – shared Hungarian	<0.001	−3.029	−3.606	−2.452
Individual Hungarian – shared Roma	<0.001	−3.308	−3.897	−2.719
Shared Roma – shared Hungarian	0.588	0.279	−0.287	0.845

$p < 0.001$. Main effects analysis showed an effect of both the instruction [WTS($df = 4$) = 1754.08, $p < 0.001$] and target group [WTS($df = 4$) = 310.04, $p \leq 0.001$]. Multivariate *post hoc* comparisons using Tukey's all-pairwise comparisons showed statistically significant differences between "Hungarian + individual perspective" and "Hungarian + shared cultural perspective" combination of factors ($p < 0.001$; summary effect estimate averaged over all dimensions = −3.03); "Roma + individual perspective" and "Hungarian + shared cultural perspective" ($p < 0.001$, effect estimate = −3.65); "Hungarian + individual perspective" and "Roma + shared cultural perspective" ($p < 0.001$, effect estimate = −3.31); "Roma + individual perspective" − "Roma + shared cultural perspective" ($p < 0.001$, effect estimate = −3.93); and between "Roma + individual perspective" and "Hungarian + individual perspective" combination of factors ($p = 0.037$, −0.62).

Mediation Analysis

For each experimental condition, we computed four parallel multiple mediator models separately using the *mediate* function from psych package (Revelle, 2019). To evaluate the presence or absence of a mediating relationship, we used bootstrapped (10,000 samples) indirect effects (total effects, direct effects as well as bootstrapped indirect effects are reported in **Supplementary Tables 4–7**). In this analysis, we used a parametric approach, built on linear regression, initially proposed to evaluate mediation hypotheses in the BIAS map model (Cuddy et al., 2007). Cuddy et al. (2007), Studies 2 and 3 presented experimental evidence supporting a causal relationship between stereotypes and emotions, and stereotypes and behavioral tendencies. In line with previous replications (Bye and Herrebrøden, 2018), adopting this approach allows us to compare our analysis with previously published results. Following the advice of Fiedler et al. (2018) we acknowledge that the significant results of the mediation in the present study are conditional on the BIAS map model's hypothesis of a causal relationship between stereotypes, emotions, and behavioral tendencies. Likewise, we acknowledge that other models of their relationship cannot be excluded.

With the exception of the "Roma + shared cultural perspective" experimental condition, a higher perceived warmth was associated with less active harm as a result of the effect of warmth on contempt, which in turn influenced levels of active harm (bootstrapped indirect effect of warmth ranged from $b = -0.2$ to -0.05; bootstrapped indirect effect via contempt ranged from $b = -0.2$ to -0.05). There was no evidence that feelings of envy mediated the negative association between warmth and active harm.

In all four experimental conditions, a higher perceived warmth was associated with higher active facilitation as a result of the effect of warmth on admiration and pity, which in turn influenced behavioral tendencies (bootstrapped indirect effect of warmth ranged from $b = 0.09$ to 0.3; bootstrapped

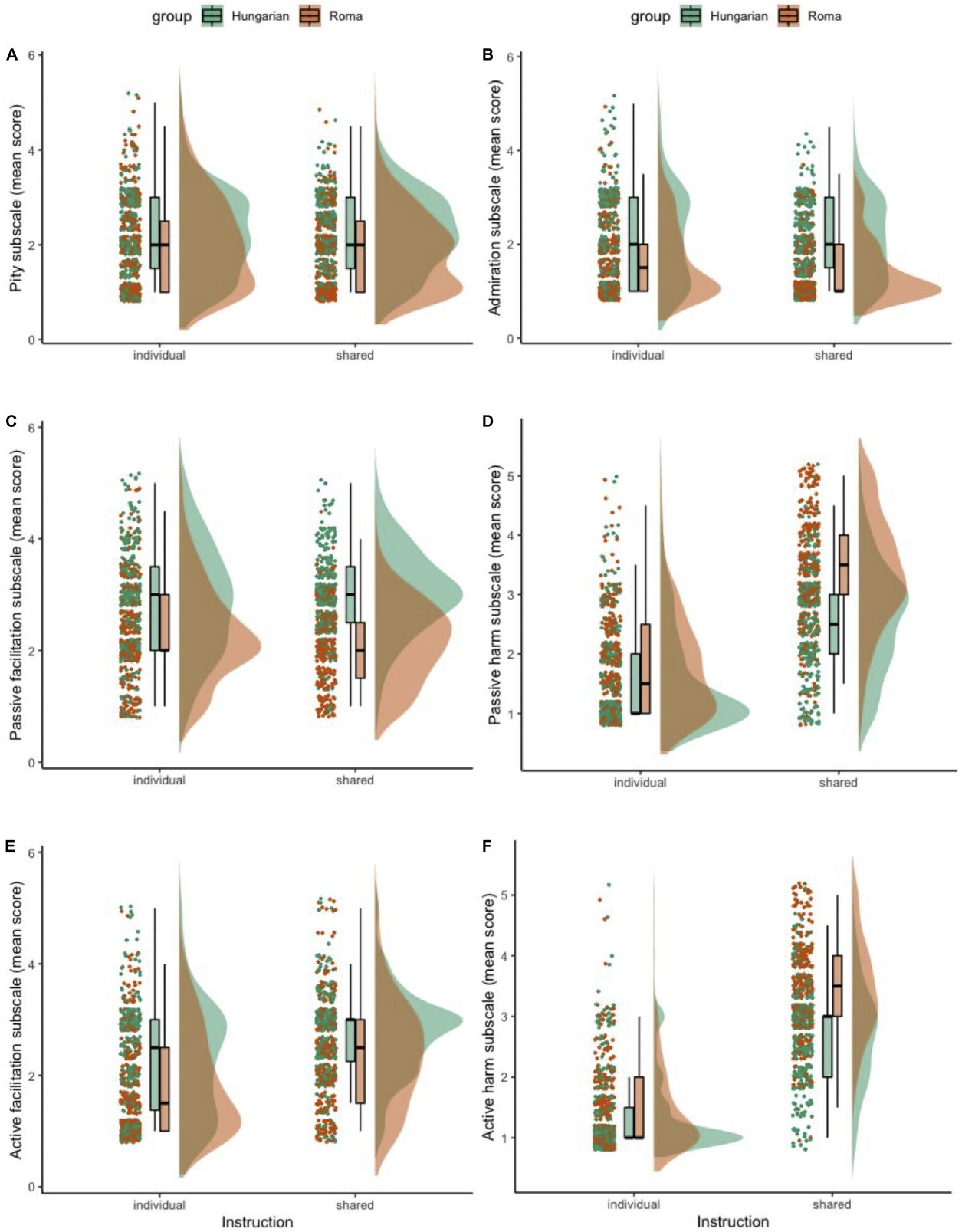

FIGURE 2 | Individual responses for the BIAS map subscales per experimental factors, boxplots and distributions: pity **(A)**, admiration **(B)**, passive facilitation **(C)**, passive harm **(D)**, active facilitation **(E)**, active harm **(F)**.

indirect effect via admiration ranged from $b = 0.07$ to 0.15; bootstrapped indirect effect via pity ranged from $b = 0.02$ to 0.15). The mediating mechanism in the "Roma + shared cultural perspective" condition was present only for pity, but there was no evidence of the mediating mechanism for admiration.

With the exception of the "Roma + shared cultural perspective" experimental group, higher perceived competence was associated with less passive harm as a result of the effect of competence on contempt, which in turn influenced levels of passive harm (bootstrapped indirect effect of competence ranged from $b = -0.08$ to -0.25; bootstrapped indirect effect via contempt ranged from $b = -0.02$ to -0.26; bootstrapped indirect effect via pity ranged from $b = -0.06$ to -0.26). The effect of competence on passive harm was mediated through feelings of pity in the "Roma + shared cultural perspective" condition.

In all four experimental conditions, higher perceived competence was associated with less passive facilitation as a result of the effect of competence on admiration, which in turn influenced levels of passive facilitation (bootstrapped indirect effect of competence ranged from $b = 0.06$ to 0.15; bootstrapped indirect effect via admiration ranged from $b = 0.06$ to 0.15). There was no evidence that feelings of envy mediated the association between competence and passive facilitation.

DISCUSSION

The results support H1 and H2, and partially support H3. They show that response instruction (H1) and target group (H2) had significant effects on scores in the BIAS map scales. Furthermore, they reveal a significant effect of interaction (H3) between the response instruction and target group on scores in social structure and behavioral tendencies (but not stereotypes and emotions) BIAS map scales. The results also suggest partial influence on the mediation hypothesis underlying the BIAS map; and minor influence on its scale properties.

The Impact of Response Instruction and Target Group on Scale Properties

There were only small differences between the experimental conditions in the *scale properties* of the BIAS map subscales, with the notable exception of the "Roma + shared cultural perspective" condition, which displayed the lowest levels of scalability and reliability. Its social structure subscales (status, competitiveness) and two behavioral tendencies subscales (passive harm, passive facilitation) had moderate scalability, two emotions subscales (contempt, admiration) had low scalability, and one behavioral tendencies subscale (active harm) was not scalable. In all the experimental groups, active harm was the least scalable and reliable subscale of the BIAS map.

The least satisfactory scale properties in the "Roma + shared cultural perspective" experimental condition can be partly explained by participants' perceptions of the contradictory social norms associated with the Roma in Slovakia, whose polarizing effect could have rendered a normal data distribution impossible. These perceptions could reflect the contrast between the normative approval of anti-Roma stereotypes, prejudice and discrimination, most visible in the infra-humanizing language to which the Roma are subjected in political discourse (Kluknavská, 2013; Kroon et al., 2016) and the human rights protection and anti-discrimination norms enshrined in domestic and especially European Union legislation (Chopin et al., 2017).

Similarly, the fact that active harm was the least scalable and reliable subscale of the BIAS map could be related to the ambiguous normative perceptions of the Roma as a category of people who suffer from both verbal and physical conflicts with ethnic Slovaks. Although the Roma are often the victims of police violence (Szilvasi et al., 2013; The Slovak Spectator, 2017), they are also frequently represented as inherently vicious, immoral and inclined to criminal behavior (Tileagă, 2006; Kroon et al., 2016).

Scalability issues of some BIAS map subscales (e.g., active harm) could indicate problems with ecological validity. The problematic items need to be cross-culturally validated using both quantitative and qualitative (e.g., cognitive interviews) methods to identify reasons for their unsatisfactory performance and suggest potential modifications (Lášticová et al., underv review). The validation process could lead to development of a more target-group tailored measure of stereotypes that would capture the specific position of the target group within the culture-specific context of intergroup relations (Bu and Borgida, 2020). A mixed-methods approach could also be helpful in exploring how and why contradictory social norms might affect some but not all dimensions of the BIAS map, and why some dimensions of the BIAS map are more and other less susceptible to normative influence.

The Influence of Response Instruction and Target Group on Mediation Hypothesis

Our findings partly challenge the *mediation hypothesis* proposed for the BIAS map measure (Cuddy et al., 2007). In three out of the four behavioral tendencies subscales, the behavioral tendencies were in most sub-groups mediated by a single emotion, passive facilitation being the sole exception. This is mostly in line with Bye and Herrebrøden (2018) and Constantin and Cuadrado (2019), who report that "for each of the four behavior outcomes the effect of stereotype content was mediated through one emotion rather than two as predicted by the BIAS map" (p. 1). The mediation models proposed for the BIAS map measure performed furthest from theoretical predictions in the "Roma + shared cultural perspective" experimental condition. In contrast to other experimental conditions, there was no evidence of the mediating mechanism in two out of four behavioral tendencies subscales (active harm and passive harm) in the "Roma + shared cultural perspective" experimental condition. The difference could be attributed to the effects of the response instruction and the target group as well as to the limited reliability and scalability of the BIAS map in the "Roma + shared cultural perspective" experimental condition. However, since we were not directly testing differences between mediation models in respective experimental conditions, our findings must be viewed

with caution and should be further investigated with a new data collection in a future research.

The Impact of Response Instruction on the BIAS Map Scores

The systematic differences between participants' responses when instructed to give answers from either their own individual perspective or the shared cultural perspective for both target groups point to *the effect of the response instruction* on the BIAS map measure (H1). The more pervasive difference between individual stereotypical beliefs and perceptions of shared cultural stereotypes in relation to the Roma rather than the Hungarians could indicate differences in the perceived social consensus (Haslam et al., 1996; Stangor et al., 2001b). They could suggest that there is actually a normative dissensus—relative to their personal opinions, participants perceive social norms relating to the Roma as more ambivalent and perhaps contradictory than those relating to the Hungarians. In the present study, the unsatisfactory scale properties of the "Roma + shared cultural perspective" experimental condition, which violate the assumptions of normality, give support to the latter interpretation. These findings extend those of Kotzur et al. (2020) to all dimensions of the BIAS map model. Based on their findings, Kotzur et al. (2020) proposed "aggregating stereotype content scores from participants' personal perspective to the cultural level." In contrast, we argue that instructing participants to respond from a shared cultural perspective can reveal the social normative consensus or dissensus in the social perception of the target group (e.g., the Roma) that responding from an individual perspective is unable to provide. On the other hand, when seeking to measure individuals' stereotypical beliefs about target groups (e.g., when testing the effectiveness of prejudice reduction interventions), instruction from a personal perspective seems to be an adequate choice. In fact, a comparison between individual stereotypical beliefs and perceptions of shared cultural stereotypes could become a useful operationalization for assessing the "normative climate" (Váradi, 2014; Forscher et al., 2015) or "normative context" (Kende et al., 2017; Kende and McGarty, 2019). The concept of "normative climate" would allow for studying the attitude-social norm context in which stereotypes and prejudice toward different target groups are expressed or withheld.

The Impact of Target Group on the BIAS Map Scores

The observed *effect of the target group* on the scores of the BIAS map measure (H2) is an expected finding because the BIAS map and the SCM were developed to measure the content of stereotypical beliefs and related social structure, emotions and behavioral tendencies toward various target groups. This is in line with the findings of Kende et al. (2020) who report blatant negative stereotyping of the Roma across six European countries. In Hungary, Romania, and Slovakia, the Roma were also perceived as competitors for limited resources, receiving undeserved benefits (Kende et al., 2020). Participants also expressed stronger tendencies to exclude and demean them (higher in passive harm); a weaker inclination to cooperate with and associate with them (lower in passive facilitation); and to help and protect them (lower in active facilitation) than they did in relation to the Hungarians. These findings provide additional supporting evidence to previous literature characterizing the Roma as a low status, stigmatized, dehumanized out-group, subjected to the expression of blatant prejudice and discrimination (Kteily et al., 2015; Kende et al., 2017, Study 4) and low collective action intentions concerning the Roma in Slovakia (Poslon et al., 2020).

More notably, these findings also underscore the observed effect of the response instruction on the BIAS map—the effect of the target group on emotions and behavioral tendencies was more evident when participants were instructed to respond to questions from the shared cultural perspective than from the individual perspective.

Interaction of the Impact of Response Instruction and Target Group on the BIAS Map Scores

The results partially support hypothesis about *interaction effect of response instruction and target group* on the BIAS maps scores (H3): stigmatized target group (Roma) elicited less favorable evaluations in social structure and behavioral tendencies (but not in stereotypes and emotions) scales when reported from a shared cultural perspective (compared to individual perspective) than non-stigmatized target group (Hungarian). There was no interaction effect of response instruction and target group on stereotypes and emotions scales of the BIAS map. Responses from shared cultural perspective yielded less favorable stereotypical and affective evaluations than responses given from individual perspective irrespective of target groups being studied. However, there was a combined effect of these two factors on social structure and behavioral tendencies scales. Examination of pairwise comparisons suggests different patterns of interaction effects for each of these factors.

In the case of social structure subscales (status, competitiveness) there were statistically significant differences between "Roma + shared cultural perspective" and "Hungarian + shared cultural perspective" conditions but not between "Roma + individual perspective" and "Roma + shared cultural perspective" and between "Roma + individual perspective" and "Hungarian + individual perspective" conditions. These findings give further credence to the role of divergent normative climates for Roma and for Hungarians in shaping the shared cultural perceptions of both target groups' status and competitiveness.

In contrast, behavioral tendencies subscales (active and passive harm, active and passive facilitation) demonstrate a reversed pattern: there were statistically significant differences between all other conditions but not between "Roma + shared cultural perspective" and "Hungarian + shared cultural perspective" conditions. These findings suggest that inclinations to behave toward the members of Roma and Hungarian are less subject to shared normative concern and are more prone to individual beliefs.

However, we advise caution when interpreting these findings since they are limited to two target groups in Slovakia. Future research could attempt to replicate these findings with a larger number of different ethnic target groups in Slovakia (Ruthenians, Czechs, Ukrainians) or with target groups in different intergroup contexts.

Treating Personal and Shared Cultural Stereotypes as Two Potentially Separate Constructs

In sum, the effects of response instruction and target group suggest that use of the individual perspective, as opposed to the shared cultural perspective response instruction, solicits different responses to the BIAS map and the SCM, especially in relation to target groups for whom stereotyping and prejudice is more normatively approved. Based on these findings, we argue for caution when using the individual perspective response instruction to measure the perceived normative perspective of most of the people in a society. Depending on the target group in question, instructing the participants to respond from their own individual perspective instead of from the shared cultural perspective of their society can significantly distort the outcomes produced by the BIAS map and the SCM and seriously undermine their construct validity as measures of shared cultural stereotypes. Conversely, identical concerns apply to using a shared cultural perspective response instruction to assess participants' personal stereotypical beliefs. Our evidence gives further credence to treating individual stereotypes and shared cultural stereotypes as two potentially separate constructs with unique characteristics. However, further research is needed to ascertain their relative independence, i.e., the extent to which they are separate or interdependent.

Limitations

There are two major limitations to our study.

First, the findings are limited to the context of ethnic intergroup relations in Slovakia. They need to be validated in different national and intergroup contexts, in which the same target groups (Roma, Hungarian) are imbued with different normative concerns (Bilewicz, 2012). Moreover, future research including typologically different target groups (e.g., national, age, gender) that are exposed to varied normative climates in different countries could provide a more robust test of the impact of the response instruction on the BIAS map and its interaction with target group type. For example, the awareness about the prevalence of stereotypes about target groups is an important source of normative information (Tankard and Paluck, 2016). Especially, when evidence suggests that awareness about the prevalence of stereotypes condones stereotyping and stereotype-consistent behavior (Duguid and Thomas-Hunt, 2015). Examining the sources of normative information and their relationship to personal stereotyping could help to illuminate both within- and between-culture variation in expression of stereotypes, and ultimately reinvigorate the role of (normative) context in the study of intergroup relations (Pettigrew, 2018).

The second limitation is the problematic reliability and scalability of the BIAS map scales and subscales, especially those pertaining to the normatively ambiguous beliefs, emotions and behavioral tendencies toward the Roma target group. The uneven reliability and scalability of the BIAS map scales and subscales is related to the skewness and kurtosis of the data, suggesting variation in distribution. While the "Hungarian + shared cultural perspective" experimental condition had a multivariate normal distribution for a single BIAS map scale (social structure), the data in the other experimental conditions violated these normality assumptions. However, it is difficult to assert whether the heterogeneity in the normal distribution of the data applies specifically to the sample characteristics and target groups used in the present study or whether it has also been found in other previously published studies in general. To our knowledge, it is not common practice to report the skewness and kurtosis of the scales and subscales in BIAS map (and SCM) studies, despite these distribution characteristics helping determine whether the data should be analyzed using parametric or non-parametric statistical tests. This practice could also influence the results of published experimental studies—a statistically "not significant" result could be down to multivariate skewness and kurtosis and the use of inappropriate statistical tests. Use of more suitable procedures could lead to the opposite conclusion, flipping the result into "significant" territory. More systematic reporting of the normal or non-normal data distribution in BIAS map and SCM studies could lead to superior cross-cultural and cross-target group comparisons and provide a more rigorous framework for testing the universal applicability of the BIAS map and the SCM.

CONCLUSION

In conclusion, the present study provides novel evidence about the partial effects of response instruction, target group, and their interaction on scores, scale properties and the mediation hypothesis underlying the BIAS map measure. Rather than viewing the individual perspective response instruction as a threat to accuracy and construct validity of the BIAS map and the SCM as the measures of culturally shared perceptions of social structure, stereotypes, emotions, and behavioral tendencies, we argue for treating individual stereotypes and shared cultural stereotypes as two potentially separate constructs.

DATA AVAILABILITY STATEMENT

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found below: https://osf.io/h39xy/.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Ethics Committee of the Institute for Research in Social Communication of the Slovak Academy of Sciences. The

patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

AF, BL, and MP contributed to the conception and design of the study. MH analyzed the data. All authors wrote and revised the manuscript, and read and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2020.566725/full#supplementary-material

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Intergroup Relations During the Refugee Crisis: Individual and Cultural Stereotypes and Prejudices and Their Relationship With Behavior Toward Asylum Seekers

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In this paper, I investigate intergroup relations between natives and asylum seekers during the European refugee crisis, and contribute to the reemerging methodological debate on the measurement of stereotypes and prejudices as individual and collective constructs. Drawing on data from the Norwegian Citizen Panel (NCP; *N* = 1,062), I examined how Norwegians stereotyped asylum seekers at the height of the refugee crisis and the emotional prejudices asylum seekers as a group elicited. By experimentally manipulating the survey question format, I examined whether and how stereotypes and emotional prejudices toward asylum-seekers differed depending on their measurement as individual or collective constructs. A subset of respondents (*n* = 228) had reception centers for asylum-seekers established in their local community during the crisis. These participants reported their behaviors toward the asylum seekers in their neighborhood. In this subsample, I investigated how individual facilitating and harming intergroup behavior was related to individual and collective conceptualizations of stereotypes and prejudices. The results showed that both low warmth and low competence stereotypes, as well as negative emotions toward asylum seekers, were rated as stronger when measured as collective as compared to individual-level constructs. In the individual condition, respondents reported feeling more admiration and sympathy than respondents in the collective condition attributed to others. Individual stereotypes and prejudices correlated systematically with individual facilitating and harming intergroup behaviors. The perception that others hold more negative stereotypes of asylum seekers, and the perceived anger and fear of others, did correlated with individual harming behaviors. Perceptions of others' anxiety correlated negatively with facilitating behaviors. Implications and future directions for the conceptualization and measurement of stereotypes and emotional prejudices are discussed.

Keywords: stereotypes (social psychology), prejudice/stereotyping, intergroup behavior, refugee crisis, asylum seeker, stereotype content model

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INTRODUCTION

During the 2015/2016 refugee crisis, more than 1 million people sought refuge in Europe, the majority fleeing from the war in Syria (UNHCR, 2016). The way receiving populations respond to an influx of refugees may have far-reaching consequences, for example, by affecting the health and well-being of the incoming refugees and by impacting voting in local and national elections. Researchers across the social sciences have therefore strived to document and explain responses among receiving populations during and in the aftermath of the 2015/2016 crisis (Esses et al., 2017; Kotzur et al., 2017, 2019a; Bruneau et al., 2018; Dinas et al., 2019; Hangartner et al., 2019; Steinmayr, 2020). A range of factors – from the number of asylum seekers entering the country to political discourse and government policies – varied across receiving nations. In this paper, I contribute insights from Norway, one of the major receiving countries in the European Economic Area (EEA) relative to population size (Eurostat, 2016).

During the course of 1 year, Norwegian authorities responded to the refugee influx by establishing 259 reception centers for asylum seekers (asylum seeker centers; ASCs) in local communities across the country (Bygnes, 2020). For the asylum seekers, many of whom were later granted refugee status, being lodged in an ASC provided the first local context for cultural contact and acculturation. Local and national environments may be adaptive or restrictive for asylum seekers' acculturation processes (Donà and Young, 2016; Bruneau et al., 2018), depending on factors such as settlement policies, economic support, and access to healthcare. From a social psychological perspective, central features of reception contexts are the stereotypes, prejudices and intergroup behaviors of members of the receiving communities (Esses et al., 2017).

The purpose of this paper is two-fold. With the Stereotype Content Model (SCM) and the Behavior from Intergroup Affect and Stereotypes (BIAS) Map (Fiske et al., 2002; Cuddy et al., 2007) as a theoretical framework, I address Norwegians' stereotypes, prejudices and intergroup behaviors toward asylum seekers at a time (March 2016) when the population had witnessed an unprecedented number of asylum seeker arrivals, as well as the recent and rapid establishment of ASCs across the country. Thus, this paper contributes to the stream of research documenting receiving populations' responses to the 2015/2016 refugee influx in Europe.

Second, there is a reemerging debate about how stereotypes and emotional prejudices should be conceptualized and measured (Stangor and Schaller, 1996; Findor et al., 2020; Kotzur et al., 2020). Should researchers focus on individuals' personally held perceptions of social groups, and the individually experienced emotions toward them? Or, should we ask people about their perceptions of the broadly shared views of social groups within society and how "most people" feel toward other groups? By experimentally varying response instructions, I compare these two approaches to the measurement of stereotypes and prejudices, and contextualize my substantive findings on intergroup relations between natives and asylum seekers within this ongoing methodological debate.

The SCM and the BIAS Map

This work starts from the SCM (Fiske et al., 2002) and its extension into the BIAS Map (Cuddy et al., 2007). A core tenet of the SCM is that the stereotype content associated with social groups can be organized along the dimensions of warmth and competence. Whereas perceived warmth is rooted in perceptions of others' intent toward the self or the ingroup (i.e., friend or foe?), perceived competence is rooted in perceptions of others' capabilities to act on their intentions. There are social structural relationships between groups underlying these perceptions; perceived status (e.g., power and economic resources) predicts perceived group competence, and perceived competition predicts (lower) group warmth (Fiske et al., 2002).

Another key aspect of the SCM is that perceptions of groups' warmth and competence interact in eliciting specific emotional prejudices. Groups stereotyped as high in both warmth and competence elicit feelings of admiration and pride, whereas groups stereotyped as low in warmth and competence elicit disgust and contempt. Ambivalently stereotyped groups elicit envy and jealousy in the case of high competence and low warmth stereotypes, and pity and sympathy in the case of groups stereotyped as high in warmth and low in competence (Fiske et al., 2002; Cuddy et al., 2007).

Extending the SCM to include intergroup behaviors in the BIAS Map, Cuddy et al. (2007) argued that perceptions of warmth are associated with active behavioral tendencies of facilitation (high warmth) and harm (low warmth). Perceptions of competence are associated with passive behavioral tendencies (passive facilitation and passive harm). The active–passive dimension of facilitating and harming behaviors separates behaviors enacted with concentrated effort and intention (active), from those that require less effort and intention (passive). Finally, specific emotional prejudices are hypothesized to mediate the effect of stereotype content (warmth, competence) on intergroup behavior. Both Cuddy et al. (2007) and later studies have generally found support for the relationships between stereotype content, emotional prejudices and intergroup behaviors outlined in the BIAS Map, albeit with some variation in findings pertaining to the mediation hypotheses (see Bye and Herrebrøden, 2018, p. 1080–1082 for a review).

The focus of the BIAS Map is the uniquely human emotions of admiration, pity, envy, and contempt. However, Cuddy et al. (2007) also investigated the role of the primary emotions anger and fear in the stereotype – behavior relationship. They found that both anger and fear correlated negatively with warmth and positively with active harming behaviors. Anger also correlated negatively with active facilitation.

Refugees and Asylum Seekers in the Stereotype Content Model

In a review of the extensive literature on public perceptions of refugees, Esses et al. (2017) highlighted several important findings regarding receiving populations' reactions to asylum seekers and refugees. They describe prevalent negative attitudes and perceptions

documented by public opinion polls across Europe and the United States in response to the refugee crisis – including associating refuges with terrorists, beliefs that refugee claimants are bogus, and concerns that refugees pose economic and cultural threats. They also describe the public discourse on refugees as increasingly dehumanizing (Esses et al., 2017). This is important because dehumanization has been linked with emotions of contempt and the absence of admiration (Esses et al., 2013), as well as support for anti-refugee policies and anti-refugee behaviors (Bruneau et al., 2018).

Connecting these findings to the SCM and the BIAS Map, the predictions that follow are that (a) asylum seekers as a group will be perceived as low in warmth because they are perceived to pose economic and cultural threats, (b) asylum seekers as a group will be perceived to be low in competence due to their limited power and resources in the country of reception, (c) asylum seekers as a group primarily elicit feelings of contempt, disgust, anger and fear, and (d) as a consequence face active and passive harming responses from native majority members.

There are still few studies of asylum seekers or refugees within the SCM. Notable exceptions are studies focusing on the German context in the wake of the refugee crisis (Kotzur et al., 2017, 2019a,b; Froehlich and Schulte, 2019; Wyszynski et al., 2020). These studies show diverging results. In line with the predictions outlined above, one set of studies showed that refugees as a generic category, as well as closely related groups (i.e., Syrian immigrants, Afghan immigrants, Syrian refugees, and Afghan refugees), were stereotyped as low to moderate in warmth and low in competence (Froehlich and Schulte, 2019; Kotzur et al., 2019a; Wyszynski et al., 2020).

Contrary to the predictions outlined above, the other set of studies showed that asylum seekers and refugees were stereotyped as moderate to high in warmth and moderate in competence (Kotzur et al., 2017, 2019b; Study 1a, 1b, and Study 2). Moreover, Kotzur et al. (2019b, Study 1b and Study 2) found that asylum seekers elicited little contempt, and moderate to high levels of admiration and pity, and that participants were generally willing to engage in solidarity based collective action on behalf of asylum-seekers, a form of active facilitation (Study 2). Similarly, Kotzur et al. (2017) found that Germans reported feeling very little contempt, anxiety, and anger toward refuges and asylum seekers, but moderate to high levels of pity and admiration. Their respondents also reported high to moderate levels of passive and active facilitation, and very low levels of harming behaviors.

The divergence in the substantive findings from these sets of studies is intriguing – especially because they are conducted in the same national context, within a time frame of just a few years, and with similar types of samples (mostly university students). The key difference between the two sets of studies is the instructions to the participants: in the first set of studies participants were asked to indicate how warm and competent the groups were as perceived by most people in society/Germany, and in the second set, they were asked to provide their personal views, emotions and behaviors.

Stereotypes and Prejudices as Cultural and Individual-Level Constructs

In Fiske et al.'s (2002) formulation of the SCM, stereotypes were defined and measured as socially shared and consensual phenomena within a culture; participants were asked not to give their personal views, but to report the views of the American society. Similarly, the first operationalization of emotional prejudices in the SCM and BIAS Map focused on how, from the perspective of society, various social groups made the respondents' group, or "people in America," feel[1] (Fiske et al., 2002; Cuddy et al., 2007). This focus on shared, group-level stereotypes and group-level emotional prejudice has its roots in a long tradition of conceptualizing stereotypes as collective phenomena (Katz and Braly, 1933; Blumer, 1958; Stangor and Schaller, 1996). Asking about what other people believe and feel about social groups is also argued to limit the degree of social desirability bias in people's responses (Fiske et al., 2002; Cuddy et al., 2007). In contrast to the original formulation, and as described in the case of asylum seekers and refugees above, other researchers drawing on the SCM explicitly address stereotypes as personal beliefs (Kotzur et al., 2017, 2019b) and examine individual emotions associated with social groups (e.g., Becker and Asbrock, 2012; Kotzur et al., 2019b). This individual approach also has a long history in social psychology (Stangor and Schaller, 1996). Until recently (Findor et al., 2020; Kotzur et al., 2020) however, these two approaches to the measurement of the constructs in the SCM had not been systematically compared. As illustrated by the results pertaining to the social perception of asylum seekers/refugees detailed above, varying the instructions may produce results that have diverging substantive interpretations.

Kotzur et al. (2020) conducted three experimental studies to assess how varying response instructions impacted on the placement of social groups in the SCM space. They found that instructions to provide one's personal view lead to more positive views on the deprecated dimension for ambivalently stereotyped groups (i.e., on the competence dimension for groups stereotyped as warm but incompetent, and on the warmth dimension for groups stereotyped as competent but cold) as compared to the instructions to take society's perspective. For groups stereotyped as low on both warmth and competence in the collective condition, personal views were more positive on both the warmth and the competence dimensions. These findings are important because they begin to answer the question of how response instructions impact on the placement of social groups in the warmth × competence space. However, Kotzur et al. (2020) did not test the impact of varying response instructions on the emotional prejudices reported toward groups, and which implications differences in response instructions may have with respect to the prediction of intergroup behaviors.

Findor et al. (2020) investigated the effect of response instructions on the full BIAS map model. Their target groups

[1]"As viewed by society, does this group make your group feel: disappointed, fearful, sympathetic…"(Fiske et al., 2002, p. 896). "Now I'm going to ask you about some feelings that people in America have towards (group) as a group. To what extent do people tend to feel (emotion, e.g., pity) towards (group)?" (Cuddy et al., 2007, p. 648).

were two ethnic minority groups in Slovakia – Roma and Hungarians. I focus here on the Roma, the stigmatized minority of the two groups. In line with Kotzur et al. (2020), Findor et al. (2020) found that stereotype ratings of the Roma were more positive on both the warmth and competence dimensions in the individual condition. Moreover, they found that the reported levels of contempt and envy toward the Roma were higher, and admiration and pity lower, in the collective condition as compared to the individual condition. In the collective condition, the Roma were perceived to elicit substantially more active and passive harm, than in the individual condition. These results illustrate that response instructions may impact not only stereotype ratings, but also ratings of emotional prejudice and intergroup behaviors. What remains an open question, however, is how perceptions of shared, collective stereotypes and prejudices relate to individual intergroup behaviors.

According to Stangor and Schaller (1996, p. 5).

> …the pivotal point of distinction between individual and collective approaches [to stereotypes] lies in the assumed importance of shared social beliefs, above and beyond the importance of individual beliefs, as determinants of social behavior. This distinction is particularly important for a complete understanding of stereotypes and stereotyping.

In the development of the BIAS Map, the measurement of intergroup behaviors was aligned to the measurement of stereotypes and emotional prejudice as shared, collective phenomena. Respondents were asked to indicate how people in America generally behave toward various social groups (Cuddy et al., 2007). Cuddy et al. (2007, p. 644) argued, consistent with their collective approach, that "even when individuals personally reject stereotypes that are prevalent in their cultures, they know and often cannot help but be affected by them. (…) exposure to (even without endorsement of) cultural stereotypes considerably affect reactions to outgroups." However, they also recognize that "societal prejudices do not always equal personal prejudices. We do not yet know how the perspective of the perceiver will affect the BIAS map's relationships at the personal level, a central question for future research" (p. 644). This question may be approached in different ways, one of them is to compare the relationships that stereotypes and emotional prejudices measured as individual and collective constructs exhibit with individuals' own intergroup behaviors.

The Present Study

In the present study, I build on and extend recent research on intergroup relations between host populations and asylum seekers/refugees within the SCM framework (Kotzur et al., 2017, 2019a,b; Froehlich and Schulte, 2019; Wyszynski et al., 2020) and the work of Kotzur et al. (2020) and Findor et al. (2020) on the impact of response instructions. Specifically, I compare the stereotype content and emotional prejudices associated with asylum seekers as a group under instructions to indicate either one's personal opinion or to take the perspective of others in society.

With respect to stereotype ratings, previous research on the perceived warmth and competence of refugees and asylum seekers (Kotzur et al., 2017, 2019a,b; Froehlich and Schulte, 2019; Wyszynski et al., 2020) and the results of Kotzur et al. (2020) and Findor et al. (2020) suggest that asylum seekers will be rated as low in both warmth and competence in the collective condition, and specifically that they will be perceived as comparatively warmer and more competent in the individual condition.

> Hypothesis 1. Asylum seekers are perceived as higher in warmth and competence when stereotypes are conceptualized as individual beliefs compared to perceived collective beliefs.

A core assumption in the SCM and the BIAS Map is the systematic relationship between stereotype content and emotional prejudice (Fiske et al., 2002; Cuddy et al., 2007). It follows from this principle that if the stereotype content associated with asylum seekers differs meaningfully across response instructions (e.g., from low/moderate warmth and low competence in the collective condition to high warmth and moderate competence in the individual condition, as would be expected based the research discussed above), the emotional prejudices elicited in the two conditions will differ. Specifically, I expect that:

> Hypothesis 2. Asylum seekers as a group will elicit more contempt, disgust, anger and fear in the collective than the individual emotions condition.
> Hypothesis 3. Asylum seekers as a group will elicit more pity, sympathy, admiration, and pride in the individual compared to the collective emotions condition.

With respect to intergroup behaviors directed toward asylum seekers, reactions in Norway to the refugee influx in 2015 included both facilitating (e.g., donating money and volunteering to help the asylum seekers) and harming behaviors (e.g., protesting the establishment of ASCs and in one extreme case setting fire to a planned ASC facility; Bygnes, 2020). Whereas some behaviors, such as protesting political decisions on social media or donating money, may be enacted irrespective of the presence of asylum seekers in the local environment, other behaviors (e.g., greeting asylum seekers or avoiding them) are primarily relevant for people who live in communities that host asylum seekers. In this paper, I focus on the intergroup behaviors of a subset of respondents who had an ASC established close to where they lived. In this group, I compare the extent to which the two different conceptualizations of stereotypes and emotional prejudices are related to respondents' facilitating and harming behaviors toward asylum seekers in their local communities.

MATERIALS AND METHODS

Design

I conducted a survey experiment employing a between–groups design. Participants were randomly asked to indicate their personal views and emotions (individual condition, $n = 525$), or the views and emotions of people in Norway in general

(collective condition; n = 537) on asylum seekers as a group. The experiment was embedded in a larger survey module including questions about the establishment of reception facilities for asylum seekers in the participants' neighborhood, and how respondents had behaved toward asylum seekers hosted in ASCs established in their local community in response to the crisis.

Participants and Procedure

The experiment was embedded in the Norwegian Citizen Panel (NCP; Ivarsflaten et al., 2019). This is an online panel, where a random sample of the Norwegian population answers questions on a range of issues (e.g., climate change, politics, and immigration) two to three times a year. The sample is drawn from the Norwegian Population Registry, and all inhabitants above the age of 18 have an equal probability of being invited to the panel. Due to different rates of participation, there are some groups (e.g., young men with low levels of education) that are underrepresented (or overrepresented) in the sample compared to the population. For details on representativeness, please see the NCP methodology Report for wave 6 (Skjervheim and Høgestøl, 2016).

In wave 6 of the NCP (fielded March 1–19, 2016), 1,256 respondents were randomly assigned to be in the subpanel which contained the experiment. Due to the focus on asylum seekers as a target group, individuals were excluded if they indicated being citizens of another country, had an immigrant background, or declined to answer the citizenship/immigration questions (140 respondents were excluded on these grounds). Respondents reported their background and citizen status when entering the panel, so these data were drawn from wave 1, 3, 4, and 5. In addition, data on the items covering stereotypes and emotional prejudices were missing completely (n = 32) or largely (>50%, n = 22) for some respondents. These were also excluded, leaving a sample size of N = 1,062. Thus, respondents who answered 50% or more of the stereotype and prejudice items were retained in the sample, but ignored in the analyses when their response was missing on the variables involved.

In the sample, 51.4% were men. The respondents' year of birth was pulled from the Population Registry. For anonymity purposes, year of birth is reported in decades in the NCP data. The cohort distribution in the sample was: Born in 1939 or earlier (3.2%), 1940–1949 (19.8%), 1950–1959 (22.7%), 1960–1969 (19.2%), 1970–1979 (17.6%), 1980–1989 (12.2%), and 1990 or later (5.3%). The majority of the sample had some college/university education (58.8%), or had completed high school (27.5%). A minority indicated no education or completed elementary school (9.4%), or declined to indicate their educational level (4.3%). As described above, all participants indicated being Norwegian citizens, born in Norway to Norwegian parents.

Measures

Stereotypes

Following Cuddy et al. (2007), respondents in the collective condition were asked to "*Think about how asylum seekers are viewed by people in Norway in general. In the view of people in general, to what extent are asylum seekers*:" Respondents in the individual condition read: "*Think about how you personally view asylum seekers. In your own view, to what extent are asylum seekers*:" These instructions were immediately followed by one item for competence and one item for warmth "*Competent (capable, confident, and skillful)*" and "*Warm (friendly, good natured, and honest)*". These items were responded to on a scale from 1 (Not at all) to 5 (To a very large extent).

Emotional Prejudices

Participants in the collective condition read: "*Now there will be some questions about what people in general feel about asylum seekers. To what extent do people have the following emotions about asylum seekers as a group?*" Participants in the individual condition read: "*Now there will be some questions about what you personally feel about asylum seekers. To what extent do you have the following emotions about asylum seekers as a group?*" The instructions were followed by a list of emotions: contempt, disgust, admiration, pride, pity, sympathy, envy, jealousy, anger, fear, and anxiety. Although not addressed in the hypotheses, envy and jealousy are included for completeness. These items were also responded to on a scale from 1 (Not at all) to 5 (To a very large extent).

Presence of ASC in the Local Community

Respondents read the introduction "*In the last year, a number of new asylum seekers centers have been established in Norway. Do you have an asylum seekers center close to where you live?*" Response categories were "No," "Yes, my neighborhood has received a new asylum center in the last year," "Yes, my neighborhood has had an asylum center for more than a year," and "Do not know." In this paper, I focus on the subset of respondents (n = 228) who had an ASC established in their local community during the last year (i.e., in response to the refugee crisis).

Behaviors Directed at the ASC and Asylum Seekers

The instructions to the behavioral items read: "*People have responded to the establishment of ASCs in their local community in different ways. How have you behaved in response to the establishment of an ASC close to where you live? Please indicate how well or how poorly the following statements describe the way you personally have responded. I have…*" Participants were then presented with a list of items including both facilitating (e.g., participated in voluntary work to help the asylum seekers) and harming (e.g., participated in protests to stop the ASC being set up) behaviors. These items were developed to cover both harming and facilitating behaviors of varying intensities (Cuddy et al., 2007). They were informed by conversations with sociologist Susanne Bygnes, who was conducting qualitative interviews and field work on ASC establishment in local communities in Norway at the time the survey items were created (Bygnes, 2020). Response categories ranged on a five-point scale from "fits very poorly" to "fits very well," in addition

there was a "Not relevant" option (e.g., for people without social media profiles, protesting on social media may be seen as not relevant). In the analyses, "not relevant" was coded as missing.

As the behavioral items had not been employed in previous research, I conducted a principal component analysis. This revealed two components with eigenvalues >1 (eigenvalues were 5.28 and 3.03 for the first and second factors, respectively), which together explained 63.9% of the variance. After rotation (varimax), the two components reflected facilitating and harming intergroup behaviors. The list of items is included in **Table 1**. Based on this analysis, two intergroup behaviors scales were crated: facilitation (seven items, Cronbach's α = 0.90, M = 2.08, SD = 1.06) and harm (six items, Cronbach's α = 0.80, M = 1.66, SD = 0.75).

RESULTS

Stereotype Content and Emotional Prejudice

To address the three hypotheses, a series of one-way ANOVAs were conducted, with a Bonferroni adjusted threshold for significance at 0.0045. Full results are presented in **Table 2**.

Supporting hypothesis 1, stereotypes of asylum seekers were significantly more positive when assessed as individual beliefs (M_{warmth} = 3.25, SD = 0.81; $M_{competence}$ = 3.16, SD = 0.80) than as collective representations (M_{warmth} = 2.84, SD = 0.73; $M_{competence}$ = 2.66, SD = 0.74).

Supporting hypothesis 2, asylum seekers as a group elicited significantly stronger negative emptions in the collective than the individual condition; contempt (M = 2.70 vs. M = 1.48) disgust (M = 2.54 vs. M = 1.39), anger (M = 2.67 vs. M = 1.29), fear (M = 3.24 vs. M = 1.85) and anxiety (M = 3.26 vs. M = 2.01). In partial support of hypothesis 3, asylum seekers as a group did elicit more admiration (M = 2.53 vs. M = 2.19) and sympathy (M = 3.43 vs. 3.22) in the individual than the collective condition. The means for pride and pity did not differ significantly.

As illustrated in **Figure 1** (which for completeness includes also envy and jealousy), the differences between individual and group emotional prejudices show a very clear pattern. Across all the negative emotions, the emotional prejudices of others were rated as substantially stronger than the individual emotions. The pattern for the positive emotions, however, is one of similarity. Despite the difference in means between the individual and the collective conditions being statistically significant for admiration and sympathy, these

TABLE 1 | Intergroup behaviors directed at asylum seekers and the ASC. Rotated principle components solution.

Item	Component loadings	
	Facilitation	**Harm**
Participated in voluntary work to help the asylum seekers	**0.90**	0.00
Initiated activities for the asylum seekers	**0.89**	0.09
Become friends with some of the asylum seekers	**0.84**	0.10
Said hello to some of the asylum seekers	**0.77**	−0.03
Given gifts to the asylum seekers' center	**0.75**	−0.07
Written something positive about the asylum seekers' center in the comments area or similar, without giving my name	**0.67**	0.44
Written something positive about the asylum seekers' center using my full name in social media or similar	**0.63**	0.17
Participated in protests to stop the asylum seekers' center being set up	0.12	**0.87**
Taken the initiative to protest to stop the asylum seekers' center being set up	0.14	**0.84**
Written something negative about the asylum seekers' center using my full name in social media or similar	0.32	**0.78**
Written something negative about the asylum seekers' center in the comments area or similar, without giving my name	0.38	**0.77**
Avoided the center and the asylum seekers as far as possible	−0.21	**0.62**
Tolerated the establishment of the asylum seekers' center	0.34	**−0.52**

Bold values indicate which component each item had the strongest loading on.

TABLE 2 | Means, standard deviations, and one-way analysis of variance for the effects of response instruction on stereotypes and emotional prejudices.

	Experimental group							
	Collective		Individual					
	M	***SD***	***M***	***SD***	***F***	***df***	***p***	η^2
Warmth	2.84	0.73	3.25	0.81	75.02	(1, 1,042)	0.000	0.067
Competence	2.66	0.74	3.16	0.80	111.23	(1, 1,048)	0.000	0.096
Contempt	2.70	0.80	1.48	0.79	621.98	(1, 1,056)	0.000	0.371
Disgust	2.54	0.79	1.39	0.71	614.59	(1, 1,056)	0.000	0.368
Anger	2.67	0.88	1.29	0.64	838.88	(1, 1,056)	0.000	0.443
Fear	3.24	0.87	1.85	0.96	611.25	(1, 1,057)	0.000	0.366
Anxiety	3.26	0.84	2.01	0.98	505.98	(1, 1,059)	0.000	0.323
Admiration	2.19	0.72	2.53	0.94	43.83	(1, 1,048)	0.000	0.040
Pride	2.10	0.74	2.10	0.90	0.00	(1, 1,033)	0.999	0.000
Pity	3.31	0.71	3.33	0.93	0.13	(1, 1,057)	0.723	0.000
Sympathy	3.22	0.66	3.43	0.90	19.37	(1, 1,058)	0.000	0.018

differences were smaller in magnitude than the differences across the negative emotions.

Figure 1 also shows that the mean perception of others' emotions follows the profile of the mean individually felt emotions very closely. In other words, despite the gap in the reported intensity of the negative emotions, the patterns of the means align.

Behavior Targeting Asylum Seekers

For those respondents who had received an ASC in their neighborhood in the last year (n = 100 and n = 128 from the collective and individual conditions, respectively), I correlated ratings of stereotypes and emotions with their reports of facilitating and harming behaviors targeting the newly arrived asylum seekers (**Table 3**). Recall that the behavioral items all assessed the individual's own behavior.

Respondents' perceptions of others' stereotypes and emotional prejudices were mostly uncorrelated with their own intergroup behaviors directed at the asylum seekers and the ASC in their neighborhood, with some notable exceptions. Perceptions of others' view on the warmth and competence of asylum seekers correlated negatively with harming behaviors, whereas the perceived anger and fear of others correlated positively with harm. Higher perceived levels of anxiety felt by others correlated negatively with facilitating behaviors.

For respondents who reported their individual stereotypes and emotional prejudices, the correlations revealed a consistent picture in line with the SCM and BIAS Map general predictions. Warmth and competence perceptions correlated positively with facilitation and negatively with harm. Feelings of contempt, disgust, fear, and anxiety correlated negatively with facilitation, and along with anger, envy and jealousy, they correlated positively with harm. Feelings of admiration, pride, and sympathy with asylum seekers correlated positively with facilitation and negatively with harming behaviors. Pity also correlated negatively with harm.

DISCUSSION

The purpose of this study was to investigate Norwegians' stereotypes, emotional prejudices, and intergroup behaviors toward asylum seekers following the 2015 refugee crisis and influx of asylum seekers to the country. I also aimed to contribute to the reemerging methodological debate concerning the measurement of stereotypes and prejudices as individual and collective phenomena. Consistent with the first hypothesis, asylum seekers as a group were rated as warmer and more competent when respondents provided their own view as compared to the perceived perspective of others in general. This finding mirrors the results of previous studies of stereotypes of refugees and asylum seekers in Germany (Kotzur et al., 2017, 2019a,b; Froehlich and Schulte, 2019; Wyszynski et al., 2020). It is also consistent with Kotzur et al. (2020) assertion that groups that are deprecated on both the warmth and competence dimension when respondents are instructed to take the perspective of others are rated more positively on both dimensions under instructions to provide one's personal view. Extending the work of Kotzur et al. (2020), I also found that asylum seekers as a group elicited more contempt, disgust, anger, fear, and anxiety in the collective condition than when respondents reported their individual emotions. When reporting

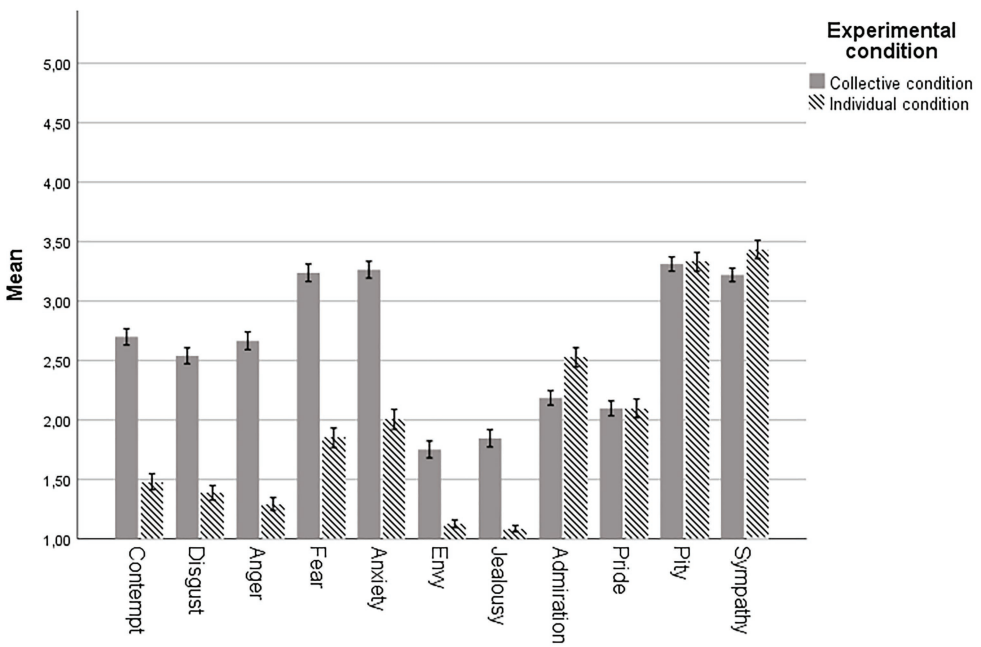

FIGURE 1 | Mean emotional prejudice by experimental condition. Error bars indicate 95% confidence intervals.

TABLE 3 | Correlations between stereotypes, emotions and individual behaviors directed at asylum seekers by experimental condition.

	Experimental group			
	Collective condition		Individual condition	
	Facilitation	Harm	Facilitation	Harm
Warmth	0.04 [−0.17, 0.25]	−0.24*[−0.42, −0.04]	0.32**[0.13, 0.49]	−0.38**[−0.53, −0.21]
Competence	0.01[−0.20, 0.22]	−0.25*[−0.43, −0.05]	0.20†[0.00, 0.38]	−0.41**[−0.55, −0.24]
Contempt	0.03[−0.17, 0.23]	−0.11[−0.31, 0.09]	−0.21*[−0.39, −0.01]	0.27**[0.09, 0.43]
Disgust	0.04[−0.17, 0.25]	−0.02[−0.22, 0.18]	−0.20†[−0.38, 0.00]	0.27**[0.09, 0.43]
Envy	0.03[−0.18, 0.24]	0.04[−0.16, 0.24]	−0.10[−0.29, 0.10]	0.17†[−0.01, 0.34]
Jealousy	0.02[−0.19, 0.23]	−0.09[−0.29, 0.11]	−0.01[−0.20, 0.18]	0.16†[−0.02, 0.33]
Anger	−0.03[−0.24, 0.18]	0.24*[0.04, 0.42]	−0.14[−0.33, 0.06]	0.33**[0.16, 0.48]
Fear	−0.12[−0.32, 0.09]	0.18†[−0.02, 0.37]	−0.24*[−0.42, −0.05]	0.27** [0.09, 0.43]
Anxiety	−0.19†[−0.39,0.02]	0.16 [−0.04, 0.35]	−0.19†[−0.37, 0.00]	0.25*[0.07, 0.41]
Admiration	0.02[−0.19, 0.23]	−0.04[−0.24, 0.17]	0.18†[−0.02, 0.36]	−0.44**[−0.58, −0.28]
Pride	0.09[−0.13, 0.30]	−0.01[−0.21, 0.20]	0.24*[0.04, 0.42]	−0.25*[−0.42, −0.07]
Pity	−0.05 [−0.26, 0.16]	−0.04[−0.24, 0.16]	0.09[−0.11, 0.28]	−0.20*[−0.37, −0.02]
Sympathy	−0.18 [−0.38, 0.03]	−0.10[−0.30,0.11]	0.17†[−0.03, 0.35]	−0.49***[−0.62, −0.34]

*Participants with a new ASC in the local community (n = 228). Sample sizes for the correlational analyses vary from n = 85 to n = 94 in the collective condition, and n = 99 to n = 115 in the individual condition. Numbers in square brackets indicate 95% confidence intervals. ***p < 0.001; **p < 0.01; *p < 0.05; †p < 0.10.*

their own emotions, respondents indicated more admiration and sympathy for asylum seekers than they perceived others to experience. These differences were small, however.

The differences across conditions in the reported emotional prejudices were in line with the hypotheses and consistent with the tenets of the SCM and the BIAS Map that emotional prejudices follow from stereotype content (Fiske et al., 2002; Cuddy et al., 2007). However, it is noteworthy that the differences across conditions in the negative emotions were considerably stronger than the differences in stereotype content and positive emotions (see effect sizes in **Table 2**). Although the sample in this study was not perfectly representative of the Norwegian population, it does provide a close approximation. We can therefore regard the average responses in the individual condition as an approximation of the "correct answer" to the question posed in the collective condition of what people in Norway in general think and feel about asylum seekers. When considered from this perspective, the results of the experiment tell us at least two things. First, the average perception of others' stereotypes and positive emotions appear to be fairly accurate, at least in the case of asylum seekers as target group, despite individual ratings being somewhat more positive. Second, the perception of others' negative emotions is accurate in terms of the pattern of emotions, but not in the average intensity. I cannot rule out that individuals underreported the intensity of their personal negative emotions due to social desirability concerns. However, there is also a possible substantive interpretation. Negative emotions associated with asylum seekers may have been perceived to be stronger among other people in general as a consequence of the intense media focus and a national political debate centered on restricting arrivals to the country (Bygnes, 2020).

In line with this interpretation of the findings, Gaucher et al. (2018) found in a longitudinal study that warmth and competence stereotypes of migrants and refugees (rated from the perspective of "most Canadians") became more positive following a change in government and related changes in political rhetoric and policies toward refugees. This change was stronger among individuals motivated to justify their sociopolitical system. In other words, the perceived stereotypes of others toward refugees were influenced by changes in the government policy, and the same type of process may be operating with respect to the perception of negative emotions targeting asylum seekers. This interpretation is also in line with the claim that "people's understanding of culturally shared stereotypes takes the perspective of society's dominant reference groups." (Fiske et al., 2002, p. 881), which in times of intense political debate and news coverage may be politicians at the national stage.

Among the subgroup of the respondents who had had an ASC established in their neighborhood in the last year, the results showed that individual stereotypes and emotional prejudices were consistently correlated with individual harm and facilitation toward asylum seekers in line with SCM and BIAS Map predictions. The pattern of correlations was less consistent when individual intergroup behaviors were correlated with perceptions of collective stereotypes and prejudices. However, the perception that others hold more negative stereotypes of asylum seekers, and the perceived anger and fear of others, did correlate with individual harming behaviors. Perceptions of others' anxiety correlated negatively with facilitating behaviors. Whereas the interpretation of the stereotypes–emotions–behavior correlations is uncomplicated in the case of the individual response instructions, and the relationships between the perceived stereotypes and emotions of others and individual behaviors require more discussion.

The pattern of correlations in the collective condition could be interpreted as reflecting the impact of perceived descriptive norms of stereotypes and emotions toward asylum seekers in society on individuals' self-reported behaviors, in line with Cuddy et al.'s (2007) argument that knowledge of cultural stereotypes and prejudices impact individuals' behaviors.

It could also be interpreted within an intergroup emotions framework (Mackie and Smith, 2015). Intergroup emotion theory explicitly emphasizes the role of self-categorization processes in emotion, reserving the group emotion term for "emotions that causally depend on self-categorization, that occur whether or not the group is physically present, and that reflects group-level, rather than interpersonal processes" (Mackie and Smith, 2015, p. 264). Although the respondents were not explicitly asked to think of themselves as Norwegians in the collective condition, the instruction to indicate the view of people in Norway in general, may have increased the salience of this group membership. There results from the collective condition are consistent with both these perspectives, so disentangling them would require additional studies.

Kotzur et al. (2020) argued that due to the differences they observed between the individual and collective response instructions on stereotype ratings, the way forward is to ask individuals to provide their personal views and aggregate these to the cultural level. Although this may very well be a valid approach to mapping the stereotype content of social groups within and across countries, it is important to acknowledge that stereotype ratings gathered from a collective approach have been related to cultural values, economic indicators and other country-level factors (Durante et al., 2013, 2017; Cuddy et al., 2015). Another approach put forward by Findor et al. (2020) is to treat individual and collective stereotypes and prejudices as separate constructs. They argue that individual instructions are adequate for assessing individuals' stereotypes and prejudices and they suggest interpreting collective stereotypes as indicators of the normative context or climate in a society. Thus, it appears premature to abandon the collective approach to the measurement of stereotypes and emotional prejudices. Rather, I would argue that systematically combining and comparing them could be a way toward new insights, as a number of questions remain unanswered. What are the relationships between the perceived stereotypes and emotional prejudices of others in society and individually held stereotypes and emotions? For example, if the perceived stereotypes of others in society toward politicized groups (e.g., refugees) changes with political rhetoric and policy, as indicated by the work of Gaucher et al. (2018), is this change also reflected in individuals' personal perceptions? In this study, I found that both individuals' personally held stereotypes and prejudices and perceptions of others' stereotypes and emotions (anger, fear, and anxiety) were associated with intergroup behaviors. However, because of the between-groups design, I could not compare their relative contributions to intergroup behaviors within individuals. Addressing this issue with a different design would be a valuable direction for future research.

Strengths and Limitations

The present study has a number of strengths. An experimental design and a large sample from the Norwegian adult population provides a solid foundation for comparing the impact of response instructions on ratings of stereotypes and emotional prejudices. However, there are several limitations that need to be addressed. The measures of stereotypes were based on single items, which prevented the latent variable modeling advocated by other stereotype researchers (e.g., Kotzur et al., 2020). With respect to the relationships between the stereotype and emotional prejudice ratings and the intergroup behaviors, the data were collected at the same time, and the cross-sectional and correlational design limits causal inferences.

Because I wanted to study intergroup behaviors among respondents who had recently had asylum seekers move in to ASCs in their neighborhood, the sample size for the intergroup behaviors analyses were smaller than might be desired. The n for the subsample correlations between stereotypes and prejudices and intergroup behaviors varied, with the smallest $n = 85$. With that sample size (given $\alpha = 0.05$, two-tailed test), I had a power of 0.99 to detect a population correlation of 0.50, a power of 0.81 to detect a population correlation of 0.30, and a power of 0.15 to detect a population correlation of 0.10 (G*Power version 3.1.9.4; Faul et al., 2007; O'Keefe, 2007). Small-to-moderate correlations between stereotypes and emotional prejudices on the one hand and intergroup behaviors on the other may be both theoretically and practically relevant. It is important to acknowledge that the size the subsample in the present study does not allow for establishing the existence of smaller effects.

Although the behaviors included in the intergroup behavior items were intended to capture both active (e.g., befriending) and more passive (e.g., commenting on social media) behaviors, the principal component analysis indicated only two components capturing facilitating and harming behaviors in general, without separating them along the active-passive dimension (Cuddy et al., 2007). This prevents a formal test of the mediation hypotheses central to the BIAS map. It is also important to note that the means of both harming and facilitating behaviors were low and the distributions of responses were skewed, especially for harming behaviors. From a substantive perspective, this indicates that several respondents reported not having engaged in the behaviors depicted in the items. This it interesting in itself, as it suggests that having an ASC established in the neighborhood triggers less backlash, but also less prosocial responses, than might have been expected (see also Bygnes, 2020). From a methodological perspective, the skewed distributions could have attenuated the correlations between the intergroup behaviors and the stereotype and prejudice measures.

CONCLUSION

I found that following the 2015 refugee influx to the country, Norwegians' stereotypes of asylum seekers centered on ascriptions of moderate warmth and competence – perceptions were more positive when respondents provided their personal views, and more negative when reporting their perceptions of the views of other people. Across response instructions, the emotional responses to asylum seekers as a group were characterized by pity and sympathy. When reporting the perceived emotions of others, asylum seekers were also perceived to elicit fear and anxiety, and to a certain extent anger, contempt and disgust.

Among individuals who had a reception center for asylum seekers established in their neighborhood during the crisis, individual stereotypes and prejudices, and the perceived stereotypes and prejudices of others, were related to facilitating and harming intergroup behaviors. The average reported levels of both harming and facilitating behaviors were low, however. This may suggest that for a majority of individuals in receiving communities, hosting asylum seekers in an ASC in the neighborhood elicited neither backlash nor a strong prosocial behavioral response.

I found that response instructions impacted both the reported stereotype content and emotional prejudices, but do not conclude that one approach should be preferred over the other. Rather, I argue that systematically combining and comparing them could be a way toward new insights, as a number of questions remain unanswered.

DATA AVAILABILITY STATEMENT

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found below: the data applied in the analysis in this publication are based on the Norwegian Citizen Panel [Waves 1 (2013), 3 (2014), 4 (2015), 5 (2015), and 6 (2016)]. The data are provided by UiB, prepared and made available by Ideas2Evidence, and distributed by the Norwegian Centre for Research Data (NSD). Neither UiB nor NSD are responsible for the analyses/interpretation of the data presented here. Data from the Norwegian Citizen Panel are available upon request from the Norwegian Centre for Research Data: https://nsd.no/nsddata/serier/norsk_medborgerpanel.html. Data from the Norwegian Citizen Panel are available for non commercial use. Please see conditions of use here: https://www.uib.no/en/digsscore/122158/data-and-conditions-use.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by The Norwegian Data Protection Authority (License number 34817). The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

HHB designed the study, analyzed the data, and wrote the manuscript.

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The Paradox of the Moderate Muslim Discourse: Subtyping Promotes Support for Anti-muslim Policies

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Tolerant discourse in the United States has responded to heightened stereotyping of Muslims as violent by countering that "not all Muslims are terrorists." This subtyping of Muslims—as some radical terrorists among mostly peaceful "moderates"—is meant to protect a *positive* image of the group but leaves the original negative stereotype unchanged. We predicted that such discourse may paradoxically increase people's support of anti-Muslim policies because the subtyping and its associated negative stereotypes justify hostile actions toward Muslims. In Study 1, subtyping predicted support for three anti-Muslim policies, but only among political moderates and conservatives. In Study 2, participants who were exposed to subtyping narratives expressed greater support for surveillance of Muslims in the United States. The effect of subtyping narrative exposure was stronger on support for hawkish anti-terror policy when participants' preexisting endorsement of subtyping was low. Irrespective of the well-meaning intentions of peaceful vs. radical subtyping, its expression can justify ongoing "War on Terror" policies. As the population of Muslims increases in North America, the intuition that most Muslims do not meet the negative stereotype may ironically reduce inclusion.

Keywords: subtyping, Islamophobia, Muslims/Islam, prejudice/stereotyping, secular critique

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INTRODUCTION

During the third debate leading up to the 2016 U.S. presidential election, a Muslim American asked the candidates how they would respond to rising Islamophobia. The candidates began their responses by opposing prejudice and then converged on a longstanding narrative that understands Muslims as a group with distinct responsibility for thwarting violence (Politico Staff, 2016):

> Donald Trump: Well, you're right about Islamophobia, and that's a shame . . . but whether we like it or not, there is a problem. And we have to be sure that Muslims come in and report when they see something going on. When they see hatred going on, they have to report it.
>
> Hilary Clinton: . . . unfortunately there has been a lot of very divisive, dark things said about Muslims . . . We need American Muslims to be part of our eyes and ears on our front lawns . . . Part of our homeland security.

Both responses opposed anti-Muslim prejudice and in so doing also reinforced a central message to the Muslim questioner and to the broader audience: a minority of Muslims in America can

potentially harm, and a peaceful majority has a responsibility to stop it. Though some parts of their answers not included above certainly diverged in tone and content, it is noteworthy that the candidates responded similarly amidst such a divisive election season.

We argue that the dialogue captured in that debate is a poignant example of an intercultural stereotype of Muslims as either radical or moderate, a form of subtyping, as it called in the stereotyping literature. We argue in this paper that the subtyping of Muslims emerges within a militaristic historical period, one that produced a sociocultural framing of Muslims as peaceful but always potentially violent. Furthermore, the stereotype continues to function as a basis for building popular support for aggressive policies through its anti-prejudicial veneer.

Subtyping Informs and Protects Stereotypes

Subtyping refers to the process of distinguishing members of a category while retaining a general stereotype about the category. Research conducted within the cognitively oriented period of the stereotyping literature proposed at least two purposes for subtyping. First, subtyping can specify examples that constitute a category that is too broad to be understood with a single stereotype (Devine and Baker, 1991). For instance, while a general schema can structure perception of African Americans in the United States, particular stereotypes animate this structure through subtypes such as "streetwise," "athlete," or "poor," often to prejudicial effect (Devine and Baker, 1991). The category of *elderly* may be subtyped either as "grandmotherly" or "elder statesman," among others (Brewer et al., 1981). Here, the subtypes inform a hierarchical perception of a unitary category and allows more diverse stereotypical representations of the group. Some scholars also label this type of subtyping as subgrouping (e.g., Richards and Hewstone, 2001), in which subgroups exist within the superordinate group and stereotypes of the superordinate group are still valid (Brown et al., 2018).

Second, and more related to the current research, subtyping can insulate a category's general stereotype in the face of disconfirming evidence or non-stereotypical examples (Weber and Crocker, 1983; Kunda and Oleson, 1995; Queller and Smith, 2002; Joyce et al., 2020). That is, subtyping allows for individuals to be understood as unrepresentative of the broader category (Weber and Crocker, 1983). This is especially the case when deviance cannot be attributed to any other information about the target. For instance, the stereotype of gay men as promiscuous did not change in the face of disconfirming examples when the disconfirming evidence could be attributed to other neutral information, such as being an accountant (Kunda and Oleson, 1995). Evidence that participants were less likely to subtype if they were distracted by another task, and thus unable to judge a disconfirming target as atypical, suggests that subtyping requires considerable cognitive resources and motivation (Yzerbyt et al., 1999). More recent work has also revealed subtyping's mechanism and its moderators. Subtyping can be driven by a motivation to embrace the stereotypes endorsed by ingroup members and to comply with the ingroup's normative context (Carnaghi and Yzerbyt, 2006) and thus reduce the likelihood of group level social changes. Subtyping can also be moderated by preexisting intergroup attitudes. For example, facing counter-stereotypical members of the outgroup, high-prejudiced individuals subtyped positive racial outgroup members, while low-prejudiced individuals subtyped negative racial outgroup members (Riek et al., 2013).

Good Muslim, Bad Muslim

Before situating the current research within the subtyping framework, it is helpful to outline how history has produced different stereotypes in Europe and the United States to organize perceptions of Muslims. During the colonial period, when the intercultural attitudes were developed through European travelers producing literature and art, Muslims were understood as exotic, sensuous, and depraved (Said, 1979; Ahmed, 1992). Then, throughout the twentieth century, as majority-Muslim societies attempted to form sovereign nation states, and with the onset of larger and more distant migration patterns, Muslims were now living either in newly independent countries or on the front lawns of European and U.S. cities. Much of this new period understood Muslims either as allies in a global anti-communist struggle or as resentful antagonists (Mamdani, 2002).

The sociopolitical landscape was reconfigured again after the 9/11 attacks and subsequent global "War on Terror," offering a potent spark to solidify a stereotype of Muslims as violence-prone, anti-American extremists. In a poll conducted 6 months after 9/11, 25% of Americans believed Islam was more likely to encourage violence than other religions (Pew Research Center, 2003). By July 2003, the rate increased to 44%, indicating that the stereotype relies not only on purported evidence of violent expression but also on the contingent sociopolitical factors, with the invasion of Iraq beginning shortly before. This attribution of violence also carried gendered discourse, with militaristic and political interventions in Muslim-majority countries being justified through constructions of Islam as essentially patriarchal and homogenizing representations of Muslim women as oppressed figures in need of white, western saviors (Abu-Lughod, 2013; Wong, 2019).

Importantly, however, increasing stereotyping of Islam as encouraging violence did not coincide with a commensurate increase in explicit anti-Muslim prejudice in the United States (though Muslims are judged least favorably of any religious group). In March 2001—6 months before 9/11—45% of Americans viewed Muslim-Americans favorably (Pew Research Center, 2003). By November 2011, this favorability had *increased* to 59%, before dropping to 51% in March 2003. More recently, some argue that a general *affection* is replacing the general hostility toward Islam and Muslims, a concerted extension of liberal inclusion (with its own political costs; Shryock, 2010). So how did national sentiment toward Muslims balance this seeming contradiction, of increasing negative stereotypes without increasing explicit prejudice?

One line of research speaking to this question attempts to decouple the frequently conflated prejudice against Muslims and a secular critique of the religion itself, without reference to the adherents (Imhoff and Recker, 2012). That is, rather

than a catchall "Islamophobia" that describes all hostilities for Islam and Muslims, this perspective argues for an empirical and ethical distinction between bias against the people and dispassionate disagreement with the doctrines and practices, referred to as Secular Critique of Islam. With the use of two new separate measures, two studies among non-Muslims in Germany found that Islamoprejudice was related to a separate measure of prejudice (and social dominance orientation), whereas Secular Critique was not. Islamoprejudice and Secular Critique correlated positively ($r = 0.21$) in a community sample and were unrelated in a student sample (Imhoff and Recker, 2012).

In empirically distinguishing Islamoprejudice from Secular Critique, such research ironically demonstrates, for our argument, their inextricable sociopolitical link; within everyday discourse, each way of perceiving Muslims is relevant when contrasted with the other. One study found that right-wing authoritarianism and social dominance orientation predicted the prejudicial dimension of Islamophobia but not the secular critique dimension; however, both dimensions predicted perceptions of terrorism by Muslims as a threat to the country (Italy; Tartaglia et al., 2019). In France, social scientists typically eschew the term Islamophobia for precisely this reason, because it is seen as ill-defined, too often extending to describe disparate phenomenon ranging from racism to anti-terrorism (Shryock, 2010). Perhaps not coincidentally, an aversion to the label "Islamophobia" coincides with efforts to directly restrict and control religious expression, beyond a general state secularism, a phenomenon referred to as *new secularism* (Troian et al., 2018). In studies conducted in France in the aftermath of terrorist attacks, *new secularism* (example item, "*Some* religions go against secularism," emphasis added) can partially explain the relationship between social dominance orientation and prejudice against North Africans (Troian et al., 2018). These studies demonstrate how these dimensions of perceiving Muslims—which correspond to subtyping—are empirically distinct but politically entwined because these ways of talking and thinking about Muslims occur in tandem.

We argue that the subtyping of Muslims opens an avenue for a negative stereotype to apply to a narrow subgroup (violent extremists) while attempting to maintain a positive view of Muslims. Importantly, this social balancing act coincided with the aggressive military campaigns over the next 2 years within Muslim-majority countries (Afghanistan and Iraq) supposedly in retaliation for the 9/11 attacks. We understand this link as occurring amidst the attempt to integrate a growing Muslim population in Europe and North America while justifying the policies that target a small minority of their co-religionists, or at least coping with the realistic and symbolic threats posed by Muslims. In remarks 9 days after 9/11, then-president George W. Bush acknowledged concerns that one billion Muslims, including the many thousands living in the United States, would be subject to negative stereotypes as a result of the attacks: "The terrorists practice a fringe form of Islamic extremism that has been rejected by Muslim scholars and the vast majority of Muslim clerics; a fringe movement that perverts the peaceful teachings of Islam" (President Bush Addresses the Nation, 2001). Then, directly addressing Muslim listeners, "The terrorists are traitors to their own faith, trying, in effect, to hijack Islam itself. The enemy of America is not our many Muslim friends. It is not our many Arab friends. Our enemy is a radical network of terrorists and every government that supports them." In the lead up to decisions of major international consequence, the leader of the most powerful military in the world simultaneously sounded alarm about a violent fringe movement and discouraged prejudicial sentiment against the religion's peaceful adherents.

The subtyping of Muslims thus diverges from the traditional approaches to subtyping described in the previous section. Most importantly, whereas previous subtyping literature explored how biased individuals are motivated to maintain negative stereotypes of groups, the subtyping of Muslims protects a representation of Islam and Muslims as inherently *good*; the violent extremists are the exceptions to the general category. Drawing from the moral credential perspective and justification literature, we argue that this discursive framework justifies suspicion toward not only the extreme subtype, but the entire group, since the majority is acknowledged to be peaceful, absolving the group of prejudicial intent (e.g., Monin and Miller, 2001; Crandall and Eshleman, 2003). Furthermore, it places responsibility upon Muslims to disprove the public's default suspicion, perhaps even encouraging Muslims to join in the collective cause against the perceived threat of extremism. Hawkish anti-terror policy, and the Orientalist stereotypes that accompany it, are protected from accusations of Islamoprejudice if the "good" Muslim majority is enlisted to the cause of rejecting and surveilling the "bad" Muslim minority (Mamdani, 2005). Muslim subtyping is thus a functional, context-dependent stereotype that emerges within the post-9/11 political landscape and is deployed to justify "War on Terror" policies.

Current Research

The present studies explore how a novel form of stereotyping against Muslims is related to geopolitical attitudes, given the emergence of this subtyping within the context of the U.S.-led "War on Terror." First, we expect to find overall support for Muslim subtyping since it is meant to protect an image of the group as inherently good. Second, we explore how Muslim subtyping is related to support for aggressive military and social policies. We predict that great endorsement of Muslim subtyping or exposure to an experimental manipulation of Muslim subtyping would predict greater levels of harsh policy. Third, the literature suggests that subtyping effects could be moderated by preexisting intergroup attitudes. We hypothesize that political orientation may moderate the relationship between Muslim subtyping and support for militaristic foreign policy. Conservatives tend to shorten cognitive thinking and are more ready to eliminate ambiguity (Petty and Jarvis, 1996; Jost et al., 2007) and thus may experience a greater threat when facing non-stereotypical evidence of Muslims than liberals. Such threat may lead conservatives to interpret such evidence as the exception that proves the "radical" Muslim subtype, rather than considering the evidence as truly counter-stereotypical. Thus, we predict that conservatives would show greater support for militaristic foreign policy in response. In addition, political conservatism is also a strong predictor of militaristic foreign

policy in the literature (e.g., McCleary and Williams, 2009), and thus, responding by endorsing militaristic foreign policy is more accessible for conservatives. We tested the above hypotheses in both a correlational study (Study 1) and an experiment (Study 2).

STUDY 1

The first study explored the function of subtyping by assessing its convergent and discriminant endorsement with more self-evident measures: preferences for different anti-Muslim policies and prejudice. Furthermore, this first study tested for an explicit partisan character of subtyping by measuring the relationship between subtyping and political orientation and by examining the role of political orientation in moderating the relationship between subtyping and support for anti-Muslim policies. To test for the effect of subtyping on support for policies above and beyond individuals' levels of explicit bias, we also measured prejudice, which should be a strong positive predictor of support for interventionist policies that target Muslims. This study occurred in early 2017, when coverage of ISIS atrocities filled news coverage, and amidst heightening anti-Muslim rhetoric.

Materials and Methods

Participants

We recruited 151 participants from Amazon's Mechanical Turk. Their completion of the 10 min survey was compensated with $1 USD. Three participants failed an attention check embedded in the survey, resulting in a total sample of 148 participants (M = 36.72, SD = 12.29, range: 18–74), of whom 37.1% identified as women (one participant did not report a gender) and of whom 80.8% identified as White/Caucasian, 7.9% as Black/African American, 5.3% as Asian, 2.6% as Hispanic, and 2.0% as Native American or Pacific Islander, and 1.3% not reported.

Measures

Unless otherwise indicated, all self-report measures were completed with 1 (*strongly disagree*) to 7 (*strongly agree)* scales.

Muslim subtyping

We first constructed a five-item measure (adapted from the Secular Critique of Islam scale; Imhoff and Recker, 2012) to operationalize the preference to distinguish between two groups of Muslims as, consistent with popular portrayals, either moderate/peaceful or radical/fundamentalist/violent (α = 0.73): "Distinguishing between moderate and radical Muslims is vital to American security," "It is wrong to ignore the threat of fundamentalist Islam," "We should support those moderate Muslims who distance themselves from fundamentalist interpretations of Islam," "One can fight against the political ideology of Islamic fundamentalism without having anything against non-fundamentalist Muslims," and "I believe that most Muslims are peaceful, but to ignore the threat of radical Islamic jihad is a mistake." We picked those items among many others in the scale that best captured a rational, open-minded distinction between Muslims who are moderate/non-fundamentalist and radical/fundamentalist.

Surveillance

Four items (α = 0.95) captured support for a set of tactics that would target Muslims with extra vigilance to promote American security: "I think American intelligence services should place extra effort on the surveillance of Muslim immigrants to the U.S.," "It only makes sense to take the fact that someone is a Muslim into consideration when considering whether or not to search them at the airport," "Even if it only helped save just one American life, spying on Muslim immigrants in the U.S. would be justified," and "If it makes Americans safer, I think it's justified that Muslims should come under greater scrutiny at the airport than other individuals."

Anti-immigration

The average of two items captured support for suspending immigration from terror-prone, Muslim-majority regions (r = 0.85). With the first item, participants rated the extent to which they agreed with the statement, "I think we should suspend immigration from terror prone regions, even if it means turning away refugees from those regions." With the second item, participants picked a point on a seven-point bipolar scale, with one anchor reading "The United States should continue to take in immigrants and refugees" and the other end "Banning people from Muslim-majority countries is necessary to prevent terrorism."

Hawkish Anti-terror

Four items (α = 0.87) captured support for aggressive, militaristic policies to confront terrorism perpetrated by ISIS: "To put an end to terrorist acts by ISIS, I think it is ok to use torture," "To put an end to terrorist acts by ISIS, I think it is OK to bomb a country if it is known to harbor ISIS terrorists," "To put an end to terrorist acts by ISIS, I think it is OK to target supporters of ISIS with extra profiling and surveillance," and "I support continued military efforts abroad to root out potential ISIS terrorists."

Prejudice

A seven-item social distancing measure (α = 0.96) captured preference to affiliate and interact with Muslims (e.g., "Muslims are likeable people," "I would like a Muslim to work in the same place as I do," and "Muslims are the kind of people I tend to avoid").

Political orientation

We averaged two items (α = 0.86) to capture how participants rate themselves on economic and social issues (1 = *very liberal*, 4 = *middle of the road*, 7 = *very conservative*).

Demographics

Participants reported their race/ethnicity, gender, education, age, and residential status.

Results

Means, standard deviations, and correlations among variables are presented in **Table 1**. Consistent with the first hypothesis, participants overall endorsed Muslim subtyping (M = 5.35, SD = 1.10) to a greater extent than the neutral point of the scale (3.5), $t(150) = 20.64$, $p < 0.001$, $d = 1.68$. Generally supporting the second hypothesis, Muslim subtyping was significantly correlated

TABLE 1 | Descriptive results and correlations among variables.

			Correlations					
	M	*SD*	1	2	3	4	5	6
(1) Muslim subtyping	5.35	1.10	–					
(2) Surveillance	3.87	1.85	0.22*	–				
(3) Anti-immigration	3.64	2.12	0.09	0.81**	–			
(4) Hawkish anti-terror	4.28	1.64	0.29**	0.72**	0.64**	–		
(5) Prejudice	3.83	1.56	0.18*	0.63**	0.59**	0.36**	–	
(6) Political orientation	3.79	1.87	0.07	0.55**	0.61**	0.42**	0.48**	–

*$p < 0.05$, **$p < 0.01$.

with all militaristic foreign policy outcomes, except for anti-immigration.

We next conducted a series of hierarchical multiple regression analyses with subtyping and political orientation predicting support for the different policies. These models tested for the effect of subtyping as a functional stereotype in predicting anti-Muslim policies beyond the effect of explicit bias by controlling for prejudice. It was necessary to control prejudice in analyses because, as an individual difference, prejudice may be correlated with both our predictors and outcomes, serving as a confounding variable. The first set of models included each of those three predictors, and the second set tested for an additive predictive effect of the interaction between subtyping and political orientation. In all models, prejudice toward Muslims, subtyping, and conservative political orientation were significant predictors of support for surveillance, anti-immigration, and hawkish anti-terror policies.

In Step 2 of all three models, the effects of subtyping and political orientation were qualified by significant *Subtyping* × *Political orientation* interactions (**Table 2**). We used Preacher et al.'s (2006) online tool to probe the interactions and calculate simple slopes for the relationship between subtyping and policy at different political orientations. Probing of the interaction showed that as political orientation shifted more conservatively, the relationship between subtyping and support for the policies was stronger. In the case of hawkish anti-terror, simple slope analyses showed that for liberals (i.e., at a political orientation value of 2), there was no relationship between subtyping and hawkish anti-terror, $b = 0.15$, $t = 0.95$, $p = 0.34$, 95% CI [0.01, 0.30]. However, for middle of the road and conservative participants (at political orientation scores of 4 and 6, respectively), subtyping endorsement was positively related to support for hawkish anti-terror: middle of the road participants, $b = 0.37$, $t = 3.46$, $p = 0.009$, 95% CI [0.26, 0.48], and conservative participants, $b = 0.58$, $t = 4.31$, $p < 0.001$. 95% CI [0.44, 0.72] (see **Figure 1**). Simple slope analyses for all three measures are summarized in **Table 3**.

STUDY 2

Having found evidence for an association with anti-Muslim policies, the goal of Study 2 was to test for causal effects by manipulating the salience of Muslim subtyping. Given that Study 1 revealed a generally strong endorsement of Muslim subtyping ($M = 5.35$, scale from 1 to 7), we used the measure itself as a prime. Like Studies 1 and 2 examined subtyping as a predictor of relevant anti-Muslim policies.

Materials and Methods

Participants

We recruited 113 undergraduate students enrolled in a psychology course to participate in the experiment in exchange for course credit. Three participants who did not complete all the measures were excluded. The final sample consisted of 110 participants ($M = 18.95$, $SD = 0.96$, range: 18–24), of whom 52.7% identified as women, and of whom 78.0% identified as White/Caucasian, 5.5% as Black/African American, 4.6% as Hispanic or Latino, 3.7% as Asian, 2.7% as multiracial, 2.7% as Native American, and 2.7% not reported.

Procedure

In the introduction to the study, participants in both conditions learned that they would be reading a news article, followed by questions they would answer regarding the article. This step served to set up a context for participants before they answered the Muslim-relevant questions. All participants read a news brief adapted from a CNN article titled "ISIS Fast Facts," which described the group's purported origins, aims, and strategies. Data collection occurred during the spring of 2017, when ISIS's territorial control was still near its peak and news coverage regularly portrayed the group as a threat

TABLE 2 | Prejudice, Subtyping, Political orientation, and Subtyping × Political orientation interaction predicting support for three policies.

	Surveillance		Anti-immigration		Hawkish anti-terror	
Predictor	**Model 1**	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**
Prejudice	0.67**	0.71**	0.58**	0.62**	0.31**	0.34**
Subtyping	0.50**	−0.24**	0.28*	−0.63**	0.49**	−0.08
Political	0.26**	−0.66**	0.45**	−0.69*	0.23**	−0.47
Subtyping × Political	–	0.18**	–	0.22**	–	0.13**
R^2	0.57	0.62*	0.51	0.56**	0.31	0.35**

*$p < 0.05$, **$p < 0.01$.

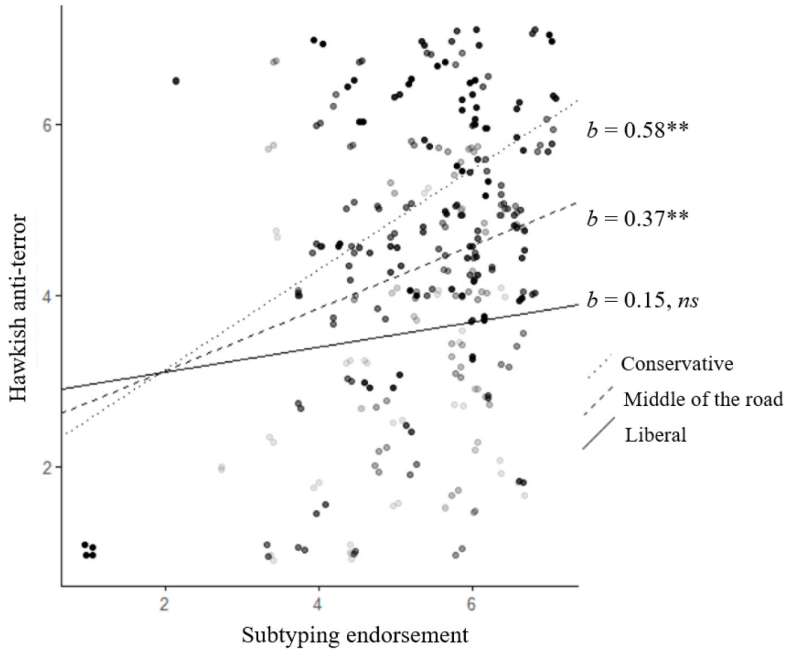

FIGURE 1 | The interaction between subtyping and political orientation predicting support for hawkish anti-terror measures. Dots represent data points. Darker dots represent values of more conservative participants. $^{**}p < 0.01$.

to the United States and Europe. We assumed that most participants would be familiar with ISIS, given that a previous representative survey found that 96% of U.S. respondents rated ISIS as either a "critical" or "important threat"; only 1% of respondents did not have an opinion (Gallup, 2015). After reading the article, participants completed a three-item quiz to assess reading comprehension.

Next, an order manipulation varied the salience of Muslim subtyping (see Adams, 2005, Study 3, for another example). Half of participants (N = 56) were randomly assigned to complete the subtyping measure from Study 1 immediately following the article and quiz. The other half of participants (N = 56) proceeded directly to the dependent measures, which were identical to those in Study 1 (support for surveillance, anti-immigration, and hawkish anti-terror). The subtyping measure was then completed by those participants who did not complete it earlier directly following the ISIS article.

Finally, participants reported their political orientation and demographics in identical fashion to Study 1.

Results

Replicating results of Study 1, subtyping was endorsed in both the subtyping salient condition (M = 5.30, SD = 0.95) and the control condition (M = 5.38, SD = 0.90), and overall to a greater extent than the neutral point of the scale (3.5), $t(111) = 21.10$, $p < 0.001$, $d = 1.99$. We conducted three independent samples t-tests to examine the effect of the *Subtyping salient* manipulation on support for the policies. While all three tests trended in the hypothesized direction, only one effect reached statistical significance. There was no effect of the manipulation on support for anti-immigration: participants in the *Subtyping salient condition* (M = 3.57, SD = 1.82) expressed similar levels of support relative to participants in the *Control condition* (M = 3.09, SD = 1.67), $t(109.23) = 1.46$, $p = 0.14$.

TABLE 3 | Results of simple slope tests for the interactions between subtyping manipulation and political orientation on support for three anti-Muslim policies.

Levels of political orientation	Surveillance	Anti-immigration	Hawkish anti-terror
Liberals	0.02	−0.32	0.15
Middle of the road	0.27*	0.04	0.37**
Conservatives	0.52**	0.40*	0.58**

Numbers represent regression coefficients. $^{*}p < 0.05$, $^{**}p < 0.01$.

There was also no effect of the manipulation on support for hawkish anti-terror: participants in the *Subtyping salient condition* (M = 4.89, SD = 1.17) expressed similar levels of support relative to participants in the *Control* condition (M = 4.60, SD = 1.23), $t(109.74) = 1.28$, $p = 0.20$.

However, there was a significant effect of the manipulation on support for surveillance: participants in the *Subtyping salient condition* (M = 4.71, SD = 1.63) expressed greater support than participants in the *Control condition* (M = 3.79, SD = 1.81), $t(109.99) = 3.10$, $p = 0.002$, $d = 0.59$.

While the study design made subtyping salient in only one condition (i.e., for only half of participants), the remaining half of participants completed the measure at the end of the study,

TABLE 4 | Condition, Subtyping endorsement, and Condition × Subtyping interaction predicting support for three policies.

Predictor	Surveillance	Anti-immigration	Hawkish anti-terror
Condition (0 = *Control*, 1 = *Subtyping salient)*	3.57*	3.95*	3.93**
Subtyping endorsement	−0.01	0.22	0.51**
Condition × Subtyping	−0.52	−0.65	−0.68**
R^2	0.11	0.03	0.07

*$p < 0.05$, **$p < 0.01$.

allowing for the testing of actual endorsement of subtyping as a necessary moderator of the manipulation. To test for such an effect, we ran three models testing the effects of the manipulation, subtyping endorsement, and their interaction to predict support for the three policies.

As shown in **Table 4**, with the inclusion of the interaction terms, the main effect of Condition was significant in predicting greater support for each of the policies. The models predicting support for surveillance and anti-immigration did not reveal significant interactions. However, the model predicting support for hawkish anti-terror did reveal a significant interaction, a probe of which indicated that, on average, participants in the *Subtyping salient condition* expressed greater support for hawkish anti-terror measures than participants in the *Control condition*.

We interpreted the interaction by first treating subtyping endorsement as the moderator and the subtyping manipulation as the predictor. Simple slope analyses showed that the effect of the manipulation was significant only when subtyping endorsement was low (4.40), $b = 0.96$, $t = 3.05$, $p = 0.003$, 95% CI [0.34, 1.58], but not when subtyping endorsement was high (6.26), $b = -0.41$, $t = -1.18$, $p = 0.239$, 95% CI [−1.07, 0.27], or at intermediate level (5.33), $b = 0.35$, $t = 1.56$, $p = 0.120$, 95% CI [−0.09, 0.78] (**Figure 2**). These results suggest that the subtyping manipulation exerted an influence on support for hawkish anti-terror policy only when individuals previously held lower levels of such subtyping belief; for high and intermediate participants, subtyping endorsement wiped out the manipulated effect.

We also interpreted the interaction by switching the role of the variables, treating the subtyping manipulation as the moderator, and subtyping endorsement as the predictor. This simple slope analyses showed that whereas subtyping endorsement was not a significant predictor of support for the policy among participants in the *Subtyping salient condition*, $b = -0.18$, $t = -1.09$, $p = 0.28$, 95% CI [−0.51, 0.15], it was a significant predictor among participants in the *Control condition*, $b = 0.50$, $t = 2.88$, $p = 0.005$, 95% CI [0.15, 0.84] (**Figure 2**). This replicates what we found in Study 1 that subtyping endorsement positively predicted support for hawkish anti-terror policy.

Finally, we tested the interaction between subtyping manipulation and political orientation on support for the policies. No interactions were significant, $ps \geq 0.140$. However, the main effects of political orientation were significant. Conservatism positively predicted support for the policies, $ps < 0.001$. However, as in Study 1, when we defined subtyping

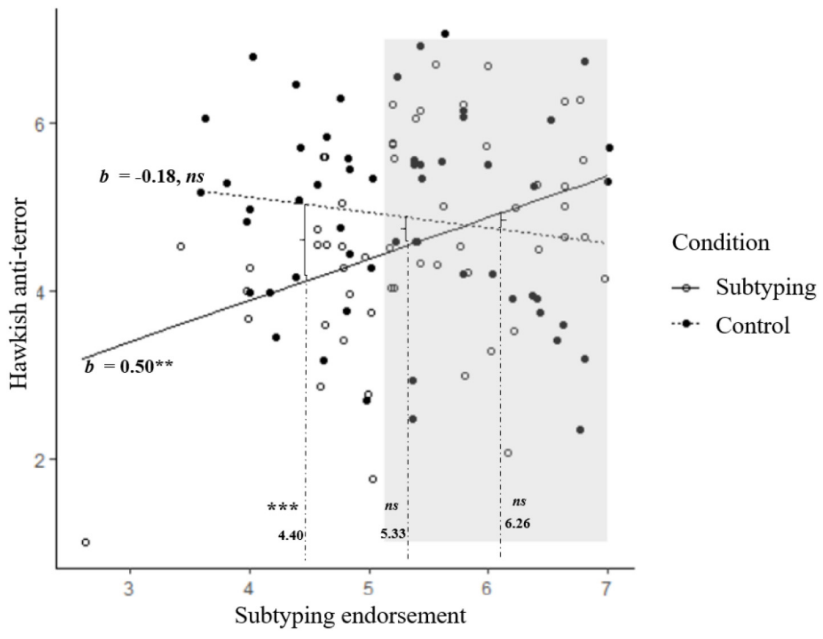

FIGURE 2 | The interaction between subtyping endorsement and subtyping manipulation predicting support for the hawkish anti-terror measure. Dots represent data points. The effects of manipulated condition at different levels of subtyping endorsement are marked by brackets. With the use of the Johnson–Neyman technique, the shaded area represents the levels of subtyping at which the effect of manipulated condition was not significant in increasing support for Hawkish anti-terror policy. ***$p < 0.001$, **$p < 0.01$.

TABLE 5 | Results of subtyping endorsement's simple slope on different levels of political orientation, Study 2.

Levels of political orientation	Anti-immigration	Hawkish anti-terror
Liberals	$b = -0.28$, $t = -1.49$, $p = 0.139$, 95% CI (−0.65, 0.09)	$b = 0.05$, $t = 0.38$, $p = 0.703$, 95% CI (−0.21, 0.30)
Middle of the road	$b = -0.06$, $t = -0.41$, $p = 0.683$, 95% CI (−0.37, 0.24)	$b = 0.19$, $t = 1.81$, $p = 0.073$, 95% CI (−0.02, 0.40)
Conservatives	$b = 0.37$, $t = 1.47$, $p = 0.145$, 95% CI (−0.13, 0.87)	$b = 0.47$, $t = 2.74$, $p = 0.007$, 95% CI (0.13, 0.82)

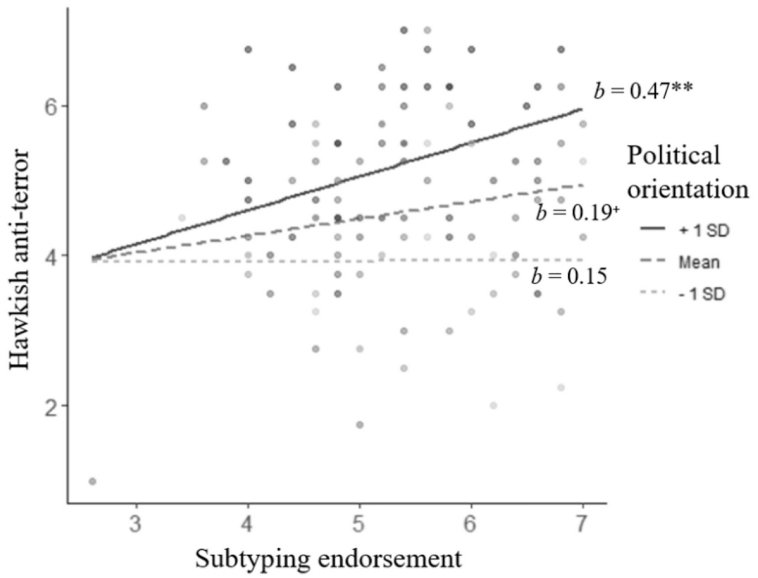

FIGURE 3 | The interaction between subtyping endorsement and political orientation predicting support for hawkish anti-terror policy. Dots represent data points. $^{+}p < 0.10$, $^{**}p < 0.01$.

endorsement as a predictor and political orientation as a moderator, while controlling for subtyping manipulation, results generally replicated what we found in Study 1. Specifically, the interactions between subtyping endorsement and political orientation were significant on anti-immigration policy, $b = 0.22$, $t = 2.11$, $p = 0.037$, 95% CI [0.01, 0.42], on anti-terror policy, $b = 0.14$, $t = 2.02$, $p = 0.046$, 95% CI [0.002, 0.28], but not on surveillance, $b = 0.11$, $t = 1.28$, $p = 0.203$, 95% CI [−0.06, 0.27]. Simple slope analyses for the two significant measures are summarized in **Table 5**. In the case of anti-immigration, simple slope analyses did not reveal any significant effect of subtyping endorsement at any level of political orientation. However, for anti-terror policy, conservative participants (at political orientation score of 6), subtyping endorsement was positively related to support for hawkish anti-terror but not for liberal and middle of the road participants (see **Figure 3**).

GENERAL DISCUSSION

The post-9/11 era has been fertile ground for the growth of an intercultural stereotype of Muslims as being either moderate or radical. Throughout the 2016 U.S. presidential campaign, for instance, contentious debate argued for and against using a descriptor like "radical Islam" to label Muslims who threatened the United States. Partisans of the term defended its use by arguing that it focused only on the dangerous fringe of a particular group, without encouraging any prejudice toward all Muslims. During a town hall event, then-Republican candidate Donald Trump was asked if he trusted Muslims in America. He responded: "Many of them I do. Many of them I do, and some, I guess, we don't . . . We have a problem, and we can try and be very politically correct, and pretend we don't have a problem, but . . . we have a major, major problem. This is, in a sense, this is a war" (Johnson and Hauslohner, 2017). The current research examined how the subtyping of Muslims into moderates and radicals, while superficially reconcilable with religious pluralism, predicts support for discriminatory policies that target Muslims.

Across one online sample and one student sample, we found that American participants overall endorse Muslim subtyping. More importantly, such endorsement translates into support for aggressive military and social policies. We witnessed this pattern when we measured Muslim subtyping in Study 1, when we manipulated Muslim subtyping in Study 2, and when we examined the subtyping endorsement's simple slope effect within the control condition of Study 2. Subtyping endorsement was associated with greater support for surveillance policy, anti-immigration policy (when simultaneously considering the interaction effect with political orientation), and support for Hawkish anti-terror policies. Providing causal evidence, participants of Study 2 who were primed with Muslim subtyping also endorsed greater support for Hawkish anti-terror policies.

Moreover, the subtyping effect on support for hawkish anti-terror policy was evident only when individuals previously held lower levels of Muslims subtyping belief. Confirming our moderation hypothesis, in both Studies 1 and 2, the relationship between subtyping endorsement and greater support for those hostile policies was particularly evident among conservatives.

Previous work on subtyping primarily focused on the process of subtyping itself (e.g., Queller and Smith, 2002; Carnaghi and Yzerbyt, 2006) and tended to focus on subtyping as an outcome. Our findings extend the literature by examining subtyping's sociopolitical consequences. Muslim subtyping reveals how complementary stereotypes can maintain the status quo and justify ongoing harm (Jost and Kay, 2005; Kay et al., 2007). We propose that subtyping justifies support for hostile policies specifically toward "radicals," making such behaviors more socially acceptable and even favorable, regardless of the harm caused to broader Muslim populations. Therefore, Muslim subtyping can be used and has been leveraged in U.S. political discourse as a "legitimate" tool to maneuver the vast population's support for both domestic and foreign policies against Muslims (e.g., Muslim travel ban and Iraq war).

We also suspect that Muslim subtyping may not be unique to the United States and Europe and that the presence and effect of this discourse should be further examined in non-U.S. contexts. For example, France shares with the U.S. evocative experiences of, and responses to, domestic terrorism and a history of participation, albeit much less pronounced, in the "War on Terror" (Puar, 2007). Context-sensitive replications can uncover how the sociopolitical contingencies may produce similar results, though filtered through the laic norms that more directly racialize the Muslim minority. In China, on the other hand, in addition to promoting different norms constraining religious expression, Muslims are a longstanding domestic minority. Wei Fenghe, the Minister of National Defense of China, without even engaging in any Muslim subtyping, alleged that Xinjiang "re-education" internment camps that indoctrinate Uyghur Muslims serve to eliminate extreme values among Uyghur Muslims (Lengshanshiping, 2019).

Our findings also qualify the growing body of evidence that empirically distinguishes between prejudicial and non-prejudicial aversion to Islam and Muslims. We intentionally operationalized subtyping using items from an established measure that evidenced weak or no associations with prejudice. The present findings demonstrate that irrespective of whether it is prejudicial in nature, "culture talk" about Muslims as being either moderate or radical can unquestioningly perpetuate hostile policies (Mamdani, 2002). Future research can devise new operationalizations to test the limits of the present findings. For instance, while the current items all explicitly contrasted moderate and radical Muslims/Islam, a more conservative test of this subtyping hypothesis can include items that mention only moderate Muslims; a conceptual replication of these results with such a measure would indicate that the invoking of "moderates" alone does indeed invite thinking about "radicals" as well.

Theoretically, these findings of subtyping add to the robust literature on the adverse implications of concepts with positive guises. Such concepts include benevolent sexism (a chivalrous ideology that women should be protected by men; Glick and Fiske, 2001), the model minority myth (minorities can achieve success on their own with enough efforts; Kao, 1995), positive stereotypes (positive stereotype receivers expect being ascribed negative stereotypes; Siy and Cheryan, 2016), and patronizing forms of racism (Jackman, 1994). Frye (1983) articulates these "double-binds" as markers and mechanisms of systemic oppression. All these stereotypes send seemingly positive messages about disadvantaged groups but have subtle and insidious sociopolitical consequences—in this case, reinforcing foreign aggression and domestic discrimination.

Whereas the current research only included non-Muslim responses, future studies can investigate how Muslims perceive their group's subtyping as well as measuring their own endorsement of subtyping. American Muslims may endorse subtyping as a way to protect positive U.S. and Muslim identities as a coping strategy to alleviate the consequences of subtyping and negative stereotypes (Branscombe et al., 1999). Muslims in non-Muslim majority settings may find those settings increasingly receptive to their expressions of moderate-ness, reinforcing the dialogic framing that anchors positive representations as existing in opposition to the negative stereotypes (Morey and Yaqin, 2011).

As the population of Muslims increases in North America and Europe, the intuition that most Muslims do not meet the violent stereotype may ironically reduce inclusion of the whole group. This occurs because the carving up of Muslims into moderates and radicals presumes that greater identification with religion is necessarily linked to violence. Ultimately, then, we would do well to release Muslims from the double-bind of subtyping and to confront political discourse that mobilizes the specter of a minority to perpetrate harm against the majority.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation, to any qualified researcher.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the University of Kansas Institutional Review Board. The participants provided their written or electronic informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

NH and XZ wrote the initial draft. All authors contributed to the study design, data collection, and subsequent revision of drafts.

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The Way We See Others in Intercultural Relations: The Role of Stereotypes in the Acculturation Preferences of Spanish and Moroccan-Origin Adolescents

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Although the relationship between stereotypes and acculturation preferences has been previously studied from the majority perspective among adults, the perspective of adolescents and minority groups is understudied. This research analyzed the contribution of four stereotype dimensions (i.e., morality, immorality, sociability, and competence) to the acculturation preferences of Spanish adolescents and adolescents of Moroccan-origin, the moderating role of stereotypes in intergroup acculturation discrepancies, and the interaction of stereotypes with acculturation perceptions on acculturation preferences. A sample of 488 Spanish adolescents and 360 adolescents of Moroccan-origin living in Spain, from 12 to 19 years old, reported how moral, immoral, social, and competent they perceive each other to be. Spanish adolescents reported their perception about how Moroccan youth were acculturating in terms of maintaining their original culture and adopting the host culture, and their acculturation preferences in the same dimensions. Adolescents of Moroccan-origin reported to what extent they were maintaining their original culture and adopting the host culture, their acculturation preferences, and their ethnic and national (Spanish) identity. Results showed that adolescents of Moroccan-origin reported more positive perceptions of Spanish youth than conversely. The perceived immorality of the outgroup was important for understanding the preferences for adopting the host culture of both groups, but in the opposite direction. The four stereotype dimensions modulated the majority-minority discrepancies in preferences for cultural adoption. An analysis of the interaction between stereotypes and perceived adoption on acculturation preferences showed that when Spanish adolescents perceived that Moroccan youth were not adopting the Spanish culture, perceived morality and sociability played a role in their preferences for adoption. The less moral and sociable Moroccans were perceived, the more preference for cultural adoption. These findings support the importance of considering stereotypes in acculturation studies of majority and minority groups, as well as the relevance of including these perceptions in interventions aimed at improving intercultural relations.

Keywords: stereotypes, immorality, morality, acculturation preferences, acculturation perceptions, identity, adolescents, Moroccan immigrants

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INTRODUCTION

The phenomenon of migration has significant consequences on human life. One of the most important forms of consequence is the continuous contact with members of other cultures, triggering noteworthy changes in both the immigrants and the host society (Redfield et al., 1936). These changes are conceptualized in the psychosocial literature as the acculturation process. Berry (2005) defines acculturation as "the dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members" (p. 698).

Within Europe, Spain has become an important recipient of immigration in the last two decades. Of the foreign residents in this country, 15.2% are under the age of 16 years. Acculturation preferences of adolescents from both the majority and minority groups living in the same context can settle their future peaceful vs. conflictual relationships, and contribute – in the long term – to social inclusion and well-being in contemporary societies. We focus on adolescence because of two main reasons. Firstly, because the impact of acculturation processes and the identity development considering both the original and the new host culture are specifically complex and sensitive during adolescence. The relationship between acculturation and identity (ethnic and national) has been claimed in several works (Phinney, 2003; Schwartz et al., 2006). The relevance of identity and identification processes takes more importance in adolescence, and even more for immigrant adolescents (Schwartz et al., 2006). They have to face the challenge of constructing or endorsing an identity that incorporates elements of both the cultural origins and the receiving cultures, in addition to the difficulties of constructing an identity that characterizes this developmental period (Schwartz et al., 2006). Secondly, because at this developmental stage, stereotypes are still flexible and relatively easy to change. Therefore, mapping the relations between stereotypes toward outgroups and intergroup behavior in intercultural encounters is essential to facilitate the change of stereotypes and biased intergroup perceptions at this stage before they get firmly established in adulthood, increasing intergroup hostility (Constantin and Cuadrado, 2019).

Given the importance of acculturation preferences for cultural understanding, several researchers have turned to the study of those variables associated with more flexible acculturation preferences that facilitate cultural negotiation and positive coexistence. Among them, the way we see others – that is, intergroup stereotypes – constitute basic dimensions in this process of mutual understanding. Despite the importance of social beliefs about groups in the acculturation process, the evidence of the relationship between stereotypes and acculturation preferences is scarce, especially among adolescents and considering the minority perspective. Although this relationship has been established among adults, the way stereotypes can interact with other variables to predict acculturation preferences or how stereotypes contribute to modulate discrepancies in acculturation preferences between majority and minority groups remain unexplored.

Accordingly, the main question that motivated this inquiry was to understand the specific role that distinct stereotype dimensions play in the acculturation preferences of Spanish adolescents and adolescents of Moroccan-origin living in Spain. Moroccans constitute the largest immigrant group in this country (15.9% of foreign residents; INE, 2020) and systematically receive worse evaluations from Spaniards compared to members of other immigrant groups, such as Romanians or Ecuadorians (e.g., Navas et al., 2012; López-Rodríguez et al., 2013, 2016). We first follow a descriptive approach by analyzing mutual stereotypes (Objective 1), and the majority-minority discrepancies in adolescents' acculturation perceptions and preferences (Objective 2). Then, we analyze the specific contribution of four different stereotype dimensions (i.e., morality, immorality, sociability, and competence), beyond traditional variables of acculturation perceptions (for majority and minority groups) and national and ethnic identities (for the minority group), to predict their acculturation preferences (Objective 3). Based on the diagnostic value of (im)morality, we anticipate that these specific dimensions will be more relevant than the other stereotype dimensions to adolescents' acculturation preferences. This research also tests if stereotypes modulate the discrepancies between Spanish adolescents and adolescents of Moroccan-origin in their acculturation preferences (Objective 4). Finally, we address an innovative question by analyzing whether stereotypes might be more predictive of acculturation preferences depending on acculturation perceptions (Objective 5). As far as we know, no previous research has covered this gap in the theory of acculturation and stereotypes. Coherent to the function of stereotypes as cues to orientate rapid decisions and social judgments, we hypothesize that stereotypes have no isolated effects on acculturation preferences, but they combined with other important factors such as acculturation perceptions. According to this reasoning, stereotypes might have a more prominent role in acculturation preferences under more threatening circumstances, that is, when majority members perceive immigrant-origin adolescents are not adopting the host culture.

The Complex Process of Acculturation

According to the extremely influential acculturation model developed by Berry (1997), immigrants must face two fundamental questions when living in the host country: (1) To what extent is it important to maintain my cultural heritage? and (2) To what extent is it important to establish relations with the host society and adopt the host culture? Regarding identity, these two questions refer to maintaining a sense of belonging to one's ethnic community (ethnic identity), and to developing a sense of host national belonging (national identity), respectively (Zhang et al., 2018). Initially considered orthogonal, these two dimensions were combined to yield four acculturation categories. Nowadays, however, several researchers prefer to measure these underlying dimensions of maintenance and contact/adoption due to methodological considerations (Rudmin, 2003), and to avoid losing precious information (Brown and Zagefka, 2011).

Although acculturation models were initially focused on the acculturation preferences of minority groups, the importance of examining also the preferences of the majority group was subsequently recognized (Zagefka et al., 2014), given its

substantial influence and power in the host society (Geschke et al., 2010). Accordingly, in the last decades, considerable work has focused on the majority perspective (e.g., Bourhis et al., 1997; Piontkowski et al., 2000; Zagefka et al., 2007). Different models recognize the interactive nature of acculturation (for a review see Horenczyk et al., 2013) such as the mutual acculturation model (Berry, 2006), the interactive acculturation model (IAM; Bourhis et al., 1997), the concordance model of acculturation (Piontkowski et al., 2002), or the relative acculturation extended model (RAEM; Navas et al., 2005, 2007). In the present research, we use the RAEM to capture the mutuality in acculturation processes.

Similar to previous interactive models, the RAEM takes into account two acculturation dimensions (maintenance of original culture and adoption of host culture) and considers both the majority and minority perspectives in order to understand better the acculturation processes. Moreover, this model differentiates between the real and the ideal plane in the acculturation process. The real plane refers to the acculturation strategies that minority groups declare to practice and the perception of majority members about these strategies. The ideal plane refers to the acculturation preferences (that is, what both minority members and hosts would prefer if they could choose, in terms of cultural adoption and maintenance for minority members). Moreover, the RAEM considers simultaneously different domains as a way to capture the inherent complexity of the acculturation process, asking for different areas of socio-cultural reality (e.g., political, work, social well-being, and consumer habits) or others more central to the cultural process (e.g., social relations, family relations, religion, and values).

This model gives particular importance to the acculturation perceptions and preferences of both minority and majority members. This is especially relevant from a psychosocial perspective given that the analysis and potential interventions on biased perceptions and discrepant attitudes take a central stage on intercultural conflict resolution. When comparing majority and minority perspectives, acculturation discrepancies can be found. According to Bourhis et al. (1997), when the profile of acculturation orientations obtained for the host community and the immigrant group match very little or not at all, acculturation discordance between both communities can be problematic or conflictual, respectively. These discrepancies are usual in acculturation research, with immigrants usually preferring to adopt the host culture less and maintaining the original culture more than what the members of the host country prefer they do (e.g., in Spain, Navas et al., 2007; Navas and Rojas, 2010). In the specific case of adolescents, a research conducted in two Mediterranean countries (Italy and Spain) found that there was little consensus between immigrant and host adolescents in their acculturation preferences (López-Rodríguez et al., 2014a; Mancini et al., 2018): immigrant adolescents living in both countries preferred to maintain their original culture more than what host adolescents preferred. Additionally, young immigrants in Italy preferred to adopt the host culture to a lower extent compared to what their Italian national peers demanded. This discrepancy in preference for adoption was inverted in Spain, with young immigrants preferring to adopt more the host culture compared to what Spanish adolescents demanded (especially in school or consumer habits). This study, however, included immigrants from different backgrounds. As acculturation is context-depended, results might vary when a specific cultural background is considered.

The study of majority members' acculturation preferences is essential because host majority members can influence the acculturation strategies of minority members, "who in turn may also affect the orientations of the host majority" (Bourhis et al., 1997, p. 375). As Van Acker and Vanbeselaere (2011) have claimed, knowing the antecedents of majority members' preferences regarding the acculturation of different minorities offers chances to modify and intervene on majority members' preferences and to fill the gap between the positions of both the majority and the minority groups, and consequently, to improve intergroup relations. This research analyzes the contribution of intergroup stereotypes beyond traditional variables of acculturation perceptions to predict acculturation preferences among Spanish adolescents and adolescents of Moroccan-origin living in Spain, the moderating role of stereotypes in intergroup acculturation discrepancies, as well as the interaction between stereotypes and acculturation perceptions on acculturation preferences.

Intergroup Stereotypes and the Acculturation Process

Acculturation processes are characterized by a remarkable complexity and are contingent to the context of intergroup relations. In this line, studies have related majority and/or minority acculturation preferences to different psychosocial variables, such as prejudice, stereotypes, or perceived discrimination (e.g., Maisonneuve and Testé, 2007; López-Rodríguez et al., 2014b; Rojas et al., 2014; Zagefka et al., 2014; López-Rodríguez and Zagefka, 2015; Cuadrado et al., 2017, 2018). The way we see others is essential to understanding intercultural relations. Stereotypes serve as social keys to guide judgments in complex situations as those involved in intercultural relations. With not much social information, stereotypes fulfill the gaps and shape interpretations of different events, being essential in intercultural relations. From the majority perspective, more flexible acculturation orientations such as integration are more strongly preferred for "valued" than "devalued" immigrants, whereas less tolerant acculturation orientations such as assimilation or exclusion are more endorsed for "devalued" than "valued" immigrants (Montreuil and Bourhis, 2001). As far as we know, no previous research has tested whether intergroup stereotypes could modulate acculturation discrepancies between the minority and majority groups.

The stereotype content model (SCM; Fiske et al., 2002) postulates that social group members are evaluated on two basic dimensions of social perception: warmth and competence. The warmth dimension helps to anticipate the intentions of others and includes characteristics such as being sincere or friendly. The dimension of competence allows knowing the capacity of others to achieve their intentions or objectives and includes characteristics such as being intelligent or skillful. Afterward, Leach et al. (2007) demonstrated that warmth consists

of two differentiated evaluative components: sociability and morality. According to Brambilla and Leach (2014, p. 398), "sociability pertains to being benevolent to people in ways that facilitate affective relations with them (e.g., friendliness, likeability, and kindness), morality refers to being benevolent to people in ways that facilitate correct and principled relations with them (e.g., honesty, trustworthiness, and sincerity)." Several studies have highlighted the primary and distinctive role of morality on social judgments, impression formation, or in-group and out-group evaluations and reactions (e.g., Brambilla et al., 2011, 2012; López-Rodríguez et al., 2013; Leach et al., 2015; Landy et al., 2016; Cuadrado et al., 2020; see Brambilla and Leach, 2014, for a review). Therefore, there is enough evidence on the importance of analyzing morality and sociability as two separate dimensions of warmth. Studies carried out in Spain with the three-dimensional stereotype content model in adult population confirm the distinctive role of morality (vs. sociability and competence) in outgroup evaluations. These studies have analyzed the perceptions of the majority group toward immigrants from different origins (López-Rodríguez et al., 2013), the perceptions of the minority group toward the majority group (Cuadrado et al., 2017, 2020 Study 2), and the intra-minority perspective where immigrants evaluated other immigrant groups (Cuadrado et al., 2016). Constantin and Cuadrado (2020) have confirmed the superiority of the three-factor model of stereotype content compared to the bi-dimensional one in a study with Spanish adolescents evaluating to Moroccan and Ecuadorian immigrants.

That said, recent studies (e.g., Goodwin and Darley, 2012; Sayans-Jiménez et al., 2017) have shown the importance of also considering the negative aspects of morality (i.e., immorality) in impressions formation and out-group evaluations. According to Brambilla and Leach (2014, p. 400), "when people search for the most diagnostic information available about a person, they search for negative information about that person's morality." The negative pole of morality has more evaluative weight than the positive pole. Attributes associated with badness in negative moral actions (e.g., theft, cheating) are more reliable and objective than those related to the goodness of positive moral actions (e.g., donate money; Goodwin and Darley, 2012). The cue-diagnosticity of negative traits related to morality in the impression-formation process is well-known. Skowronski and Carlston (1987) found "that negative behaviors are perceived as more diagnostic than positive behaviors when the former are morality related (honesty-dishonesty)" (p. 689). The negativity effect of morality has motivational, affective and cognitive bases (for a review see Rusconi et al., 2020). Additionally, the methodological research conducted by Sayans-Jiménez et al. (2017) indicated that the addition of negative items of morality (i.e., immorality) allows researchers to explain a bigger amount of variance than when only positive items are used.

Perceived morality and immorality allow us to infer the potential benefits and/or threats that other people or groups represent to our well-being or that of our group (Brambilla et al., 2011, 2012). Therefore, these are prominent stereotypical dimensions in the search for information, impressions formation, and out-group evaluation that must be taken into account. To our knowledge, no studies have yet been conducted using the four dimensional model of stereotype content (i.e., morality, immorality, sociability, and competence) in adolescents from the minority perspective and its relationship with acculturation preferences.

The relationship between these stereotype dimensions and acculturation preferences has received scarce attention in the literature. There are some exceptions. López-Rodríguez et al. (2014b) found that stereotypes (and the perceived threat associated to them) mediated the relationship between perceived adoption and preference for maintenance and adoption of a sample of Spaniards regarding Moroccan immigrants. In this case, positive evaluations were associated to more preference for culture maintenance and less preference for culture adoption *via* perceived threat. When stereotype dimensions were experimentally manipulated, the dimension of morality was the only dimension that affected the desire of majority members for minority group's maintenance of the original culture (López-Rodríguez and Zagefka, 2015). From the minority perspective, Cuadrado et al. (2017) found that, especially perceived morality, but also perceived competence, indirectly and positively predicted the preference of immigrants for adopting Spanish customs through positive emotions toward Spaniards. These studies have not simultaneously considered the majority and minority perspective, the real (perceptions) and ideal plane (preferences) in the acculturation process, and they have only taken into account three (but not four) stereotype dimensions, ignoring the role of perceived immorality, the most threatening stereotype dimension. Moreover, previous research has not inquired about under which circumstances stereotypes might be more closely related to acculturation preferences. Kosic and Phalet (2006) found a significant interaction effect between perceived maintenance of the Moroccan culture of origin and prejudice on overcategorization. This finding suggests that the interaction between high prejudice and high perceived maintenance is associated with a highly threatening situation displayed as an overcategorization of photographs as Moroccans. Therefore, although prejudice has been found to interact with acculturation perceptions, there is no evidence that stereotypes interact with these perceptions to predict acculturation preferences.

Objectives and Hypotheses

The main question that motivated this inquiry was to understand the role that distinct stereotype dimensions play in the acculturation preferences of Spanish adolescents and adolescents of Moroccan-origin living in Spain. To achieve this goal, we first described the participants' perceptions and preferences. Specifically, we analyze the majority-minority discrepancies in adolescents' acculturation perceptions and preferences, and their mutual stereotypes. We expect Spanish adolescents to have a more negative perception of Moroccan youth than vice versa (H1). Based on previous findings with minority and majority samples of adolescents (e.g., López-Rodríguez et al., 2014a; Mancini et al., 2018), we expect that adolescents of Moroccan origin will report adopting more and maintaining less than what Spanish adolescents perceive them to do (H2a), and prefer to adopt less and maintain more than what host adolescents demand (H2b).

Then, we analyzed the specific contribution of four different stereotype dimensions (i.e., morality, immorality, sociability, and competence), beyond traditional variables of acculturation perceptions (for majority and minority groups) and national and ethnic identity (for the minority group), to predict their acculturation preferences. The main categories of identification considered as important variables in acculturation processes are the ethnic and national categories. Because of that, we include also these categories of identity as classical predictors of acculturation preferences for the minority group. We hypothesize that dimensions of stereotypes will predict acculturation preferences beyond acculturation perceptions (for majority and minority groups) and identity (for the minority group). Based on the diagnostic value of (im)morality (e.g., Skowronski and Carlston, 1987; Sayans-Jiménez et al., 2017), we expect that these two dimensions will be more relevant to adolescents' acculturation preferences than the other dimensions of stereotypes (H3).

This research also tests whether stereotypes could modulate the discrepancies between Spanish adolescents and adolescents of Moroccan-origin in their acculturation preferences. Previous research has found that less tolerant acculturation orientations such as assimilation or exclusion are more endorsed for "devalued" immigrants toward whom there are negative stereotypes (Montreuil and Bourhis, 2001). We might infer that mutual negative stereotypes would harden acculturation discrepancies, whereas positive mutual perceptions might soften such discrepancies (H4).

Finally, we address an innovative question by analyzing under which circumstances stereotypes might be more predictive of acculturation preferences. Previous research has shown that acculturation perceptions can interact with prejudice (Kosic and Phalet, 2006) as well as the central role that perceived adoption (compared to perceived maintenance) can play in acculturation preferences (López-Rodríguez et al., 2014b). This innovative exploration is relevant since it connects the literature of acculturation and intergroup relations in an interactive way instead of studying the predictive role of stereotypes or acculturation perceptions in isolation, which is likely to often oversimplify people's psychosocial realities. We hypothesize that stereotypes would play a major role in majority members' acculturation preferences when they perceived that Moroccan youth were not adopting the Spanish culture because it is a more threatening situation than when minority group members are adopting the host culture (H5).

MATERIALS AND METHODS

Participants

A sample of 488 Spanish adolescents (M_{age} = 14.79, SD_{age} = 1.23; 52.4% girls) and 360 adolescents of Moroccan origin living in Spain (M_{age} = 15.16, SD_{age} = 1.36; 58.7% girls) from 12 to 19 years old volunteered to participate in this study. They were enrolled in different public secondary schools in Spain. The 36.4% of adolescents of Moroccan origin were born in Spain and 62.2% in Morocco. Most of their parents (97.8% of fathers and 98.6% of mothers) were born in Morocco. For participants who were born in Morocco, the average age of arrival to Spain was 4.84 years (SD = 4.39).

Variables and Instruments

Participants answered one of two similar versions of a questionnaire, changing the out-group evaluated. Spanish adolescents answered the questionnaire assessing Moroccan youth, and adolescents of Moroccan origin assessed Spanish youth. The questionnaires contained instruments to measure the following variables. All items were measured on a five-point Likert scale ranging from 1 (*not at all*) to 5 (*very much*).

Stereotypes

This variable was measured through a 17-item scale (from López-Rodríguez et al., 2013; Sayans-Jiménez et al., 2017). The scale consisted of four subdimensions: morality (four items: honest, trustworthy, sincere, and respectful), immorality (five items: aggressive, malicious, harmful, treacherous, and false), sociability (four items: friendly, warm, likeable, and kind) and competence (four items: intelligent, skilful, competent, and efficient). Participants were asked to what extent each adjective described the out-group (Spaniards or Moroccans). The estimated reliability coefficients (Cronbach's alpha and split-half with Spearman-Brown correction) are included in **Table 1**.

Acculturation Perceptions

They were measured through two scales adapted from the RAEM to adolescent populations (López-Rodríguez et al., 2014a; Mancini and Bottura, 2014; Mancini et al., 2018): one for maintaining the customs of origin and another for adopting Spanish customs. Spanish adolescents indicated to what extent they perceived that Moroccan youth maintained the origin customs and to what extent they perceived they have adopted or practiced Spanish customs across six domains (academic, economic, social, family, religion, and values). One example of an item is the following: "To what extent do you think that Moroccan youth living in Spain maintain nowadays the customs of their country in social relations (ways of socializing, usual places for socializing, the way in which they spend their free time, ways of having fun, etc.)?" Adolescents of Moroccan origin indicated to what extent they maintained the Moroccan customs (of their parents' country of origin) and adopted or

TABLE 1 | Estimated reliability coefficients.

	Cronbach's alpha		Split-Half (Spearman-Brown)	
	SA	MA	SA	MA
Maintenance	0.58	0.68	0.65	0.67
Adoption	0.71	0.66	0.81	0.72
Preferences for maintenance	0.83	0.83	0.86	0.84
Preferences for adoption	0.86	0.77	0.89	0.82
Morality	0.82	0.65	0.84	0.69
Immorality	0.80	0.77	0.74	0.73
Sociability	0.85	0.72	0.86	0.71
Competence	0.76	0.68	0.76	0.63

SA, Spanish adolescents; MA, Moroccan-origin adolescents.

practiced Spanish customs in the same domains. One example of an item is the following: "To what extend do you maintain nowadays the Moroccan customs in your family relationships (way of relating to their parents, with older people in the family, with their brothers and sisters, tasks that each member of the family does, etc.)?" Average scores on each scale (cultural maintenance and adoption) were obtained. The estimated reliability coefficients (Cronbach's alpha and split-half with Spearman-Brown correction) are included in **Table 1**.

Acculturation Preferences

Participants' preferences were also measured using two scales: one for maintaining the origin customs and another for the adoption of Spanish customs. Spanish adolescents were asked to what extent they would like Moroccan youth to maintain the origin customs and to adopt the Spanish customs. One example of an item is: "If you could choose, to what extent would you like Moroccan youth living in Spain to adopt or practice the Spanish customs in social relations (ways of socializing, usual places for socializing, the way in which they spend their free time, ways of having fun, etc.)?" Adolescents of Moroccan origin were asked to what extent they would like to maintain the Moroccan customs (of their parents' country of origin) and to adopt the Spanish customs (the items were the same as for Spanish adolescents but asking "To what extent would you like to adopt or practice the Spanish customs?"). Each scale contains six items referring to the same RAEM domains. Average scores on each scale (cultural maintenance and adoption) were obtained. The estimated reliability coefficients (Cronbach's alpha and split-half with Spearman-Brown correction) are included in **Table 1**.

Group Identity

Ethnic and national identities were measured in Moroccan-origin adolescents with four questions. They indicated their identification with and valuation of their ethnic group (Moroccan) through two questions: "To what degree do you feel Moroccan?" and "how do you value being Moroccan?" (ethnic identity, $r = 0.63$, $p < 0.001$). They were also asked about their identification with and valuation of the host country with two questions: "To what degree do you feel Spanish?" and "how do you value being Spanish?" (national identity, $r = 0.70$, $p < 0.001$). Average scores in both questions (for each identity) were obtained.

Socio-Demographic Variables

Participants reported their sex, age, country of birth, country of birth of parents (father and mother), and age of arrival in Spain (for Moroccan participants). The questionnaire included more variables since it was part of a broader national project but only those relevant for the objectives of this study are reported.

Procedure

Analysis of population registers (INE, 2019) was carried out to determine the number, geographical distribution, and countries of origin of foreign adolescents living in Spain. Subsequently, public secondary schools with a high number of adolescents of Moroccan origin were selected in provinces with a high presence of this population. Schools were contacted and the appropriate permits were requested to carry out the study. The parents/legal guardians of the adolescents signed an informed consent form that was collected at the time of application of the questionnaire. Teachers, families, and adolescents were informed of the objectives of the research, the people in charge, their voluntary participation, and the possibility of stopping at any time. Likewise, they were informed that the data collected would be treated anonymously and confidentially. The questionnaires were completed in paper and pencil format, and applied by trained personnel, in the classrooms of 16 public secondary schools of five Spanish provinces. The study was approved by the Human Research Bioethics Committee of the researchers' university. The database used in this research has been made publicly available and can be accessed at Open Science Framework (OSF) https://osf.io/khmvu/?view_only=f41e41bf48a349c689469481baf63eaf.

RESULTS

Preliminary Analyses

Confirmatory factor analysis was conducted to test the fit of the four-factor stereotypes model, which included the dimensions of morality, immorality, sociability, and competence. In addition, the fit of the two-factor model (warmth and competence; Fiske et al., 2002) and the three-factor model (morality sociability, and competence; Leach et al., 2007) were checked out. We used the chi-square test and calculated the root mean square error approximation (RMSEA), the comparative fit index (CFI), and the Tuker-Lewis index (TLI) to test the fit of these models. For general interpretation, models with RMSEA values greater than 0.10 and CFI and TLI values below 0.90 should be rejected (Brown, 2015). We also report the Akaike information criterion (AIC) and the Bayesian information criterion (BIC). Smaller values of these indices indicate better model fit. The maximum likelihood (ML) method was used to estimate the parameters and correlation between the factors were freed.

The four-factor stereotypes model showed a good fit of the data for both groups: Spanish adolescents, χ^2 (113) = 278.05, $p < 0.001$, CFI = 0.95, TLI = 0.95, RMSEA = 0.05, AIC = 19863.10, BIC = 20030.13; and Moroccan-origin adolescents, χ^2 (113) = 191.42, $p < 0.001$, CFI = 0.94, TLI = 0.93, RMSEA = 0.04, AIC = 15489.01, BIC = 15642.63. All factor loadings were statistically significant (see **Figure 1**). Results of the CFA for the three-factor and two-factor models for both groups indicated that they should be discarded: Three-factor model for Spanish adolescents, χ^2 (116) = 500.32, $p < 0.001$, CFI = 0.90, TLI = 0.88, RMSEA = 0.08, AIC = 20209.63, BIC = 20364.37; and for Moroccan-origin adolescents, χ^2 (116) = 325.98, $p < 0.001$, CFI = 0.85, TLI = 0.83, RMSEA = 0.07, AIC = 15778.15, BIC = 15920.68; Two-factor model for Spanish adolescents, χ^2 (118) = 554.22, $p < 0.001$, CFI = 0.88, TLI = 0.86, RMSEA = 0.09, AIC = 20259.53, BIC = 20405.90; and for Moroccan-origin adolescents, χ^2 (118) = 440.03, $p < 0.001$, CFI = 0.77, TLI = 0.74, RMSEA = 0.09, AIC = 1588.21, BIC = 16023.03.

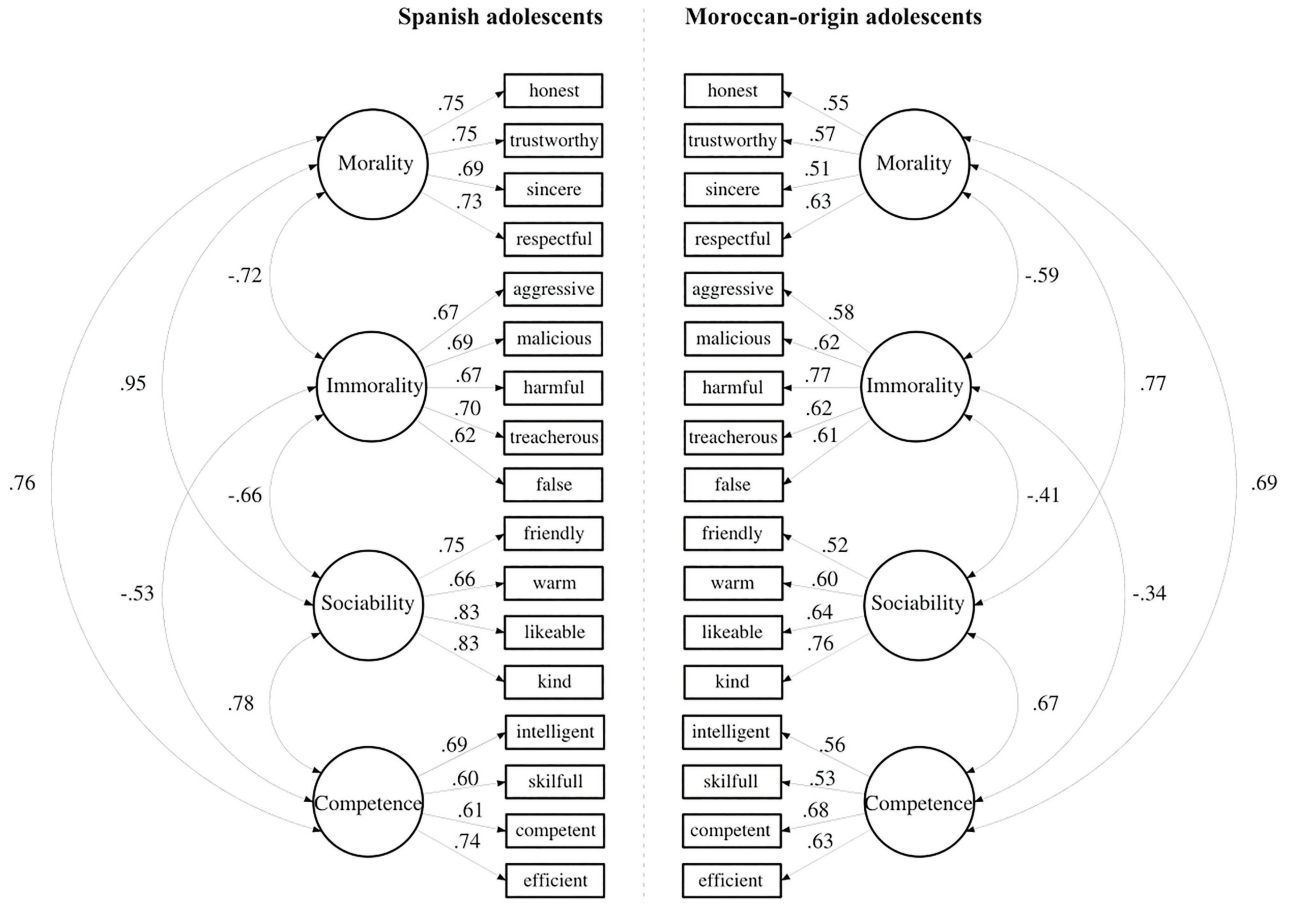

FIGURE 1 | Results of confirmatory factor analysis for the four-factor model for Spanish and Moroccan-origin adolescents. All factor loadings are standardized and statistically significant.

Descriptive statistics and bi-variate Pearson correlations among variables for both Spanish and Moroccan-origin adolescents are reported in **Table 2**.

Intergroup Differences in Stereotypes

In order to compare intergroup stereotypes and acculturation perceptions and preferences, two multivariate analysis of variances (MANOVAs) were performed: stereotype dimensions and acculturation perceptions and preferences were included as dependent variables and the target/group (Moroccan youth evaluated by Spanish adolescents vs. Spanish youth evaluated by adolescents of Moroccan origin) as independent variable.

Results of the MANOVA showed that there was a multivariate effect of the group in the stereotype dimensions as combined dependent variables, Wilk's $\lambda = 0.86$, $F(4, 820) = 33.37$, $p < 0.001$, $\eta^2_p = 0.14$. As shown in **Figure 2** (see also means and SDs in **Table 2**), adolescents of Moroccan origin had a more positive perception of Spanish youth compared to the perception that Spanish adolescents had of Moroccan youth (H1). Statistically significant differences appeared in all four stereotype dimensions analyzed. Moroccan youth were perceived by Spanish adolescents as less moral, $F(1,823) = 91.72$, $p < 0.001$, $\eta^2_p = 0.10$; more immoral, $F(1,823) = 45.49$, $p < 0.001$, $\eta^2_p = 0.05$; less sociable, $F(1,823) = 119.32$, $p < 0.001$, $\eta^2_p = 0.13$; and less competent, $F(1,823) = 23.44$, $p < 0.001$, $\eta^2_p = 0.03$, compared to the perception that Moroccan-origin adolescents had about Spanish youth. Homogeneity of variances for between-subjects comparison was not assumed. However, *t*-tests with corrections revealed the same results.

Intergroup Differences in Acculturation Orientations

Results of the MANOVA showed that there was a multivariate effect of the group in the acculturation perceptions and preferences as combined dependent variables, Wilk's $\lambda = 0.78$, $F(4, 807) = 54.65$, $p < 0.001$, $\eta^2_p = 0.21$. As shown in **Figure 3**, there were some discrepancies between what Spanish adolescents perceived that Moroccan youth were doing and what Moroccan-origin adolescents admitted doing (H2a). Spanish adolescents perceived that Moroccan youth were adopting less than they claimed to do,

TABLE 2 | Correlations among variables for Spanish and Moroccan-origin adolescents.

	1	2	3	4	5	6	7	8	9	10	Spanish adolescents		Moroccan-origin adolescents	
											M	*SD*	*M*	*SD*
1. Maintenance		0.08	0.05	0.01	-	-	0.19**	−0.06	0.18**	0.22**	3.57	0.60	3.83	0.71
2. Adoption	0.11*		0.34**	0.09*	-	-	0.49**	−0.29**	0.47**	0.28**	2.78	0.72	3.31	0.73
3. Preference for maintenance	0.62**	0.11**		−0.03	-	-	0.33**	−0.17**	0.38**	0.28**	3.11	0.92	3.85	0.85
4. Preference for adoption	0.08	0.60**	0.20**		-	-	−0.01	0.11*	0.01	0.01	3.44	0.91	3.31	0.83
5. Ethnic identity	0.36**	−0.05	0.34**	−0.12*		-	-	-	-	-	-	-	4.37	0.79
6. National identity	−0.04	0.11*	0.02	0.26**	−0.19**		-	-	-	-	-	-	3.06	1.11
7. Morality	0.13*	0.24**	0.13*	0.23**	−0.01	0.07		−0.58**	0.80**	0.59**	2.77	0.79	3.28	0.70
8. Immorality	0.01	−0.06	−0.06	−0.20**	0.08	−0.06	−0.43**		−0.54**	−0.40**	2.98	0.79	2.60	0.82
9. Sociability	0.06	0.22**	0.12*	0.22**	−0.04	0.17**	0.53**	−0.32**		0.61**	3.04	0.85	3.66	0.74
10. Competence	0.09	0.14**	0.16**	0.18**	−0.01	0.11*	0.46**	−0.25**	0.49**		3.26	0.74	3.50	0.66

Correlations for Spanish adolescents are reported above diagonal; correlations for Moroccan-origin adolescents are reported below diagonal. $^{**}p < 0.01$; $^{*}p < 0.05$.

$F(1,810) = 103.10$, $p < 0.001$, $\eta^2_p = 0.11$; but also maintaining less than they claimed to do, $F(1,810) = 28.71$, $p < 0.001$, $\eta^2_p = 0.03$. Regarding their preferences, in line with H2b, Spanish adolescents preferred Moroccan youth to maintain less than Moroccan-origin adolescents wanted to do, $F(1,810) = 132.33$, $p < 0.001$, $\eta^2_p = 0.14$; and preferred more adoption than the latter desired to do, $F(1,810) = 4.79$, $p = 0.029$, $\eta^2_p = 0.01$.

Preference for Adopting the Host Culture

Four multiple linear regression analyses were conducted to analyze the effect of stereotypes in acculturation preferences (two multiple linear regressions for each group: one for preferences for maintenance and one for preferences for adoption). In order to control the effect of acculturation perceptions (for both groups) and ethnic and national identity (only for Moroccan-origin adolescents), these variables were included in Step 1. In Step 2, stereotype dimensions were added.

For adolescents of Moroccan origin, the results of the multiple regression analysis are shown in **Table 3**. Adopting the host culture and national identity were positively related to the desire to adopt the Spanish culture in Step 1. There was a statistically significant increase in the explained variance ($\Delta R^2 = 0.019$) in Step 2. Interestingly, perceiving Spanish youth as immoral (e.g., aggressive, malicious, and false) significantly contributed to the model. The more immoral Spanish youth were perceived, the less willingness to adopt the Spanish culture.

For Spanish adolescents, results of the multiple regression analysis are shown in **Table 4**. Only perception of adoption of the host culture was marginally related to their preference for Moroccan youth to adopt the Spanish culture in Step 1. There was a statistically significant increase in the explained variance ($\Delta R^2 = 0.021$) in Step 2. Perceiving Moroccan youth as immoral (e.g., aggressive, malicious, and false) also contributed to the model. The more immoral Moroccan youth were perceived, the more the preference for them to adopt the Spanish culture. These findings suggest that perceived immorality might be important for understanding preference for adopting the host culture for both majority and minority groups.

The Moderating Role of Stereotypes in Discrepancies of Preference for Adoption

To verify if stereotypes can moderate the discrepancies between majority and minority members in their acculturation preferences, we conducted four multiple regression analyses with the macro PROCESS 3.5 for SPSS, Model 1 (Hayes, 2018) using a bias-corrected bootstrap of 5,000 samples. Group was defined each time as predictor (1 = Spanish adolescents; 0 = Moroccan-origin adolescents) of preference for adoption and each stereotype dimension was defined as moderator (+*SD*, Mean, and −*SD*). The other stereotype dimensions were controlled as covariates. A heteroscedasticity consistent standard error and covariance matrix estimator was used.

The regression analyses yielded a significant interaction between group and perceived immorality, $B = 0.37$, $SE = 0.08$, $t(802) = 4.62$, $\Delta R^2 = 0.027$, $p < 0.001$, 95% CI [0.213, 0.527]; perceived morality, $B = -0.32$, $SE = 0.09$, $t(802) = -3.50$,

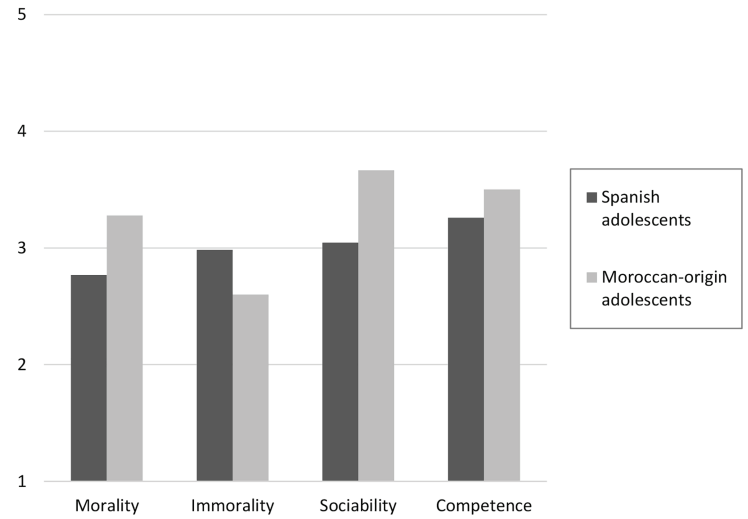

FIGURE 2 | Intergroup perceptions of Spanish and Moroccan-origin adolescents in the four stereotype dimensions.

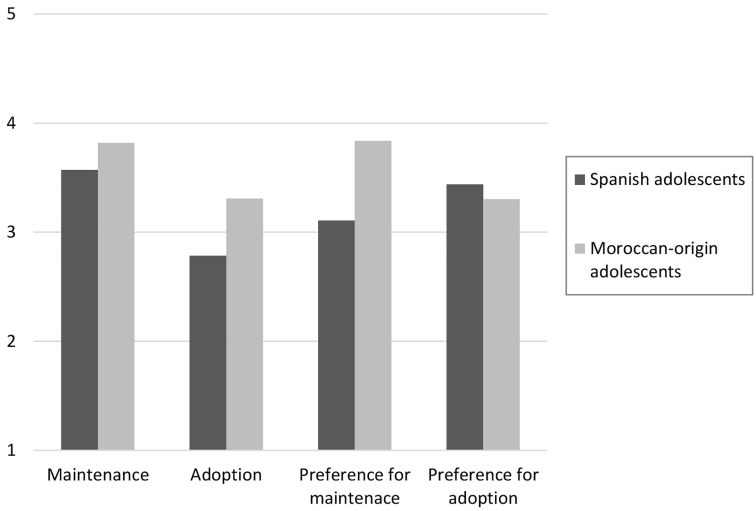

FIGURE 3 | Acculturation orientations of Spanish and Moroccan-origin adolescents.

ΔR^2 = 0.016, p < 0.001, 95% CI [−0.494, −0.139]; perceived sociability, B = −0.26, SE = 0.09, $t(802)$ = −2.99, ΔR^2 = 0.013, p = 0.003, 95% CI [−0.437, −0.091]; and perceived competence, B = −0.24, SE = 0.10, $t(802)$ = −2.43, ΔR^2 = 0.008, p = 0.015, 95% CI [−0.429, −0.045]. The negative two-way interactions mean that the discrepancy between majority and minority adolescents in their preferences for minority groups to adopt the host culture decreases as the level of perceived morality, sociability, and competence increases. The positive two-way interaction means the opposite, that the discrepancy decreases as the level of perceived immorality decreases (see **Figure 4**).

As shown in **Figure 4**, Spanish and Moroccan-origin adolescents showed strong discrepancies in their adoption preferences when the stereotypes of the other group were more negative. That is, when the other group was perceived as highly immoral (+SD), B = 0.53, SE = 0.10, $t(802)$ = 5.08, p < 0.001, 95% CI [0.322, 0.728]; lowly moral (−SD), B = 0.48, SE = 0.11, $t(802)$ = 4.27, p < 0.001, 95% CI [0.260, 0.702]; lowly sociable (−SD), B = 0.45, SE = 0.12, $t(802)$ = 3.89, p < 0.001, 95% CI [0.224, 0.681]; or lowly competent (−SD), B = 0.37, SE = 0.11, $t(802)$ = 3.50, p < 0.001, 95% CI [0.164, 0.581]. There were also differences in their adoption preferences with medium perceptions in immorality, B = 0.22, SE = 0.07, $t(802)$ = 3.23, p = 0.001, 95% CI [0.087, 0.356]; morality, B = 0.23, SE = 0.07, $t(802)$ = 3.28, p = 0.001, 95% CI [0.092, 0.368]; sociability, B = 0.23, SE = 0.07, $t(802)$ = 3.20, p = 0.001, 95% CI [0.087, 0.364]; or competence, B = 0.20, SE = 0.07, $t(802)$ = 2.92, p = 0.004, 95% CI [0.067, 0.339]. However, their preferences in adoption totally matched

TABLE 3 | Multiple regression analysis for predicting preference for adoption among Moroccan-origin adolescents.

		Preference for adoption of Moroccan-origin adolescents				
		B	***SE***	***β***	***t***	***p***
1	Intercept	0.92	0.31		2.96	0.003
	Maintenance	0.04	0.05	0.04	0.78	0.439
	Adoption	**0.64**	**0.05**	**0.56**	**12.56**	**< 0.001**
	Ethnic identity	−0.08	0.05	−0.08	−1.60	0.110
	National identity	**0.14**	**0.03**	**0.19**	**4.27**	**< 0.001**
		$F(4,318) = 51.97$, $p < 0.001$, $R^2_{adjusted} = 0.388$				
2	Intercept	1.10	0.40		2.74	0.007
	Maintenance	0.04	0.05	0.03	0.70	0.487
	Adoption	**0.62**	**0.05**	**0.54**	**11.90**	**< 0.001**
	Ethnic identity	−0.07	0.05	−0.07	−1.43	0.155
	National identity	**0.14**	**0.03**	**0.18**	**4.02**	**< 0.001**
	Morality	0.01	0.07	0.01	0.10	0.918
	Immorality	**−0.12**	**0.05**	**−0.12**	**−2.49**	**0.013**
	Sociability	0.03	0.06	0.02	0.42	0.676
	Competence	0.03	0.06	0.02	0.41	0.678
		$F(8,314) = 27.81$, $p < 0.001$; $\Delta R^2 = 0.019$, $p = 0.036$				

The results of significant predictors are in bold type.

TABLE 4 | Multiple regression analysis for predicting preference for adoption among Spanish adolescents.

		Preference for adoption of Spanish adolescents				
		B	***SE***	***β***	***t***	***p***
1	Intercept	3.23	0.29		11.04	< 0.001
	Perceived maintenance	−0.03	0.07	−0.02	−0.43	0.852
	Perceived adoption	**0.11**	**0.06**	**0.09**	**1.90**	**0.059**
		$F(2,470) = 1.84$, $p = 0.160$, $R^2_{adjusted} = 0.004$				
2	Intercept	2.41	0.43		5.65	< 0.001
	Perceived maintenance	−0.04	0.07	−0.02	−0.51	0.610
	Perceived adoption	**0.15**	**0.07**	**0.12**	**2.17**	**0.031**
	Morality	−0.04	0.10	−0.03	−0.40	0.690
	Immorality	**0.18**	**0.07**	**0.15**	**2.70**	**0.007**
	Sociability	0.05	0.09	0.05	0.58	0.561
	Competence	0.05	0.07	0.04	0.70	0.482
		$F(6,466) = 2.19$, $p = 0.043$; $\Delta R^2 = 0.021$, $p = 0.054$				

The results of significant predictors are in bold type.

(i.e., there were no discrepancies) when the intergroup perception is highly positive. That is, when the other group was perceived with the lowest levels of immorality (−*SD*), $B = -0.08$, $SE = 0.09$, $t(802) = -0.97$, $p = 0.333$, 95% CI [−0.251, 0.085]; and the highest levels of morality (+*SD*), $B = -0.02$, $SE = 0.09$, $t(802) = -0.25$, $p = 0.805$, 95% CI [−0.190, 0.148]; sociability (+*SD*), $B = -0.01$, $SE = 0.09$, $t(802) = -0.02$, $p = 0.984$, 95% CI [−0.177, 0.173]; or competence (+*SD*), $B = 0.03$, $SE = 0.09$, $t(802) = 0.36$, $p = 0.716$, 95% CI [−0.144, 0.209].

Two-Way Interaction Between Perceived Adoption and Stereotypes

A multiple regression analysis using the macro PROCESS (Hayes, 2018) tested if the relation between stereotypes (X) and preference for adoption (Y) could be conditioned by perceived adoption (W) in majority members in order to test the fourth hypothesis. A two-way interaction with perceived morality was significant, $B = 0.22$, $SE = 0.07$, $t(475) = 3.15$, $\Delta R^2 = 0.025$, $p = 0.002$, CI [0.083, 0.358]. This positive two-way interaction means that the relation between perceived morality and preference for adoption is increasingly negative as the level of perceived adoption decreases. As shown in **Figure 5** (A), only when Spanish participants perceived that Moroccan youth were not adopting the host culture, perceived morality was negatively associated to preference for adoption, $B = -0.26$, $SE = 0.08$, $t(475) = -3.04$, $p = 0.003$, CI [−0.422, −0.090].

There was also a two-way interaction with perceived sociability with the same pattern, $B = 0.21$, $SE = 0.07$, $t(475) = 3.04$, $\Delta R^2 = 0.025$, $p = 0.003$, CI [0.073, 0.339]. This positive two-way interaction means that the relation between perceived sociability and preference for adoption is increasingly negative as the level of perceived adoption decreases. As shown in **Figure 5** (B),

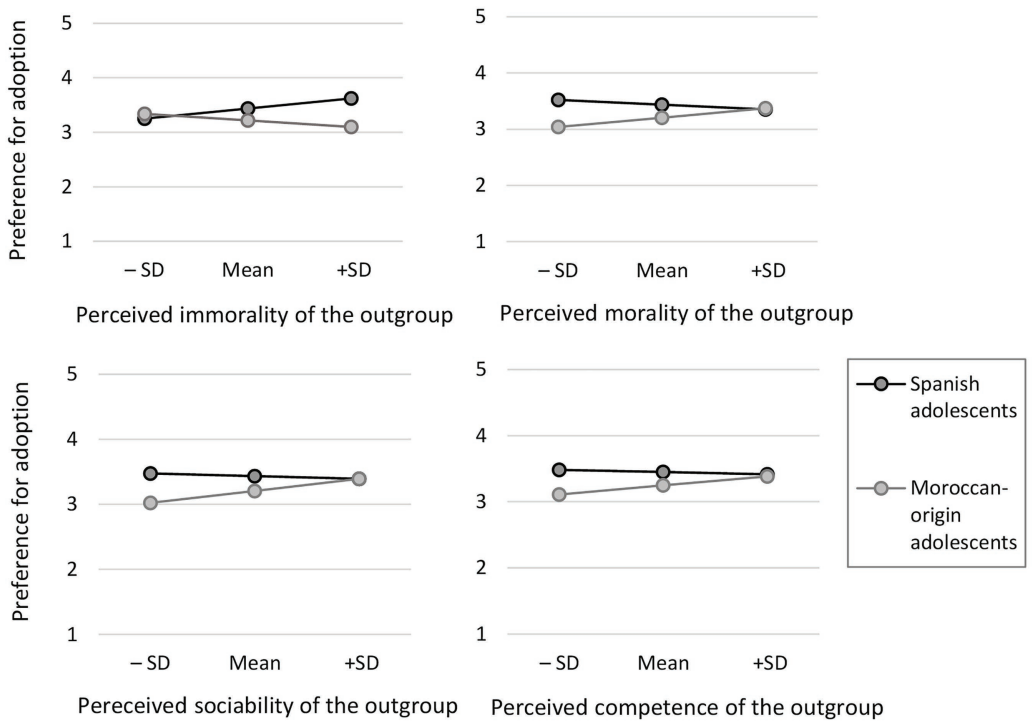

FIGURE 4 | Two-way interaction between intergroup stereotypes and group when predicting preference for adopting the host culture.

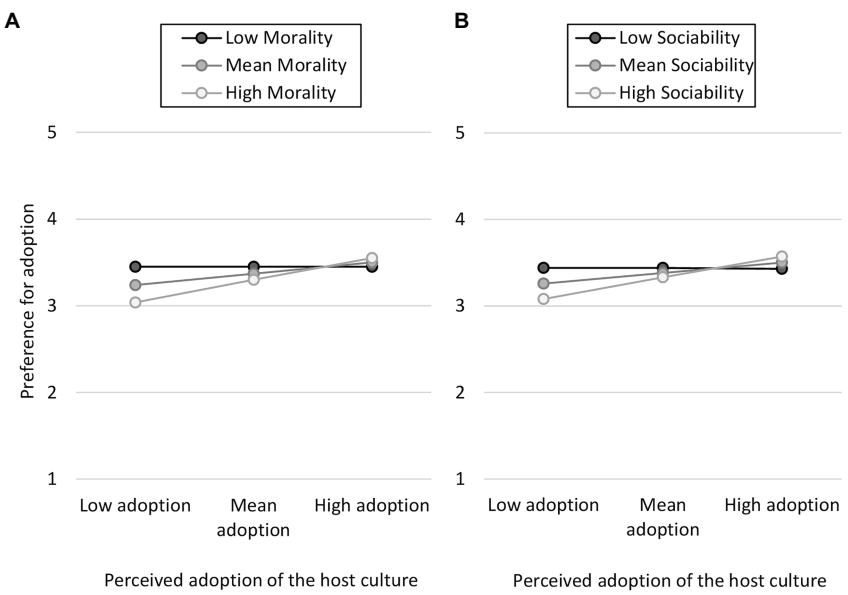

FIGURE 5 | Two-way interaction between morality **(A)** and sociability **(B)** stereotypes and perceived adoption when predicting preference for adopting the host culture.

only when Spanish participants perceived that Moroccan youth were not adopting the host culture, perceived sociability was negatively associated to preference for adoption, $B = -0.21$, $SE = 0.09$, $t(475) = -2.45$, $p = 0.015$, $[-0.385, -0.042]$. To summarize, when Spanish adolescents perceived that Moroccan youth were not adopting the Spanish culture, perceived morality and sociability played a role in their acculturation preferences regarding adoption. The less moral and sociable Moroccans

TABLE 5 | Multiple regression analysis for predicting preference for maintenance among Moroccan-origin adolescents.

		Preference for maintenance of Moroccan-origin adolescents				
		B	***SE***	***β***	***t***	***p***
1	Intercept	0.30	0.32		0.93	0.352
	Maintenance	**0.67**	**0.06**	**0.56**	**12.00**	**< 0.001**
	Adoption	0.05	0.05	0.04	0.97	0.334
	Ethnic identity	**0.16**	**0.05**	**0.15**	**3.07**	**0.002**
	National identity	0.05	0.03	0.06	1.34	0.181
		$F(4,321) = 53.84$, $p < 0.001$, $R^2_{adjusted} = 0.394$				
2	Intercept	0.12	0.41		0.28	0.776
	Maintenance	**0.67**	**0.06**	**0.56**	**11.82**	**< 0.001**
	Adoption	0.03	0.05	0.03	0.61	0.541
	Ethnic identity	**0.16**	**0.05**	**0.15**	**3.12**	**0.002**
	National identity	0.04	0.03	0.05	1.04	0.300
	Morality	−0.04	0.07	−0.03	−0.58	0.565
	Immorality	−0.05	0.05	−0.04	−0.81	0.366
	Sociability	0.03	0.06	0.03	0.51	0.608
	Competence	0.12	0.07	0.09	1.75	0.081
		$F(8,317) = 27.90$, $p < 0.001$; $\Delta R^2 = 0.012$, $p = 0.180$				

The results of significant predictors are in bold type.

TABLE 6 | Multiple regression analysis for predicting preference for maintenance among Spanish adolescents.

		Preference for maintenance of Spanish adolescents				
		B	***SE***	***β***	***t***	***p***
1	Intercept	1.69	0.28		6.16	0.000
	Perceived maintenance	0.05	0.07	0.03	0.78	0.436
	Perceived Adoption	**0.45**	**0.05**	**0.35**	**8.13**	**< 0.001**
		$F(2,469) = 33.95$, $p < 0.001$, $R^2_{adjusted} = 0.123$				
2	Intercept	0.95	0.39		2.44	0.015
	Perceived maintenance	−0.03	0.07	−0.02	−0.45	0.654
	Perceived adoption	**0.29**	**0.06**	**0.23**	**4.72**	**< 0.001**
	Morality	0.03	0.09	0.03	0.35	0.726
	Immorality	0.09	0.06	0.08	1.46	0.144
	Sociability	**0.24**	**0.08**	**0.23**	**3.05**	**0.002**
	Competence	0.11	0.07	0.09	1.69	0.093
		$F(6,465) = 17.68$, $p < 0.001$; $\Delta R^2 = 0.06$, $p < 0.001$				

The results of significant predictors are in bold type.

were perceived, the more preference for adoption. No other interactions were significant.

Preference for Maintaining the Origin Culture

For Moroccan-origin adolescents, results of the multiple regression analysis are shown in **Table 5**. Maintenance and ethnic identity were positively related to preference for maintenance. Step 2 showed that stereotypes about Spanish youth did not contribute to the model.

For Spanish adolescents, the results of the multiple regression analysis are shown in **Table 6**. In Step 1, perception of adoption of the host culture was positively related to preference for maintaining the origin culture among Spanish adolescents. There was a statistically significant increase in the explained variance ($\Delta R^2 = 0.021$) in Step 2, showing that perceived sociability contributed to the model. The more sociable Moroccan youth are perceived, the more preference for them to conserve their original culture.

Perceived immorality and perceived competence did not moderate the discrepancies between majority and minority groups in their maintenance preferences. Perceived morality did it marginally, $B = 0.17$, $SE = 0.09$, $t(806) = 1.93$, $\Delta R^2 = 0.004$, $p = 0.054$, 95% CI [−0.003, 0.333]. Only perceived sociability significantly reduced these differences, $B = 0.23$, $SE = 0.08$, $t(806) = 2.91$, $\Delta R^2 = 0.008$, $p = 0.004$, 95% CI [0.076, 0.389]; but in any case, these discrepancies disappeared, as Moroccan-origin adolescents always prefer more maintenance than what Spanish adolescents wanted independently of the perceived sociability of the other group, $p < 0.001$. Stereotypes did not interact with perceived adoption or perceived maintenance for the preference for maintenance.

DISCUSSION AND CONCLUSIONS

The main question that motivated this research was to understand the specific role that distinct stereotype dimensions play in the acculturation preferences of Spanish adolescents and adolescents of Moroccan-origin living in Spain. We analyzed the mutual stereotypes (Objective 1), and the majority-minority discrepancies in adolescents' acculturation perceptions and preferences (Objective 2), the specific contribution of four different stereotype dimensions (i.e., morality, immorality, sociability, and competence) to acculturation preferences (Objective 3), whether stereotypes could moderate the discrepancies between Spanish adolescents and adolescents of Moroccan-origin in their acculturation preferences (Objective 4), and whether stereotypes might be more predictive of majority's acculturation preferences under more threatening circumstances such as when they perceive minorities are not adopting the host culture (Objective 5).

The results confirmed, as it was expected, that Spanish adolescents evaluated Moroccan youth more negatively than adolescents of Moroccan origin evaluated their Spanish peers, confirming Hypothesis 1. The devalued group members, even if they are discriminated against, maintain a relatively positive perception of the majority group members. This finding is not surprising giving the status of these social groups in Spanish society. On the one hand, the mainstream culture in Spain does not include a wide cultural diversity, being the traditional Spanish culture the norm. Norms establish what is more valuable in society. Therefore, it is not strange that Spanish adolescents are more positively assessed by their immigrant-origin peers who presumable share mainstream norms. On the other hand, all cultural groups associated to Islam have negative connotations in Spain, being Moroccans a traditionally stigmatized group in this country, judged as less moral and more threatening immigrants than other groups (Navas et al., 2012; López-Rodríguez et al., 2013). These findings may have some relevant implications in terms of collective actions for inequality. Ethnic minority groups who maintain positive relations with the majority group tend to express positive attitudes toward the dominant group, something that could be associated to less anger toward inequality and less collective action to change the *statu quo* (Tausch et al., 2015).

Regarding the intergroup discrepancies on acculturation orientations, Spanish adolescents perceived that Moroccan youth were adopting less than the adolescents of Moroccan origin claimed to do, but they also perceived that Moroccan youth were maintaining less than Moroccan adolescents claimed to do. So, Hypothesis 2a is only partially met. However, these findings are in line with previous research in which it was found that immigrant adolescents living in Spain claimed that they maintain and adopt more compared to what Spanish adolescents perceived (López-Rodríguez et al., 2014a; Mancini et al., 2018). In the Hypothesis 2b, we expected that Spanish adolescents would prefer Moroccan youth to adopt more and maintain less than what they would desire for themselves (H2b). This hypothesis was confirmed and our results are similar to those found in the adult population applying the RAEM (Navas et al., 2005, 2007; Navas and Rojas, 2010). They diverge slightly compared to previous research with adolescents in Spain that found that immigrant adolescents preferred to maintain, but also to adopt more compared to what Spanish adolescents wanted (López-Rodríguez et al., 2014a; Mancini et al., 2018). However, this previous research included immigrants from different ethnic origins in the analyses, whereas the present research considered only adolescents of Moroccan origin. As stated before, Moroccans are a highly stigmatized group in Spain compared to other immigrants from different origins. The pattern found in this study is coherent to a relatively threatening perception of adolescents of Moroccan-origin, as Spanish adolescents demanded less maintenance of the Moroccan culture and more adoption of the Spanish culture than what this minority group prefers to do. However, it is fair to recognize that those discrepancies in their preference for adoption were smaller than their discrepancies in preference for maintenance.

Regarding Hypothesis 3, it was confirmed that stereotypes (especially the dimension of immorality) played an important role in understanding preference for cultural adoption of Spanish and Moroccan-origin adolescents beyond acculturation perceptions (in Spanish-origin adolescents) and acculturation strategies and national identity (in Moroccan-origin adolescents). For participants from the minority group, the extent to which they are already adopting the host culture and the level of national identity were positively related to the desire of adopting the Spanish culture. Interestingly, perceiving Spanish youth as immoral (e.g., aggressive, malicious, and false) significantly contributed to the model, indicating that the more immoral Spanish youth are perceived, the less the desire of adopting the Spanish culture. Likewise, for Spanish participants, perceiving Moroccan youth as immoral also contributed to the model. The more immoral Moroccan youth were perceived, the higher the Spaniards' preference for Moroccan youth to adopt the Spanish culture. Three important conclusions are derived from these findings. The first one is related to the ineludible interactive nature of acculturation: perceived immorality was important for both minority and majority groups when understanding their acculturation preferences but in the opposite direction. The immoral character of the outgroup was negatively related to preference for adoption among Moroccan-origin adolescents but positively related to preference for adoption among Spanish adolescents. This fact reveals that mutual stereotypes are important from both perspectives. The second conclusion stands on the importance of stereotypes especially for preference for adopting the host culture. Adoption of the host culture is important because it connects to social integration with the other group. From the minority perspective, if we do not trust the other, it has no sense to approach their culture. From the majority perspective, if we do not trust the other, demanding adoption of the host culture might neutralize the threat that implies their immoral character. This is coherent to previous research (e.g., Zick et al., 2001; Arends-Tóth and Van de Vijver, 2003) that has found that majority members preferred that minority members adopted the host culture instead of maintaining the origin culture. The final conclusion is that immorality seems especially diagnostic in the accommodating process of acculturation, as it does in the impression-formation process (e.g., Skowronski and Carlston, 1987), probably due to the evolutionary social function that

these traits comply and their relation to threat. Thus, perceived immorality was an important stereotypical dimension to consider for understanding the preference for adopting the host culture for both majority and minority groups, and its power in intergroup relations was confirmed (Sayans-Jiménez et al., 2017).

The relation between intergroup stereotypes and acculturation preferences, however, might be more complex than it seems. Although there is only a direct relationship between perceived immorality and preference for adoption in both groups, the four stereotype dimensions can also modulate the discrepancies between majority and minority groups regarding their adoption preferences (H4). Stereotypes, these social keys to guide judgments in complex situations, can harsh or soften intergroup discrepancies in adoption preferences. It is precisely when the other group is perceived as highly immoral, or lowly moral, social, and competent when Spanish adolescents' and Moroccan-origin adolescents' adoption preferences separate more. On the contrary, these discrepancies disappear when the other is perceived to be a source of trust, kindness, and competence. This new way to understand the role of stereotypes in the acculturation process might offer new possibilities for intervention and cultural understanding. As far as we know, no previous evidence has shown that stereotypes could increase/decrease acculturation discrepancies between different cultural groups. The way we see others can be a potential tool to come together and join different acculturation perspectives.

However, stereotypes might not be always useful in the decisions of majority members about acculturation. In an attempt to understand how and when stereotypes relate to the acculturation preferences of majority members about how minorities should acculturate, we analyzed whether their stereotypes could interact with other factors such as their own acculturation perceptions (H5). In this study, stereotypes of morality and sociability interacted with perceived adoption when predicting preference for adoption. When Spanish adolescents perceived that Moroccan youth were not adopting the Spanish culture, perceived morality and sociability played a role in their preferences for adoption. The less moral and sociable Moroccan youth were perceived, the more preference for cultural adoption. This result is in line with previous research that demonstrates the relevant role of the degree of perceived adoption (over perceived maintenance) from the majority perspective (López-Rodríguez et al., 2014b). We believe that it is due to the fact that when people perceive that "others" do not want to adopt the host culture, the host population support more cultural adoption (and not cultural maintenance) in order to assimilate them, especially if the outgroup is perceived as a threat (Tip et al., 2012; Stephan et al., 2016) or with low morality like in our study. To perceive a group as low in morality is to be able to identify a potential threat to the in-group (Brambilla et al., 2011, 2012; Brambilla and Leach, 2014). Thus, morality (and in this case, also sociability) seems to neutralize the perceived threat that a low perceived adoption can provoke in members of the majority group. Future research should clarify additional conditions under which stereotypes might be more strongly related to acculturation preferences.

An important limitation of the present research is that it was correlational and hence did not allow inferences about causality. Indeed, it is plausible to suppose that intergroup stereotypes determine acculturation preferences and vice versa. People can use stereotypes with a justifying function of their preferences for acculturation (i.e., we perceive them as less moral – or immoral – because "they do not want to adopt our culture or follow our customs and norms"). Experimental studies would corroborate the proposed direction of our results and contrast the alternative roles that stereotypes might play when understanding preferences for adopting the host culture. We can also consider that the variance explained by the stereotypes was limited. Intergroup stereotypes are not, by themselves, the most important factor when trying to understand acculturation preferences. However, they contribute and can interact with other factors such as acculturation perceptions. Future research should explore in more detail the exact role that stereotypes, especially perceived immorality, play in acculturation preferences and discard alternative hypotheses.

Despite the potential improvements that could be made, we consider that these results contribute to the psychosocial literature on acculturation and stereotypes adding evidence to the need for a more context-situated analysis of the acculturation processes of adolescent ethnic minorities and the importance of considering stereotypes in those processes, especially the attributions of immorality to the outgroup. Moreover, results of research connecting stereotypes and acculturation processes with adolescents have additional implications, since adolescence is a period in which consequences of non-harmonic acculturation processes can have more negative effects and lead to problems of psychological adaptation more easily than in adulthood (Schwartz et al., 2006). In terms of intervention, understanding these patterns in adolescence facilitates the change of stereotypes and biased intergroup perceptions before they get firmly established in adulthood, so it can be highly efficient for improving intergroup relations in the future.

In conclusion, we believe that mutual perceptions and acculturation discrepancies between majority and minority groups can contribute to either soften or harden intercultural relations in the multicultural society that Europe is today. With the increase of migration flows and the coexistence of diverse cultural groups, the study of acculturation processes and involved psychosocial variables such as intergroup stereotypes are essential to understand intercultural relations, and to generate adequate psychological and political responses to support inclusive societies.

DATA AVAILABILITY STATEMENT

The datasets used for this study can be found in Open Science Framework (OSF) at: https://osf.io/khmvu/?view_only=f41e41bf48a349c689469481baf63eaf.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Bioethics Commission from University of Almería.

Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

LL-R, AU, MN, MS-C, and IC developed the study concept and design, drafted the manuscript, provided critical revisions, and approved the final version of the manuscript for submission. Data collection was performed by MS-C and MN. MS-C, LL-R, and AU performed the data analysis. All authors contributed to the article and approved the submitted version.

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From Diversity Ideologies to the Expression of Stereotypes: Insights Into the Cognitive Regulation of Prejudice Within the Cultural-Ecological Context of French Laïcité

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This theoretical paper examines the context-sensitivity of the impact of cultural norms on prejudice regulation. Granting the importance of understanding intergroup dynamics in cultural-ecological contexts, we focus on the peculiarities of the French diversity approach. Indeed, the major cultural norm, the Laïcité (i.e., French secularism) is declined today in two main variants: The Historic Laïcité, a longstanding egalitarian norm coexisting with its amended form: The New Laïcité, an assimilationist norm. In fact, these co-encapsulated Laïcité variants constitute a fruitful ground to cast light on the processes underlying prejudice regulation. Indeed, it is documented that the assimilationist New Laïcité is linked to higher levels of prejudice as compared to the egalitarian Historic Laïcité. To this day, research mainly explored interindividual determinants of Laïcité endorsements and specified how these endorsements shape prejudice. Crucially, this "indirect-endorsement path" does not account for the more straightforward causal relationship between Laïcité and prejudice. Moreover, recent experimental evidence suggests that the normative salience of both Laïcité norms shape intergroup attitudes beyond personal endorsement. Therefore, in this contribution, we complement previous work by investigating the possible socio-cognitive processes driving this "direct-contextual path." In doing so, we seek to bridge the gap of causality by investigating how the Laïcité norms can set the stage for specific regulatory strategies. Our reasoning derives from an application of the Justification-Suppression Model bolstered by classical work on mental control, modern racism and diversity ideology. From this, we sketch out the operative functioning of two distinct regulation processes: (a) one that prevents prejudicial attitudes but which can have unexpected consequences on stereotyping within the Historic Laïcité context (i.e., suppression) and (b) one that helps realize prejudice within the New Laïcité context (i.e., justification).

From this analysis, we discuss the consequences for intergroup relations within and beyond the French context. In particular, we outline the importance of an adequate framing of egalitarian ideologies so that they achieve their goal to foster harmonious intergroup relations.

Keywords: diversity ideologies, ethnic stereotypes, cultural determinants, suppression process, justification process, French Laïcité, cultural norms of diversity

INTRODUCTION

One of the major hurdles to the development of harmonious intergroup relations within societies is the persistence of cultural stereotypes (i.e., shared beliefs about the attributes of outgroup members) which is a fertile ground for the endurance of racism within societies (Allport, 1954; Tajfel, 1969; Devine, 1989; Hamilton and Sherman, 1994; Park and Judd, 2005; Crandall et al., 2011). In fact, the expression of cultural stereotypes is fueled and driven by ethno-religious prejudice[1] (i.e., negative evaluations of individuals based on their group membership; Crandall and Eshleman, 2003). To address this phenomenon, across cultures, political authorities rely on diversity ideologies, namely, belief systems regarding the ways society should approach ethno-religious diversity (Rosenthal and Levy, 2010; Levin et al., 2012). Depending on the country, diversity ideologies shape *cultural norms of diversity*[2], namely, the shared and perceived national ways to deal with diversity (Guimond et al., 2013). As other social norms, cultural norms, represent general expectations about appropriate behaviors in societal space (Sherif, 1936; McDonald and Crandall, 2015). As such, they are expected to be powerful determinants of prejudice regulation (Verkuyten, 2011; Guimond et al., 2013, 2014; Anier et al., 2018, 2019). However, to date, the psychological determinants underlying the causal influence of cultural norms on prejudice regulation remain poorly identified.

Taking the case of France as a prime example, the present paper aims to fill this gap by highlighting specific processes of prejudice regulation under the dominant French cultural norm, the *Laïcité* (i.e., French secularism). More specifically, the Laïcité is a socio-political concept framed by law which establishes normative prescriptions related to cultural and religious diversity in French society. However, in recent decades, the Laïcité is declined into two antinomic norms: The *Historic Laïcité*, a longstanding egalitarian norm, shares the social space with it amended form, the *New Laïcité*, an assimilationist norm fostering social uniformity (Akan, 2009; Baubérot, 2012; Policar, 2017; Blanc, 2018). On top of this, the New Laïcité is related to higher levels of prejudice as compared to the Historic Laïcité (Kamiejski et al., 2012; Roebroeck and Guimond, 2015, 2017, 2018; Troian et al., 2018). To understand this relationship, research to date favors an "indirect-endorsement" path, examining how Laïcité endorsement produces distinct outcomes on intergroup attitudes. In parallel, recent experimental findings draw another possible path, showing that the mere contextual salience of these norms shapes prejudice and discrimination behavior beyond their endorsement (Anier et al., 2018, 2019). However, what is lacking is the identification of the socio-cognitive processes that can settle the causal explanation between both Laïcité and prejudice. We aim to fill this gap by arguing that the Laïcité norms can set the stage for specific prejudice regulations via a "direct-contextual" path.

THE FRENCH CULTURAL CONTEXT

From the French Republican Model to the Laïcité Norms

In order to gauge how Laïcité influences prejudice regulation, one can start by situating the French ideological landscape with regard to past work on diversity ideologies. In the literature, diversity ideologies are generally classified according to two broad orientations (Plaut et al., 2018; Leslie et al., 2020): On the one hand, one finds (1) "identity-blind ideologies" like the assimilationist ideology requiring minorities to abandon their cultural identity for the benefit of a unique national identity. This category also includes the colorblind ideology, which prescribes the ignorance of group identity in favor of thinking of individuals as unique entities. On the other hand, one finds (2) "identity-conscious ideologies" such as multiculturalism ideology[3] which

[1]According to the classic tripartite model of attitudes prejudice and stereotypes are interrelated as they represent two facets of the same construct. Specifically, prejudice is the affective component and stereotype is the cognitive component of group attitude (Rosenberg and Hovland, 1960; Eagly and Chaiken, 1993; Fiske, 1998). From a functional perspective, this relationship is viewed as an interactive process. Indeed, when cultural stereotypes serve to explain ingroup/outgroup differences (e.g., via a justification function), they are driven by a pre-existing prejudice (Allport, 1954; Crandall and Eshleman, 2003; Park and Judd, 2005; Crandall et al., 2011). In other words, prejudice constitutes a prerequisite as it is subsequently rationalized via the expression of cultural stereotypes. Hence, gauging the downstream consequences of prejudice regulation on the expression of cultural stereotypes is essential to understand their persistence in modern societies.

[2]Guimond et al. (2013) use the term *cultural norm of integration*. However, as pointed out by Anier et al. (2018), this term can generate confusion with respect to research on acculturation (Berry, 2005, 2006). In this article we therefore opt for the term "cultural norm of diversity."

[3]Multiculturalism is a term used to label different phenomena in the literature (Yogeeswaran and Dasgupta, 2014; Grigoryev et al., 2020; Verkuyten and Yogeeswaran, 2020). For example, it may refer to: (a) a demographic situation (i.e., a general depiction of a population characterized by cultural diversity); (b) a diversity ideology; and (c) a cultural norm. Taking this into account, it is important to note that most of the experimental work which is cited in this paper is carried out in the United States context. As such, it explores multiculturalism as a diversity ideology because it is not the official cultural norm (Guimond et al., 2013; Yogeeswaran et al., 2018). Indeed, when multiculturalism is studied as a cultural norm, this implies to take also into account a more detailed analysis of the acculturation process. More specifically, according to Berry's Model (2005, 2006) the acculturation process describes how the majority and minority groups become acculturated through mutual contact. In a given society, when minorities

values both the maintenance of cultural identity and the adoption of a common national culture (Wolsko et al., 2000; Berry, 2005, 2006; Guimond et al., 2010, 2014; Rosenthal and Levy, 2010; Levin et al., 2012). Within this category, research is recently also increasingly interested in polycultural ideology, which does not value the recognition of group differences *per se*, but instead the creation of mixed and malleable identities resulting from the contact between different cultures (Rosenthal and Levy, 2010; Morris et al., 2015; Pedersen et al., 2015; Grigoryev et al., 2018).

In fact, extensive comparative research suggests that when "identity-conscious ideologies" are favored as cultural norms in a given country, they shape more positive intergroup attitudes as compared to when "identity-blind ideologies" are favored as cultural norms. More specifically, Multiculturalism (e.g., the cultural norm in Canada) is mostly negatively associated with prejudice toward minorities. Conversely, assimilationism (e.g., the cultural norm in Germany) is positively linked to prejudice (Wolsko et al., 2000; Levin et al., 2012; Guimond et al., 2013; Whitley and Webster, 2019; Leslie et al., 2020). Concerning colorblindness (e.g., the cultural norm in the United States), although its initial professed goal is equality, the available findings suggest a complex pattern. Indeed, colorblindness is negatively related to prejudice when it is measured directly (e.g., self-report), but positively associated with it when measured indirectly (e.g., using measures which are less prone to social desirability; Wolsko et al., 2000; Richeson and Nussbaum, 2004; Norton et al., 2006; Apfelbaum et al., 2008; Vorauer et al., 2009; Plaut et al., 2018; Yogeeswaran et al., 2018).

With respect to these main ideological orientations, the French diversity ideology, coined *Republican Universalism*, on the whole, promotes an "identity-blind" approach as it values the transcendence of group affiliations for the benefit of a cohesive citizenship system. However, it appears to be endowed with a dual and antagonist ideological nucleus (Kamiejski et al., 2012; Guimond et al., 2014; Badea et al., 2015). Its first nucleus component is strongly assimilationist (Maisonneuve and Testé, 2007; Guimond et al., 2010; Sabatier et al., 2016). However, its second nucleus component, termed *Universalism* ensures citizen equality independently of any cultural or religious particularisms (French constitution, Art.1, 1958). Thus, scholars equate this latter universalism component to the original egalitarian goal of colorblind ideology (Badea, 2012; Guimond et al., 2014; Badea and Aebischer, 2017; Roebroeck and Guimond, 2018), and at times to a form of multiculturalism as it promotes tolerance toward minorities and cultural particularisms (Maisonneuve and Testé, 2007; Mahfud et al., 2016). These parallelisms reveal that the universalist component is more equality oriented than the assimilationist component. Therefore, it is expected to produce more favorable outcomes on intergroup relations than the assimilationist component (Badea et al., 2015). Yet, it should be noted that neither colorblindness nor multiculturalism are perceived as the prevalent cultural norms of diversity in France (Anier et al., 2019). In fact, this assimilation/universalism co-encapsulation gives rise to two specific cultural norms: the egalitarian Historic Laïcité and the assimilationist New Laïcité (i.e., following the terminology used in the social psychological literature; Roebroeck and Guimond, 2015; Nugier et al., 2016; Anier et al., 2019). Noteworthy, French citizens endorse more strongly the Historic and/or the New Laïcité than any other diversity ideology (Kamiejski et al., 2012; Anier et al., 2019). Consequently, this high degree of support for both Laïcité suggests that they are perceived as the prevalent ways to deal with diversity in French society or, in other words, as the cultural norms. Therefore, these two norms are particularly likely to be predictive of intergroup relations within the French context (Guimond et al., 2013).

Historic and New Laïcité: Two Norms to Deal With Diversity

Since the French Revolution, the Laïcité[4] represents a major institutionalized societal tool at the service of the French model to manage ethno-cultural diversity. However, because the Laïcité is framed by law, its normative frame is sensitive to the chain of socio-political events. For instance, during the 80s, French society underwent a social crisis marked by an increase in ethno-religious claims linked to the immigration waves from the later nineteenth century (Bistolfi, 2014; Gautherin, 2014; Machelon, 2015; Baudouin and Portier, 2018). To accompany these social mutations, political leaders revised the original juridical bases of the Laïcité. As a consequence, increasingly since 2004, the Laïcité is repeatedly marshaled in speeches concerning the place of Islam in French society. While at the same time, the defenders of the more traditional Laïcité do not hesitate to voice concerns about its ideological shift (Akan, 2009; Baubérot, 2012; Mangeot et al., 2012). Importantly, Kamiejski et al.'s (2012) seminal work on the French Laïcité showed that, at the psychological level, there are indeed, not one but at least two different conceptions of Laïcité that coexist in social space[5]: the Historic and the New Laïcité.

In order to gauge the cultural specificity of both Laïcité norms and, in particular their differences, it seems necessary to engage in a short definitional analysis. In fact, the Laïcité prescriptions rest on three basic components (Constitutional Council, 2013): (1) *The state neutrality component* (i.e., the notion of state-religion separation): Within the Historic Laïcité, religious neutrality is limited to public officials (e.g., state agents, hospital agents, teachers etc.; Gautherin, 2014; Machelon, 2015; Policar, 2017). Nonetheless, a recent New Laïcité prescription prohibited visible religious symbols in middle schools (Education code Act no. 228, 2004), and since 2010, the display of any religious clothing that covers the head is forbidden in the public realm (Penal

seek to maintain some aspect of their original culture while at the same time adopting the culture of the host country by participating in social life, they opt for an "integration strategy." At the societal level, when this strategy is also favored by the dominant group and for instance, encouraged by legal policies (e.g., as in Canada), it is referred as a "multiculturalist cultural norm." In sum, to count as a cultural norm, multiculturalism must act at the societal level, and provide a generic reference for intergroup relations.

[4]To the extent that Laïcité is a sociopolitical concept with a legal framing, it differs from the concept of secularism which is generally defined as the progressive disappearance of religious thinking within society (Hayat, 2006; Baubérot, 2012).

[5]It should be noted that one exception in the literature concerns the work of Cohu et al. (2018), which studies beliefs in Laïcité as a polysemic and multidimensional construct rather than a stable dual structure.

Code Act no. 1192, 2010). These laws suggest an extension of neutrality, from state institutions to the public space, and concomitantly, from state officials to everyday citizens (Bouillon, 2014; Gautherin, 2014; Policar, 2017; Saillant-Maraghni, 2017; Portier, 2018). (2) *The citizens' fundamental freedoms component*: The Historic Laïcité values the freedoms of conscience, religion choice, and religious practice "individually or collectively, in the public and in the private area" (State Council, 1989). However, the New Laïcité aims to constrain the scope of these freedoms. As one can read in a document from the government's Observatoire de la Laïcité (2016): "We must distinguish freedom of conscience and freedom of religious expression. [. . .] The freedom of religious expression ought to be restrained to guarantee the respect of public order" (p. 3). And finally, (3) *the citizen equality component*: For the Historic Laïcité, equality is synonymous to non-discrimination (Redor-Fichot, 2005; Gautherin, 2014; Zuber, 2018). Specifically, it prohibits "access to educational settings based on the beliefs or religious beliefs of students" (State Council, 1989). This aspect is not so salient within the New Laïcité prescription. For example, the relatively recent exclusion of a high school girl who refused to take off her veil seems at odds with the inclusionary ideal of the Historic Laïcité (Gautherin, 2014). In sum, the Historic Laïcité norm is an equality norm used to fend off discrimination on the basis of cultural and religious particularities, while the New Laïcité is an assimilationist norm fostering social uniformity by neutralizing distinctive identity cues in the social space.

In fact, research confirms that these distinct normative orientations influence differently attitudes toward minorities. More specifically, a handful of studies show that the endorsement of Historic Laïcité is negatively linked to prejudice and when rendered salient decreases discrimination toward Maghrebians (i.e., the group which is most affected by racism in France; Pettigrew and Meertens, 1995; Dambrun and Guimond, 2001). Conversely, the endorsement of the New Laïcité norm is positively linked to prejudice toward these minorities and when rendered salient increases discriminatory behavior (Kamiejski et al., 2012; Roebroeck and Guimond, 2017; Anier et al., 2019). These results support the notion that Laïcité norms contribute to the cultural dynamics of intergroup relations in France. Thus, to understand these effects, the challenge is to smoothly articulate how these cultural factors interact with more general psychological determinants.

FROM THE TWO LAÏCITÉ NORMS TO PREJUDICE: AN INDIRECT-ENDORSEMENT PATH

Laïcité as a Legitimizing Myth

Seminal research on the Laïcité norms approached the issue from the perspective of interindividual variability in order to grasp: (1) the psychological underpinnings associated with the endorsement of either Historic or New Laïcité, and (2) the way through which this personal endorsement influences prejudice. To this purpose, Social Dominance Theory (SDT; Pratto et al., 1994; Sidanius and Pratto, 2001) was mobilized. This classic account assumes that individuals vary in their social dominance orientation (SDO), reflecting their degree of support for group-based hierarchies in society. Moreover, the SDO level shapes the endorsement of *Legitimizing Myths* namely beliefs or ideologies which enhance or attenuate existing hierarchical dynamics (Sidanius and Pratto, 2001). As such, high-SDO individuals gravitate toward Hierarchy Enhancing Legitimizing Myths (HE-LM), whereas low-SDO individuals favor Hierarchy Attenuating Legitimizing Myths (HA-LM). A fundamental property of SDT is that these endorsements predict, in turn, the level of prejudice (for a review, see Sibley and Duckitt, 2008). In other words, the relation between SDO and prejudice is mediated by the type of endorsed myth.

Crucially, diversity ideologies are considered as legitimizing myths (Levin et al., 2012; Guimond et al., 2014). For instance, high-SDO individuals are more likely to endorse an assimilationist ideology[6] (serving a HE-LM function) and this endorsement, in turn, positively predicts prejudice. Whereas, low-SDO individuals are more likely to favor egalitarian ideologies, such as multiculturalism (serving a HA-LM function), and this endorsement negatively predicts prejudice (Levin et al., 2012; Guimond et al., 2013; Rattan and Ambady, 2013). Thus, in light of SDT, an emerging hypothesis is that the two Laïcité norms represent cultural legitimizing myths in France (Roebroeck and Guimond, 2017; Troian et al., 2018). Hence, depending on their SDO Level, French citizens will either slant toward the egalitarian Historic Laïcité to enable its HA-LM function, or toward the assimilationist New Laïcité to capitalize on its HE-LM function.

However, in the relevant literature, the available empirical data only partially support this contention. Concerning Historic Laïcité, the findings indicate, as expected, that low-SDO individuals endorse it more strongly. In turn, Historic Laïcité endorsement is negatively correlated to prejudice (Kamiejski et al., 2012; Roebroeck and Guimond, 2017). Nevertheless, none of these authors verified that Historic Laïcité endorsement mediates the SDO-prejudice relationship, which would constitute cogent evidence for ascribing it a legitimizing myth function (Sidanius and Pratto, 2001). Concerning the New Laïcité, SDO does not predict its endorsement (Kamiejski et al., 2012) or weakly so (below 0.20; Roebroeck and Guimond, 2017, 2018), while its endorsement is indeed positively correlated to prejudice. This unanticipated absence of a SDO-New Laïcité link led Troian et al. (2018) to suspect measurement issues in past studies. By developing their own New Laïcité measurement tool, they uncovered the predicted mediation: They found that higher SDO levels are associated with stronger New Laïcité endorsement which, in turn, predicts a higher level of prejudice. At the same time, these authors did not replicate past results concerning Historic Laïcité. Thus, a comprehensive test of these two norms operating as legitimizing myths is still needed.

[6]Note that studies indicate that the link between SDO and assimilation is not straightforward. It may depend on how individuals define the assimilationist ideology (Thomsen et al., 2008; Guimond et al., 2010).

Laïcité as a Malleable Ideology?

Going one step further, personal attitudes toward Laïcité are also studied from the theory of malleable ideology (Knowles et al., 2009). This theory assumes that ideologies possess a certain degree of malleability, rather than a stable content as conceptualized by SDT. In fact, according to their SDO motives (i.e., hierarchy-enhancing vs. hierarchy-attenuating), individuals can alter the meaning of an ideology to match their personal goals. For instance, Knowles et al. (2009) showed that high-SDO individuals divert the original egalitarian purpose of colorblindness to legitimize intergroup inequality. Based on this rationale, Roebroeck and Guimond (2018) showed that in France the meaning of Laïcité is indeed diverted depending on individual's SDO motives. First of all, they found that SDO is negatively related to Laïcité attachment (i.e., worded in an unqualified, generic manner), suggesting that it is originally an egalitarian ideology. However, in a situation of symbolic threat, high-SDO individuals reported an increase in general Laïcité attachment, while concurrently exhibiting a strong endorsement of the New Laïcité. Hence, these results suggest that, in specific contexts, high-SDO individuals construct the meaning of Laïcité no longer in its egalitarian conception but infusing it with the assimilationist elements of New Laïcité.

Taken together, research conducted from the perspective of SDT and malleable ideology frameworks provide interesting insights into the psychological determinants enabling individuals to adhere to the specific content of either the Historic or the New Laïcité. However, within this general "indirect-endorsement" path, the Laïcité norms were mainly measured and not manipulated. In fact, the way they can causally influence intergroup attitudes or responses in social settings is not directly addressed.

FROM THE TWO LAÏCITÉ NORMS TO PREJUDICE: A DIRECT-CONTEXTUAL PATH TO PROBE

A Direct-Contextual Influence?

To understand how the Laïcité norms shape intergroup attitudes in social settings, it is important to examine their influence beyond personal endorsement. Therefore, we surmise that just as any other prominent social norm, the Laïcité should be able to drive regulation processes via a direct-contextual path. Interestingly, Monteith and Walters (1998) showed that the way in which individuals construct the meaning of an ideology can also influence prejudice regulation. In particular, high-prejudiced individuals who conceived egalitarianism in terms of *equality of opportunity* (i.e., equality based on fair distribution of resources and opportunity) feel a moral obligation to regulate their prejudice and thus adopt low prejudice standards (e.g., not to appear prejudicial). Conversely, high-prejudiced individuals who conceive egalitarianism in terms of *individualism* (i.e., equality based on individual merits) do not exert such control on their prejudiced attitudes. These results are consistent with extensive research on modern racism showing that, at least from the 1980s, the global anti-prejudice discourse is associated with a strong social disapproval and legal punishment of racism in the public sphere (Gaertner and Dovidio, 1986; Devine, 1989; Blanchard et al., 1991, 1994; Pettigrew and Meertens, 1995; Sears and Henry, 2003). Accordingly, individuals developed motivations to control prejudice either to avoid the cost of these social sanctions (i.e., external goals) or to remain consistent with one's own egalitarian values (i.e., internal goals; Devine, 1989; Plant and Devine, 1998; Brauer et al., 2000). Consequently, the salience of equality and anti-racism norms affect the ways individuals prevent prejudice in social settings beyond personal endorsement (Devine, 1989; Blanchard et al., 1994; Monteith et al., 1996; Wyer et al., 1998; Lowery et al., 2001; Crandall et al., 2002; Bodenhausen et al., 2009).

Concerning the Laïcité norms, a potential hint at this direct contextual influence may be spotted in the analysis of Roebroeck and Guimond (2017). They found that when SDO is statistically controlled, both Laïcité norms account, in and of themselves, for a distinct portion of variance in prejudice. Specifically, the Historic Laïcité is associated with a decrease in prejudice disclosure, while the New Laïcité is associated with an increase in prejudice disclosure. More recently, Anier et al. (2019) showed that the salience of Historic Laïcité decreases discrimination, while the salience of New Laïcité increases it. However, what is lacking in previous research is the identification of the socio-cognitive processes that can sustain a causal explanation between both Laïcité and prejudice. To fill this gap, we apply the Justification-Suppression Model (JSM; Crandall and Eshleman, 2003) to the French context.

The Justification-Suppression Model in the French Context

The central idea of the JSM is that prejudice is not directly expressed, it goes instead through a regulatory filtering which either impedes or facilitates its expression. The starting point of the model is that within a global egalitarian climate, individuals are motivated to avoid prejudicial labels (Gaertner and Dovidio, 1986; Devine, 1989; Blanchard et al., 1991, 1994; Pettigrew and Meertens, 1995; Sears and Henry, 2003). This motivation is expected to drive self-regulation of prejudice via a well-known process of mental control: suppression (Wegner and Erber, 1992; Macrae et al., 1994; Wegner, 1994; Wenzlaff and Wegner, 2000). Suppression is put in motion to prevent undesirable thoughts from emerging into consciousness because they are judged to be inappropriate (Macrae et al., 1994; Wyer et al., 1998). One of the core assumptions of the JSM is that when individuals are immersed into a suppression context, they experience a motivational conflict. As stated by Crandall and Eshleman (2003), the JSM can be conceived as "a general model for how tension and equilibrium are reached within individuals between prejudice suppression and expression" (p. 433). This quote outlines that conflict arises from two antagonistic motivations: One that pushes for the expression of prejudice that comes to mind and another that urges to suppress prejudice because its expression is prohibited.

The originality of the JSM resides in its proposition that under distinct circumstances this conflict can be resolved by the covert expression of prejudice driven by justification processes. Justification is defined as an intentional strategy to seek contexts or situations allowing an innocuous and unsanctioned way of expressing prejudice. Justification is triggered by an individual's motivation to release the tension induced by the act of suppression, while preserving the self-image as unprejudiced. Hence, justifications can be any belief, value, or ideology that can serve as a convenient explanation to release prejudice in social settings. This last consideration indicates a second fundamental property of the JSM. Indeed, Crandall and Eshleman (2003) propose that most individual attitudes or beliefs (e.g., political orientation, values, or religious systems) defined in the literature as antecedents of prejudice can be conceived to operate as potential suppression or justification factors. Based on this, a social norm such as Laïcité appears as a plausible instigator of both suppression and justification processes.

By applying this general reasoning to the specific French ecological-cultural context, it is expected that when Historic Laïcité is salient individuals should be motivated to protect their social and/or self-image from being labeled as racist. It is expected that these social motives drive self-regulation of prejudice via suppression. Conversely, under an assimilationist context embodied in the New Laïcité, individuals should be motivated to release the pressure induced by the continuous demands to suit egalitarianism. It is expected that this covert and rationalized expression of prejudice is driven by justification (see **Figure 1**). On this basis thereof, we now turn to examine the empirical evidence that supports these innovative hypotheses by highlighting their operational functioning. Furthermore, through the JSM prism we discuss the effectiveness of the two Laïcité in their potential to ensure harmonious intergroup relationships.

HISTORIC LAÏCITÉ AND INTERGROUP RELATIONS: THE SUPPRESSION PATHWAY

Evidence for Historic Laïcité as a Context of Suppression

To investigate whether an egalitarian norm such as the Historic Laïcité is a genuine context of suppression, one can turn to the specific operating principles of this process. According to classic models of mental control (Wegner and Erber, 1992; Bargh, 1994; Macrae et al., 1994; Wegner, 1994), when an individual engages in thought suppression two processes are put in motion: (a) a controlled operating process that replaces the unwanted thoughts with distractors, and (b) an automatic monitoring process that scans the content of the cognitive system in search of unwanted thoughts. Both processes work in synergy: The detection of unwanted thoughts by the monitoring process recruits the operating process. Thus, a successful cycle of suppression casts out unwanted thoughts from consciousness therefore reducing their public manifestation (Wegner and Erber, 1992; Wegner, 1994). However, this cycle is known to generate ironic consequences on subsequent cognition and behavior (for a review, see Monteith et al., 1998a). In fact, it is assumed that during the cycle of suppression the repeated detection (and thus activation) of stereotypic thoughts leads to their hyperaccessibility (Macrae et al., 1994; Galinsky and Moskowitz, 2007). As a consequence, when the demand of suppression is relaxed, the activated unwanted thoughts tend to color subsequent judgments to a greater extent than if suppression had never occurred (Macrae et al., 1994; Wyer et al., 1998). This initial reduction followed by a subsequent increase in stereotyping has been coined a *rebound effect*.

In fact, research indicates that the control of prejudice when egalitarian and anti-racist norms are salient is driven by suppression (Macrae et al., 1994; Monteith et al., 1998a; Wyer et al., 1998; Shelton, 2003; Bodenhausen et al., 2009). Furthermore, scholars argue that this spontaneous suppression is also driven by specific cultural norms such as a colorblind norm in the United States (Wolsko et al., 2000; Richeson and Nussbaum, 2004; Norton et al., 2006; Apfelbaum et al., 2008; Todd and Galinsky, 2012). Indeed, the normative prescription of colorblind emphasizing racial myopia invites individuals to suppress group labeling. More specifically, research highlights that in a colorblind context, individuals control the overt expression of prejudice (e.g., its self-reported form). However, this negative link between colorblind and prejudice could be only apparent (Wolsko et al., 2000; Richeson and Nussbaum, 2004; Norton et al., 2006; Apfelbaum et al., 2008; Correll et al., 2008; Todd and Galinsky, 2012; Plaut et al., 2018). For instance, Correll et al. (2008) highlighted that following a colorblind prompt, participants initially express low level of prejudice, but following a time delay, they show an increase in prejudice report (i.e., a rebound effect) suggesting that individuals regulate prejudice expression via suppression (see also Wolsko et al., 2000).

By analogy, in France the Historic Laïcité is the major egalitarian norm to fend off racism (Redor-Fichot, 2005; Gautherin, 2014; Zuber, 2018). As such, its contextual salience in social space could lead individuals to commit themselves to an "identity-blind" mindset and thus suppress prejudice. To date, the findings in the literature reveal that Historic Laïcité is negatively correlated to overt prejudice disclosure (Kamiejski et al., 2012; Roebroeck and Guimond, 2017), and when rendered salient it causes a decrease in discrimination (Anier et al., 2019). These results are consistent with those found when prejudice is assessed directly (e.g., with explicit measures of prejudice) in the realm of egalitarian norms or a colorblind ideology[7]. Building on this finding, we argue that a convenient way of testing the Historic Laïcité suppression hypothesis would be to experimentally introduce a subsequent measure of prejudice expression (following an initial measure) to uncover a rebound

[7]The connection between Historical Laïcité and Colorblindness is only conceptual. These two cultural norms share a common "identity-blind" root to achieve an equality ideal. However, in the context of the Historic Laïcité, the state is oblivious to religion (e.g., for instance, there is no official religion in France) to allow every citizen to be free to follow its cultural and religious standards. As such, the individual and the social space do not have to be neutral *per se* (Redor-Fichot, 2005; Gautherin, 2014; Zuber, 2018). While the colorblind ideology prescribes social dismissal of ethnic identities at the institutional and at the individual levels (Yogeeswaran et al., 2018).

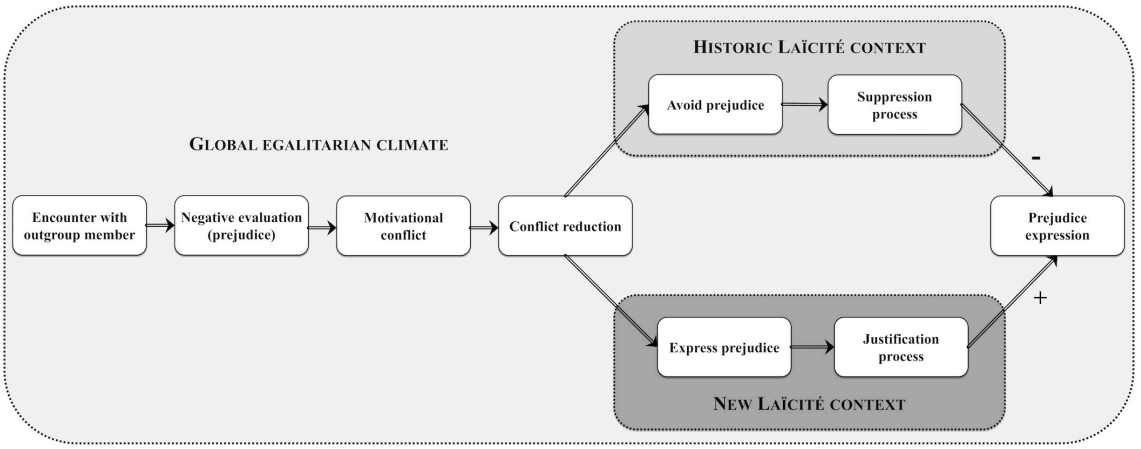

FIGURE 1 | Schematic representation of the hypothesized model of prejudice expression within the French cultural-ecological context as a function of salient Laïcité norms. The encounter of an outgroup member activates negative prejudiced thoughts which trigger a motivational conflict due to their incongruity with the global egalitarian climate. This conflict can be resolved via two regulation routes: (a) when Historic Laïcité is salient, avoid prejudice via the suppression process, or (b) when New Laïcité is salient, express prejudice via the justification process.

effect. This type of index, without being exhaustive, opens up new research perspectives to highlight the operation of suppression in the realm of Historic Laïcité. Furthermore, if the existing data seem to indicate that the Historic Laïcité can be a promising route for prejudice reduction, our analysis suggests that the picture might be more complex than originally assumed.

Intergroup Relations in the Context of Historic Laïcité

The suppression of prejudice prevents its social expression but does not actually reduce prejudice itself as illustrated by the rebound effect. What is more, the unexpected consequences of suppression are not limited to this classic phenomenon. For example, research indicates that during suppression, majority members experience aversive and tense states partly due to the motivational conflict described by Crandall and Eshleman (2003) (see also Devine et al., 1991; Monteith et al., 1993; Monteith, 1996). Furthermore, they show signs of behavioral avoidance during intergroup interactions (e.g., less eye contact; Norton et al., 2006; Trawalter and Richeson, 2006). Yet, other research suggests that these consequences are nor inevitable nor automatic.

In fact, upon a closer look, studies indicate that the suppression of prejudice toward socially sensitive groups (e.g., African Americans in the United States) does not systematically lead to a rebound effect (Monteith et al., 1998b; Gordijn et al., 2004). Indeed, the mere presence of a target of a normatively protected group can, in and of itself, operate as a reminder and reactivate equality standards (Lowery et al., 2001; Castelli and Tomelleri, 2008). And, as long as egalitarian norms are salient, individuals are expected to pursue the goal to avoid prejudice. Thus, this suggests that under ecological situations (e.g., a global egalitarian climate), even after an initial suppression period, this activated goal should prevent a rebound effect (Sedikides, 1990; Thompson et al., 1994; Ford and Kruglanski, 1995; Dumont and Yzerbyt, 2001; Gordijn et al., 2004). However, it also suggests that individuals will look for ways to bypass the tension induced by the continuous demands to suit egalitarianism (Crandall and Eshleman, 2003). Therefore, this analysis leads us to mitigated conclusions concerning the effectiveness of the Historic Laïcité to favor harmonious relations. Specifically, it is still possible that within this context individuals are motivated to release the pressure of suppression via the justification process.

NEW LAÏCITÉ AND INTERGROUP RELATIONS: THE JUSTIFICATION PATHWAY

Evidence for the New Laïcité as a Context of Justification

This assimilationist New Laïcité appears as a cultural norm likely to be an acceptable context to release prejudice via the justification process. In fact, the notion that within a global egalitarian normative climate, individuals rely on beliefs, norms or ideologies to legitimate/justify prejudice is found in many theoretical accounts (for a review, see Costa-Lopes et al., 2013) such as classic treatments on prejudice (Allport, 1954; Gaertner and Dovidio, 1986), as well as within the System justification theory (SJT; Jost and Banaji, 1994), or even SDT (Sidanius and Pratto, 2001). However, a valuable contribution of the JSM is that it describes certain operational indicators to assign a justification function to a given factor. More specifically, the first sine qua non indicator is to uncover a positive correlation between a suspected justification factor and prejudice. Furthermore, the second fundamental indicator is to show that the manipulation of the suspected justification factor produces an increase in prejudice beyond any personal endorsement. Based on the JSM, the available empirical evidence on the effects of the New Laïcité on intergroup attitudes concurs with these two indicators.

Indeed, a strong correlational link between New Laïcité and prejudice is found in at least six studies using 10 independent samples (Kamiejski et al., 2012; Roebroeck and Guimond, 2015, 2017; Nugier et al., 2016; Troian et al., 2018; Anier et al., 2018, 2019). Moreover, Nugier et al. (2016, study 2) already suggested that the New Laïcité is used to justify prejudice according to the JSM framework. For instance, they showed that high-prejudiced individuals rated more negatively a Muslim target exhibiting a deviant behavior according to the New Laïcité prescriptions (e.g., a woman claiming her right to wear the veil) as compared to a deviant catholic target (e.g., a woman claiming her right to wear a cross). Interestingly, these results suggest that it is not the deviant behavior *per se* that is sanctioned, rather the group membership of the target. Finally, Anier et al. (2019) showed that the manipulation of the New Laïcité norm causes an increase in discriminatory behavior. Taken together, these results fit the hypothesis that the prescriptions of the New Laïcité could constitute a broad context to justify prejudice toward minorities.

However, this assumption requires additional convergent empirical demonstrations. For instance, Crandall and Eshleman (2003) explain that the justification process is responsible for a reduction in the gap between direct (i.e., self-reported) and indirect (i.e., covert) indicators of prejudice. In other words, the level of prejudice expressed directly should be aligned with the one expressed indirectly when a justification is at stake. Based on this, an interesting research perspective could reside in the joint measurement of prejudice (using direct and indirect measures) following the manipulation of a New Laïcité ideological prompt vs. a control condition.

Intergroup Relations in the Context of New Laïcité

The present analysis questions at its root the beneficial contribution of a cultural norm such as the New Laïcité to the social ideals of acceptance and harmonious intergroup coexistence. Indeed, the New Laïcité appears as an institutional and social framework which allows an unsanctioned justification of prejudice while preserving a favorable self-image. In fact, Crandall and Eshleman (2003) argue that when justification is enabled, the motivation for expression is thus satisfied without any threat of a social sanction. In line with this, they argue that the justification of prejudiced views may have positive hedonic consequences. As a result, through positive reinforcement, this could encourage individuals to reiterate the expression of prejudice via this process.

Furthermore, we consider that the promotion of New Laïcité principles can be used as broad arguments to justify prejudice. For example, the New Laïcité was recently wielded by politicians as a privileged rhetorical tool against gender-related discrimination (Stasi, 2003; Redor-Fichot, 2005). At the same time, one can read on a press release of the Laïcité Observatory (2016): "The reservations are mainly expressed with regard to women's clothing. Hostility or reservation are linked to the feeling of symbolic aggression by the religious expression perceived as proselytizing in the collective space" (p. 4). Hence, and somewhat ironically, under the guise of the fight against sexism, the Muslim religion is specifically targeted. Moreover, past studies showed that the New Laïcité was not only linked to prejudice against Muslims but also to the North-African community altogether (Kamiejski et al., 2012; Roebroeck and Guimond, 2017). That being said, the fact of systematically assimilating the Muslim religion with people of North African origin is itself a cultural stereotype. From this standpoint, it is more generally argued that the fight against sexism, the visible symbols of the Muslim religion, or the condemnation of deviant acts (Nugier et al., 2016) are only a handful of the manifold sub-arguments derived from the New Laïcité to justify prejudice against Maghrebian culture.

SCOPE OF THE MODEL

Overall, the analysis of the French context shows that political and social mutations generate shifts in cultural norm meanings as it is presently the case for Laïcité. In fact, these shifts are not specific to the French cultural-context as illustrated by the malleability of color blindness in the United States (Knowles et al., 2009). Moreover, as argued by Guimond (2011), in Germany and in the United Kingdom, political actors make use of the term "multicultural ideology" to discuss about cultural segregation phenomena (i.e., the non-adoption of the host culture by some minority groups). As such, the original meaning of multiculturalism ideology is diverted (see Berry, 2005, 2006). These examples nicely illustrate how political rhetoric and intergroup context can participate in the fluctuating meanings of cultural norms. In fact, our working model offers an integrative analysis grid to account for the consequences of these cultural normative shifts on intergroup attitudes. Indeed, via an "indirect-endorsement path," the coexistence of distinct cultural norm meanings can be reinforced and used to fit individuals' motives (Sidanius and Pratto, 2001; Knowles et al., 2009; Guimond et al., 2013), and via a "direct-contextual path" they can influence the ways individuals regulate prejudice (Gaertner and Dovidio, 1986; Devine, 1989; Crandall and Eshleman, 2003). Importantly, the analysis of this "direct-contextual path" in the French context shows that it is necessary to be particularly vigilant to the framing of egalitarian and anti-racism norms within societies. For example, the egalitarian Historic Laïcité is used in the socio-political discourse as a bulwark against the normative drifts of the New Laïcité (Akan, 2009; Mangeot et al., 2012; Gautherin, 2014). However, our detailed analysis of the socio-cognitive processes suggests that the Historic Laïcité frame could drive prejudice suppression and that it is not de facto an effective way to reduce prejudice itself. As a consequence, although egalitarian norms are propagated in society with the noble intentions to fight against racism, their framing may be sometimes inefficient if the ultimate objective is to foster harmonious intergroup relations.

Yet, research demonstrates that the ideological frame of "identity-conscious ideologies" such as multiculturalism can be an efficient route to reduce prejudice itself (Wolsko et al., 2000; Levin et al., 2012; Guimond et al., 2013; Whitley and Webster, 2019; Leslie et al., 2020). In fact, when the similarities and

differences with outgroups are highlighted, this can drive the regulation of prejudice via yet another process: perspective-taking (i.e., an active attempt to embrace and identify with the experience of another individual; Todd et al., 2011). Indeed, perspective-taking reduces prejudice, increases recognition of inequalities and produces more positive intergroup interactions (Galinsky and Moskowitz, 2000; Todd et al., 2011; Todd and Galinsky, 2012).

Applied to the French context, this analysis suggests that the norm of Historic Laïcité could achieve its goal of promoting social equality if it is properly framed as an "identity-conscious" cultural norm in the political and social discourse. This idea does not appear merely as an abstract consideration because research suggests that French citizens actually embrace some aspects of multicultural ideology. For instance, both majority and minority members sometimes express a preference for integration (i.e., a strategy intrinsically related to multiculturalist ideology; Berry, 2006) rather than assimilation and sometimes an equal preference between the two acculturation strategies (Maisonneuve and Testé, 2007; Kamiejski et al., 2012). Furthermore, from the minority standpoint, this endorsement of the integration strategy is related to positive attitudes toward the Historic Laïcité. What is more, from the majority standpoint, the endorsement of Historic Laïcité is positively related to the endorsement of multiculturalist ideology (Kamiejski et al., 2012). Taken together, these findings are encouraging as they indicate that the Historic Laïcité is somewhat associated with an increased tolerance toward the preservation of minority cultures. Going beyond the French cultural-ecological context, the present analysis suggests that the effectiveness of equality norms in combating racism depends on how their prescriptions are framed, disseminated, and negotiated within society as a whole.

CONCLUSION

In French society, two distinct Laïcité norms are used as sociopolitical tools to handle diversity. To understand their effects on intergroup attitudes, we complemented the existing "indirect-endorsement" explanation (Kamiejski et al., 2012; Roebroeck and Guimond, 2017; Troian et al., 2018), with an analysis of their "direct-contextual" influence. Specifically, we argue that the desire to appear non-prejudiced drives the suppression of prejudice within the realm of the egalitarian Historic Laïcité norm. Conversely, the desire to release the pressure stemming from a relentless commitment to egalitarianism encourages the justification of prejudice within the realm of the assimilationist New Laïcité context. Of course, additional cogent evidence is needed to empirically substantiate these hypotheses. Furthermore, we discuss the implications of these processes on the effectiveness of both Laïcité to favor harmonious relationships. We suggested that beyond the specific case of Laïcité, such a causal model could be used as an interpretation framework for understanding intergroup dynamics in other cultural-ecological contexts. Specifically, future research could be dedicated to examine the conditions under which specific cultural norms may trigger suppression vs. justification, or even other regulation processes (e.g., perspective-taking).

In a nutshell, we embrace the idea that integrative attempts are required to understand the complex nature of intergroup attitudes (Duckitt, 1992; Cuddy et al., 2009; Guimond et al., 2013). In fact, research would gain in predictive power by taking into account the context-sensitivity to explain variations in prejudice within and across countries, and the ways it shapes the expression of cultural stereotypes (Verkuyten, 2011; Guimond et al., 2013, 2014; Anier et al., 2018, 2019; Roebroeck and Guimond, 2018). Indeed, prejudice, cultural stereotypes and discriminatory behaviors know no geographic nor temporal boundaries. However, their targets, their content and their forms fluctuate at the pendulum of sociopolitical mutations across places. In this process, we hope that the present contribution will constitute an insightful analysis to reveal possible stereotyping dynamics within and across countries in the constellation of their ideological correlates.

AUTHOR CONTRIBUTIONS

L-AL and TA drafted the manuscript together and approved the final version of the manuscript for submission. Both authors contributed to the theoretical development of the ideas presented in the manuscript.

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The Merchant of Venice in Auschwitz: Taking Apart Shylock Using the SCM and BIAS Map

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In response to *Frontiers'* 2020 Call for Papers on "Stereotypes and Intercultural Relations: Interdisciplinary Integration, New Approaches, and New Contexts," my paper integrates the scientific study of stereotypes with a literary-theatrical exploration of stereotyping. The focus is on Tibor Egervari's post-Auschwitz adaptation of Shakespeare's anti-Semitic comedy *The Merchant of Venice*, with a very brief look at his related work on Christopher Marlowe's *The Jew of Malta* and his 1998 collaboration with conductor Georg Tintner on a touring production of composer Viktor Ullmann's and librettist Peter Kien's one-act opera, *The Emperor of Atlantis, or Death's Refusal*, composed in the "model" concentration camp Terezín (Theresienstadt), in 1943–1944. Egervari's theater art critically deconstructs what he calls "the Old Jew" stereotype in specific ways highly readable using the Stereotype Content Model (SCM) and Behavior from Intergroup Affect and Stereotypes (BIAS) map. Theater performance can sometimes embody the forceful dynamic traced by the BIAS map, from cognition to affect to behavior. Egervari's original adapation, which sets *The Merchant of Venice* in Auschwitz, reveals this dynamic clearly. My interdisciplinary study of Egervari's theatrical-cultural work validates the SCM and BIAS map for literary studies and interprets the Shylock stereotype in the terms of those models and through the lens of Egervari's anti-Nazi adaptation of Shakespeare's *Merchant*.

Keywords: Stereotype Content Model, BIAS map, Shylock, Auschwitz, Shakespeare, Egervari

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INTRODUCTION

The genocide of six million European Jews during the Second World War involved deliberate intensification of a pre-existent Jew stereotype. The study of stereotyping is urgent for this reason alone, but there is more. In ways that people might never have imagined, understanding stereotyping is crucial if we are to end political polarization and together build a sustainable global culture. Fortunately, stereotypes have for decades been the focus of convincing research in psychology, and are now much better understood than they were in the 1930s. The Stereotype Content Model (SCM; Fiske et al., 2002; Cuddy et al., 2008), originating in the United States and now generalized across nearly fifty countries (Grigoryev et al., 2019b), and the Behavior from Intergroup Affect and Stereotypes (BIAS) map (Cuddy et al., 2008), have identified warmth and competence as universal dimensions of individual and intergroup perception and demonstrated their social antecedents: competition predicts warmth (or its absence); status predicts competence perception. The BIAS Map describes the dynamism of cognitive stereotypes, their resulting typical

affect, and the prompts and tendencies they produce for consequent behavior. This psychological research illuminates the functioning of stereotypes in our societies and provides us with tools to understand, and perhaps prevent, the harm they cause.

In theater studies too, advances have been made with respect to stereotyping. In Canada today, public performance serves to negotiate differences and identities among First Nations, between First Nations and settler/invader cultures, between French and English, and among successive waves of migrant and displaced populations (Knowles and Mündel, 2009, p. vii). In our increasingly diverse society, theater engages seriously with the problem of prejudiced and stereotypical representations of people. The coincidence of advances in social psychology and in the literary study of stereotypes suggests the timeliness of an integrative, comparative approach.

THE JEW STEREOTYPE SHYLOCK IN *The Merchant of Venice*

When Holocaust survivor Tibor Egervari wrote and directed his anti-Nazi adaptation of Shakespeare's *The Merchant of Venice,* setting it inside a prison inside the Auschwitz death camp, he felt that for the first time in his life, he could talk openly about the Shoah (Egervari, 2009, p. 115).[1] At the same time, in doing this work, he made a remarkable contribution to a centuries-long conversation about the Venetian moneylender Shylock – one of Shakespeare's most "incomparable" characters (Rowe, 1709; as cited in Drakakis, 2010, p. 1), and one who has often stolen the show. A tendency to see Shylock as the centre of the play, as opposed to Antonio, the Venetian merchant, appears in the historical record as early as 1598 when the play was listed in the Stationer's Register as "the Jew of Venice" (Drakakis, 2010, p. 2). In her important realignment of the play's early performance history, Emma Smith makes the point: "Almost every critic of *The Merchant of Venice* acknowledges Shylock as its most compelling figure, present in only five scenes and entirely absent from its final act" (Smith, 2013, p. 188).[2] Shylock's accurate insights into his own condition, his grief, anger, and pursuit of revenge, give him the complexity of a tragic hero such as Macbeth; yet he is a Jew stereotype and his play – "Shakespeare's grand, equivocal comedy," in the words of Harold Bloom – "is a profoundly anti-Semitic work" (Bloom, 1998, p. 171). As John Gross suggests, the anti-Semitism of the play helped to "prepare the ground" for the Nazi Holocaust, "and to that extent the play can never seem quite the same again. It is still a masterpiece; but there is a permanent chill in the air, even in the gardens of Belmont" (Gross, 1992, p. 352).

Egervari's adaptation centers on Shylock – contrary to his own artistic and intellectual intentions: "I just wanted to give a magnificant play a proper staging," he explains in a 2012 essay about his work (Egervari, 2012, p. 283). However, because of the weight of the war, and everything that had happened, he could not: "I felt compelled to write a new play. The idea . . . was not just any idea. It brought about the story I would not, I could not, speak of in any other form" (Egervari, 2012, p. 284). The story of the Shoah.

Of the staging of *Merchant* which he did *not* direct, he gives some account in the same essay. Growing up in Budapest after the war, he attended Shakespeare plays: "Nearly all [. . .] could be seen in Stalinist Hungary, but not *The Merchant of Venice*. In the same way that the regime 'settled' the anti-Semitism problem by purging it from the official rhetoric, it simply eliminated any plays that could not be given a 'correct' Marxist interpretation from the repertory" (Egervari, 2012, p. 274). In 1956, Tibor Egervari fled Hungary to begin a new life as a refugee and theatre artist, first in France and ultimately in Canada, where he was among the founders of the theatre program at the University of Ottawa before retiring from distinguished service in 2004. He eventually saw Jean Gascon's production of *The Merchant* in 1970, at the Stratford Festival in Ontario, when he was struck by "the Jewish questions in the play," and first among those, by Shylock's tragic loss of Jessica, amounting to her death, the death of his lineage, and the breaking of the commandments. Failure to understand the loss of Jessica from Shylock's Jewish point of view impoverishes the play: "references to the jewels were interpreted as further proof of Shylock's cupidity without noting that these ornaments pertain to Jessica and Jessica only. The dowry ornaments – for marriage to a Jew, of course – are an integral part of his daughter and therefore must die with her" (Egervari, 2012, p. 275).[3] He was impressed as well by the symbolism of blood, recalling "the medieval persecution of Jews for supposedly using Christian blood [. . .] from young children [. . . .] This ignominious accusation" (Egervari, 2012, p. 275); and by Portia's cruelty.

Egervari returned to Europe, as he recounts:

> A few years later, I found myself heading a large theatre in Bussang, in the Vosges regions of eastern France – a "people's theatre," or *théâtre populaire* as the French call it. The *Théâtre du Peuple* was founded in 1895 by Maurice Pottecher, and until the early 1970s it performed his plays exclusively. On summer Sunday afternoons the vast wooden building with its back opened to reveal the landscape, unique in France, [. . .] welcomed audiences representing almost every level of French society. When I took over as artistic director, my first move was to change the repertory by adding several Shakespeare plays [. . . .] I decided to study [*The Merchant of Venice*] with a view to production. I was in for a brutal shock. I knew that Shylock had "usurped" the leading role [. . .] but I had had no idea of the riches this usurpation was concealing. The first discovery was what I believe to be the main theme, which is the transactions or commerce [. . .] between and of men and women [. . . .] and the fundamental confrontation of

[1] For clarity throughout I abbreviate Shakespeare's *The Merchant of Venice* as (*The) Merchant*, and Egervari's adaptation, "Shakespeare's *The Merchant of Venice* in Auschwitz," as "Merchant." Likewise, when referring to Egervari's actor-characters, I add quotation marks, e.g.,"Shylock."

[2] See also Stephen Orgel: "the play has been, as far back as our records take us, a play about Shylock" (Orgel, 2003, p. 159).

[3] See also Edinborough's (1970, p. 459) review of this production, to which Egervari refers in his 2012 essay.

> the [medieval and modern] concepts of money." (Egervari, 2012, pp. 275–277)

More deserves to be said about these readings of *The Merchant*, which are in tune with much of the scholarship published in the years since; however, as it happened, the production he initially imagined did not take place, but continued forcefully to evolve. Later again, resettled in Canada, Egervari composed *"Le Marchand de Venise" de Shakespeare à Auschwitz*, which focusses on the Nazi deployment of the Jew stereotype. The play premiered in French in Ottawa in 1977; it was performed in French and English in 1993, and again in 1998 (Lieblein, 2009, p. 109). Egervari himself has translated it into Hungarian (Knutson and Gray, 2012). It was, as he writes, a project which occupied him for over two decades (Egervari, 2012, p. 283).

In Egervari's adaptation, *The Merchant* is produced inside a prison in the death camp. The fictive performance is directed by a Nazi commander, "Shylock," who controls the prison and directs the play. One other Nazi is present: "Shylock's" subordinate "Tubal," stage manager and SS Officer. They are given only the names of the Shakespearean characters they embody, reflecting perhaps the fact that prisoners in Auschwitz were stripped of their names and other signifiers of identity. "Shylock" performs almost all of that character's lines in Shakespeare's play, and speaks also as the play's director, training his Jewish, Gypsy, and German actors to better inhabit and communicate the "reality" of the Jew stereotype as the National Socialists promulgated it, including the notion of toxic contamination by Jewish blood, and other elements such as a stooped posture, taken from anti-Semitic Medieval engravings; he also, as a matter of course, indulges his murderous hatred of women.[4]

My paper investigates this "Shylock," according to the terms of the SCM and BIAS Map. Significant issues include:

- the ontology of the stereotype,
- its changeable and socially determined traits and contents,
- its nature as an ambivalent Low Warmth/High Competence (LW/HC) stereotype, which prompts the behavior of passive facilitation and active harm, and
- the importance and the failure of empathy.

I argue that the SCM and BIAS Map predict the plays' violence – even the extreme violence of Egervari's adaptation, which pales only against the reality that was.

STEREOTYPE ONTOLOGY

Stereotypes are collective cognitive entities (Winiewski and Bulska, 2019) and influential players in the global cultural continuum. This is quite clear with respect to the Jew stereotype and to Shylock as an instantiation of it. Sara Coodin, in her 2017 monograph, writes eloquently about the ways that the Shylock character, as a stereotype, causes harm to people:

> [A] bitter truth about *The Merchant of Venice*: Shylock is a figure closely bound up not only with the fictionalized landscape of anti-Semitism on the page but also with its lived history off of it. *The Merchant of Venice* has furnished notable turns of anti-Semitic phrase, foremost among them the term "Shylock" which has come to describe a cut-throat type of Jewish profiteer. This play and its Jewish moneylender [tend] to bleed messily off the page into historical actuality [. . . .]. (Coodin, 2017, pp. 4–5)

She gracefully acknowledges Cecil Roth, who made the same point almost ninety years ago, in the decade leading up to the Second World War:

> That Shylock was a sheer figure of Shakespeare's imagination, there has never been any doubt. Yet this figment has acquired an objective reality more vital than that of most creatures of flesh and blood. His actions are still a byword, his name is a reproach, and his unfortunate co-religionists actually taxed with his reputed misdeeds. (Roth, 1933, p. 148; cited in Coodin, 2017, p. 5)

Coodin's monograph explores the rich Judaic exegesis of the Jacob narrative as deployed by Shylock, in Shakespeare's text, but she acknowledges the social and cultural influence of the equally legible Jew stereotype:

> Jews remain inextricably if unwittingly bound to Shakespeare's fictional moneylender because of the ways in which he and Jessica have helped construct Jewishness in the popular imagination. In looking at Shylock and being confronted with turns of phrase from the play which, like Shylock himself, have become bywords in vernacular speech, modern Jews glimpse a reflection of their ethnographic identity through the distortive lens of interpolated stereotypes that have played a significant role in shaping cultural perceptions of Jews over time. (Coodin, 2017, p. 5)[5]

Since the war, the topic of Shylock and anti-Semitic and anti-Judaic stereotyping has received significant attention. Outstanding monographs dedicated to this work include John Gross's *Shylock: A Legend and Its Legacy* (1992), James Shapiro's (1996), *Shakespeare and the Jews* (1996), Janet Adelman's (2008), *Blood Relations: Christian and Jew in* The Merchant of Venice (2008), and David Nirenberg's (2013) *Anti-Judaism: The Western Tradition* (2013). Schools of thought across the Humanities – New Historicist, Psychoanalytic, Post-Colonial and more – have worked to understand the charisma of the character Shylock and the uses to which he has been put.

A related effort works to untangle the roots of Shakespeare's Shylock from a wide range of cultural and social models,

[4]It would take another essay to properly address this issue.

[5]Goldstein's (2014) historical article also distinguishes between stereotype and reality, demonstrating that in Shakespeare's England, Scots were the social group most likely to be negatively stereotyped and targeted as usurers who abstained from pork. In *Post-Colonial Shakespeares*, Martin Orkin cites Shelley Malka's research disassociating the Jew in *Merchant* from actual Jews living in Venice in the 16th and 17th centuries. Malka "shows . . . that Jewish representations of the concepts of mercy, justice and revenge are entirely unrelated to the (mis)representation of them in *Merchant*" (Malka, 1996, n.p.; cited in Orkin, 1998, p. 196).

including Christopher Marlowe's *The Jew of Malta*, and early modern Europe's violent religious and economic conflicts. It is thought that both Marlowe and Shakespeare drew on "older (non-Jewish) European traditions of hate literature" (Orkin, 1998, p. 196), and that anti-Judaic violence was fueled for centuries by stereotypes assigning to Jewish people a wildly exaggerated competency alongside derogatory traits as bizarre as male menstruation, cannibalism, and child murder (Bildhauer, 2020). These have a long association with blood, which makes its way importantly into Shakespeare's *Merchant* and Egervari's adaptation. Nirenberg (2013) and Freinkel (2002, pp. 115–158; 237–291) have made crucial contributions in this field, deciphering the figure of the Jew in the discursive tradition and exposing the damage done by a current of anti-Judaic Christian theology, and especially by Martin Luther.

With respect to theater history, Emma Smith has recently overturned widespread critical assumptions "about the play's Elizabethan context [that] do not stand up to close investigation. Recent criticism has used a partial and anecdotal version of theatrical and social history to reify Shylock's 'original' cultural and ethnic Jewishness" (Smith, 2013, p. 188). She traces the origins of the physical features thought to signify the stereotyped Jew on the stage, including perhaps a red beard and "bottle" or hooked nose: fictions all. The paucity of early modern references to specific visual signifiers of Jewishness suggests that Portia's question in the courtroom, "Which is the merchant here, and which the Jew? (4.1.171) is a real one" (Smith, 2013, p. 201).[6] Widespread claims that "Shylock draws on an existing and negative literary and theatrical caricature of Jewishness" are contrary to fact: "Jewish characters in drama before *The Merchant of Venice* are rare and sufficiently diverse to compromise any claim that they constitute an available stereotype" (Smith, 2013, p. 203). Furthermore, "the history of marked Jewish characters on the stage before Shylock does not support the assumption that Elizabethan audiences were primed to expect a wicked stereotype, or even that such a stereotype can be traced (Smith, 2013, p. 208). She suggests that in addition to anti-Judaic discourses, there were other factors at play when Shylock was created: issues also familiar to us today, such as immigration and xenophobia.

It might seem to be simple common sense to break apart naive mimetic association between real Jews and the stereotype; yet, John Drakakis, discussing a 1990 essay by Stephen Greenblatt, suggests that the "shift in much of contemporary criticism of *Merchant*, from an essentially mimetic commitment to social realism, to larger questions of representation, is a recent one" (Drakakis, 2010, p. 29). Drakakis (2010) suggests that "stage representations that are not validated by actual social example, such as those of Barabas or Shylock, straddle an important conceptual divide," and he goes on: "such representations form part of that *otherness* against which communal identity asserts itself,"[7] that which "cannot be domesticated" (p. 27). He cites Jean-François Lyotard:

> One converts Jews in the Middle Ages, they resist by mental restriction. One expels them during the classical age, they return. One integrates them in the modern era, they persist in their difference. One exterminates them in the twentieth century." (Lyotard, 1990, p. 23; as cited by Drakakis, 2010, p. 29)

To argue that Jews are what "cannot be domesticated" potentially returns us to a naive mimetic realism that has been rightly problematized. It is necessary to better understand what stereotypes actually are, how they are formed, of what they consist: their being, their ontology – a task undertaken by scientific research.

In their 2019 paper on discrimination against immigrants, Grigoryev et al. (2019a, closing paragraph) integrate ultimate (functional) and proximate (sociofunctional) models of discrimination to better understand prejudice and possibly to serve as a basis for future policy development. The ultimate (functional) explanation of prejudice suggested by the Evolutionary-Coalitional model encompasses the notion of "what cannot be domesticated" – but it has nothing to do with Jews or with any other group of actual people. The model proposes that "Us" versus "Them" dynamics are a product of "the evolutionary core of intergroup relations":

> [Over evolutionary time a] cognitive mechanism [. . .] evolved to detect coalitional alliances via the categorization of the social world into "Us" versus "Them"; this is what ultimately predisposes humans to discriminate in favor of their ingroup and against the outgroup. For the human mind, ethnicity, cultural group, or race is simply one historically contingent subtype of coalition because through a long human story, they have been an ecologically valid predictor of people's social alliances and coalitional affiliations. (Kurzban et al., 2001; as cited in Grigoryev et al., 2019a, Theoretical Framework)

This model dissassociates stereotypes from human beings, potentially providing an explanatory mechanism for the denial of humanity to some, and its retention for others.

Stereotypes are cognitive realities, but they are not people. In their 2019 paper on stereotype content as collective memory, Mikołaj Winiewski and Dominika Bulska review scientific understandings of the reality status of stereotypes: "stereotypes exist as cognitive structures, such as schemas (Fiske and Linville, 1980), prototypes (Brewer et al., 1981), or exemplars (Smith and Zarate, 1990)." They explain:

> For several decades psychology was mainly interested in the process of stereotyping, and few studies focused on the content of stereotypes – their specific traits (Fiske et al., 2002). Some scholars, however, noted that aside from the individual perceptions of groups and group members, stereotypes are shared across communities or entire societies, and are thus a collective entity – a part of shared knowledge (Ashmore and Del Boca, 1981; Devine, 1989). Collective stereotypes and intergroup stereotyping

[6] Smith notes that her reference to Shakespeare is from Stanley Wells and Gary Taylor, gen. ed., *The Oxford Shakespeare: The Complete Works*, 2nd ed., Oxford University Press, 2005.

[7] See also Harold Goddard: "Now Shylock is a representative of both [. . .] money, because he himself is a moneylender, and of exclusion, because he is the excluded thing. Therefore the Venetian world makes him their scapegoat" (Goddard, 1951, p. 85).

> processes – how ingroup members perceive other groups – largely shape relationships between groups, but these relationships also seem to be, at least in part, a source of stereotypical content. (Winiewski and Bulska, 2019, p. 2)

As collective cognitive entities in society and a part of shared or so-called knowledge in real time, stereotypes are actors in a dynamic, two-way relationship with material social realities. Current research describes what stereotypes are: their contents, traits and rapport with social structures and histories. It is shocking to think that powerful perceptions such as those of warmth and competence are not in fact triggered by actual loving kindness or real competence, but are in fact produced by historical, social, collective circumstances such as competition for life resources or inherited social class, but that is what the research suggests. My reading of Egervari's adaptation of *The Merchant of Venice* looks at the stereotype features or symptoms, rather than the interplay with actual Jewish people, such as Coodin explores in her beautiful exegesis of Shylock's Midrash-inflected moral invocation of the patriarch Jacob. I am interested in the stereotype as such.

Shakespeare's *Merchant* has been a vector for sharing the Shylock stereotype across communities and over time, and never more than in the twentieth century. Shylock played a role in the Nazi transmission and perpetuation of the Jew Stereotype. The relation between theater performance and the destructive reality of the stereotype in the years leading up to and during the Second World War was tangible and direct.

Recent scholarship focused on theatrical production has explored the complex place of *The Merchant* during those years. Zeno Ackermann's "Shakespearean Negotiations in the Perpetrator Society: German Productions of *The Merchant of Venice* during the Second World War" (Ackermann, 2012, pp. 35–62) traces the performance history:

> Since the end of the eighteenth century the play had always held an important place in the German Shakespeare canon. According to the performance statistics published in the yearbooks of the German Shakespeare Society, *The Merchant* ranked first among Shakespeare plays in 1927; it held third place in 1928, 1929, and 1931, and fourth place in 1932. By 1941, however, the number of performances would reach an all-time low of three shows, staged in a provincial theatre in Bohemia (annexed by the Reich in consequence of the 1938 Munich Agreement): in the listings for that year *The Merchant* held twenty-first place, just ahead of *The Merry Wives of Windsor*. There were still nine new productions during the 1933-4 theatre season, but numbers dropped to usually one or two for the following seasons (Eicher 304). Thomas Eicher attributes these declining numbers to systematic interventions by the administration, claiming that the play was in effect "stopped."[8] (Ackermann, 2012, pp. 35–36)

The almost complete blackout of *The Merchant* in the early years of the war, followed by a few tightly controlled spectacles engineered and approved by the Nazi Ministry of Propaganda, demonstrate that "as a figure or as a stereotype, Shylock certainly was an important reference point, both for the self-image of the National Socialists and for their anti-Semitic propaganda." (36)[9] On the other hand, the stance of the Nazi bureaucracy and of cultural makers was not as straightforward as we might have thought; Ackermann characterizes it as "twisted" (Ackermann, 2012, p. 35).

He goes on to prove that the demonized Jew of the earlier years became a source of anxiety once the war and the camps were underway. The content of the stereotype was changed, to re-create Shylock as pathetic, comic, disgusting – played to reassure a public that was aware of the Holocaust that the enemy had been expunged and was now harmless. He suggests, in other words, that the Shylock stereotype was intentionally re-engineered to perform another kind of cultural work: "In the case of *The Merchant* the most important propaganda task was not to demonize but to downsize Shylock" (Ackermann, 2012, p. 50).[10] Apparently, the Nazis of that era perferred a silly, clownish Shylock, with all tragedy removed: a *Commedia dell'arte* Shylock, or a fairy tale bogeyman, who – horrifyingly – according to the review of Lother Müthel's Nazi-approved production at the Burgtheater in Vienna in 1943, penned by one Siegfried Melchinger – "just like the witch, will finally have to be shoved into oven" (Melchinger, 1943; cited by Ackermann, 2012, p. 55; trans. by Ackermann).

The Nazi modulation of the stereotype from a fearsome and dangerous enemy to a figure of harmless contempt – thereby attempting to normalize their genocidal acts – is consistent with the SCM's explanation that although stereotypes may persist,

[8]To support this claim, Ackermann cites Eicher (2000, pp. 302–308), Monschau (2010, pp. 19–25 and 68–87), Symington (2005, pp. 244–251), and Bonnell (2008, pp. 119–169); also Márkus (2008, pp. 148–154), Hortmann (1998, pp. 134–137), Endriss (1994, pp. 180–180), Ledebur (1988, pp. 213–218), Drewniak (1983, pp. 250–251), and Wulf (1989, pp. 280–283).

[9]The theater department of the National Socialist Ministry of Propaganda (Reichsdramaturgie) adapted the play, eliminating in one way or another the "miscegenation" – the "mixing of Aryan blood with Jewish blood" – represented by Jessica's marriage to Lorenzo, and deleting Shylock's monologue in 3.1 perhaps "to evade the universalist humanism that can potentially be seen at work in this speech" (Herman Kroepelen quoted in Eicher, 34; quoted in Ackermann 41; his translation). John O'Connor, in *Shakespearean Afterlives*, also cites Gerwin Strobl on "the matter of Shylock's daughter marrying an Aryan youth" (Strobl, 1997. n.p.; cited in O'Connor, 2003, p. 131).

[10]Ackermann reports on an earlier re-engineering with the opposite, philo-Semitic intent: "Alexander Granach – who, interestingly, had played the role in a production directed by Holl at Berlin's Volksbühne in 1924 – offers a particularly significant example of the tendency to render or adopt Shylock as a Jewish hero (Ackermann, 2012, p. 42)." In his memoirs, Granach describes his own 1920 production in which he imagined that Shylock moves, after the trial, from Venice to the Ukraine "where he remarries and becomes the progenitor of an entire tribe of Jews: 'broad-shouldered, hardworking and hungry for new experiences'" (Granach, 1945, p. 427; cited in Ackermann, 2012, p. 43, his translation). "According to this fantasy, some of Shylock's offspring became actors and discovered their forefather in the work of Shakespeare': 'From their parents and forebears they had learned about Shylock's story of suffering. Now, on account of their kindred heart, they recognized him. And, leaning on Shakespeare's genius, they played the character of their ancestor in a tragic and partisan [. . .] manner'" (Granach, 1945, p. 427; cited in Ackermann, 2012, p. 43, his translation). Theater artist Fritz Kortner, who played Shylock in Reinhardt's, 1924 *Merchant* in Vienna, wrote in his 1959 memoir of his own ethical, dynamic interpretation of the character (Kortner, 1991; cited in Critchfield, 2008. p. 47, note 1; cited in Ackermann, 2012, p. 44 (Ackermann's translation).

their contents can change over time and across societies and cultures.[11] A similar modification of the Jew stereotype might be reflected in the fact that, while the intelligence of Jews is a relatively stable feature of the stereotype in recent centuries, during the Roman empire, Jews were considered to be dull-witted, in correlation with impoverishment and lack of education in the Jewish community at that time (Daniel, 1979; as cited in Winiewski and Bulska, 2019). Shakespeare's Shylock, however, is intelligent; it would be hard, although not impossible, to perform the character otherwise. Ackermann asks: "How much 'Angst' did Shakespeare's profoundly ambivalent figure of a thwarted Jewish avenger inspire in the proponents of an eliminatory anti-Semitism?" (Ackermann, 2012, p. 38). He concludes:

> Shylock had acquired profoundly ambivalent significations and functions: as a figuration of difference he simultaneously unsettled *and* ratified the fantasies of the Nazis. This is why the administrators of National Socialist cultural policy were so cautious about allowing Shylock to appear on the stage – and, at the same time, it is why they were so eager to make him serve their ends. (Ackermann, 2012, p. 46)

Egervari's *Merchant* adaptation reformulates this very paradox and with it, the eagerness of a Nazi Commander who is driven to put on the play, to direct its every meaning, and to trust only to himself the critical task of portraying Shylock.

THE SCM AND SHYLOCK: AN ICY, AMBIVALENT STEREOTYPE NEGATES EMPATHY

This section discusses those scenes from Egervari's adaptation which reproduce the text of Shakespeare's play – scenes which, in several respects, map very well onto the SCM, which links warmth and competence – predicted respectively by competition and status – with shifting social structures (Fiske et al., 2002; Cuddy et al., 2008).[12]

The SCM and BIAS map illuminate how, under socially stressful conditions, the low warmth/high competence (LW/HC) stereotype and the envious prejudice it generates can play a role in outbreaks of so-called ethnic cleansing and genocide. Amy Cuddy, Susan Fiske and Peter Glick discuss envious prejudice and the history of the Jew stereotype (Cuddy et al., 2008, pp. 127–129):

> [T]he BIAS map may help us to understand "why envied groups are often tolerated but later attacked, particularly under [socially stressful] conditions that convert envy into anger. . .. The dynamics of envious prejudice demand further study because this type of prejudice may help to explain the most extreme form of intergroup hostility, genocidal attack." (Cuddy et al., 2008, p. 129)

In 1543, Martin Luther influentially contributed to social stress by arguing that Jews' familiar religious bond with their God "fleeced" Christians (Luther, 1971; as cited in Drakakis, 2010, p. 18). In the same tract, Luther "posited a specific connection between Jews and usury, although it emerged as part of a more general expression of moral outrage and resentment at the Jewish claim to be God's chosen people" (Drakakis, 2010, pp.16–17). For Shylock, this means that the social antecedents of his stereotyping (and so, of his destruction) are his integration into the Venetian financial sector, and, simply, his cultural and ethnic identity as a Jew.

Research demonstrates that whereas both warmth and competence are core dimensions of social perceptions, "warmth judgments are primary, both in the sense that warmth is judged before competence and that warmth judgments carry more weight in affective and behavioral reactions" (Cuddy et al., 2008, p. 89).[13] This is particularly important because the absence of warmth perception can and sometimes has led to dehumanization and active harm, including genocide. With respect to preventing this kind of harm, Thomas Pettigrew and Linda Tropp have tested intergroup contact theory's basic contention that contact typically reduces prejudice by increasing knowledge about the outgroup, reducing anxiety about contact, and "increasing empathy and perspective taking." They found that "the mediational value of increased knowledge appears less strong than anxiety reduction and empathy" (Pettigrew and Tropp, 2008, p. 922).

Shakespeare's play explores the question of empathy in some detail in scenes involving Shylock and the ingroup composed of Venetian Christian merchants and aristocrats. When Antonio and Bassanio visit Shylock in order to borrow money, their conversation exhibits characteristic features cued by the ambivalent LW/HC stereotype, namely behavior combining passive facilitation and active harm. As noted above, this behavior can break down into dangerous violence in socially stressed conditions (Cuddy et al., 2008). The play dramatizes the dynamic linking of social antecedents to behavior: competition → coldness → consequences.

Shylock initially responds to the Venetians' request by accurately describing the mixed behavior to which he has been subject in Venice as a financially successful resident alien Jew: they appeal to him for financial services, yet spit upon him in the street, and call him a dog. The Venetians' specific behaviors accord with those predicted by the SCM and BIAS map as a consequence of the high competence/low warmth stereotype: passive facilitation alongside active harm (Cuddy et al., 2008). In one of the plays most extraordinary and well-known scenes, passive facilitation accompanied by active harm is spelled out:

> ANTONIO
> Well, Shylock, shall we be beholding to you?

[11] In their Discussion, Grigoryev et al. (2019a) also make the point that the boundaries of "Us" and "Them" are movable and changeable.

[12] I cannot at this time identify the Shakespeare text that Egervari, or his translator, Annick Léger, was using. In this paper, therefore, my references to Shakespeare are taken from Shakespeare (2010), *The Merchant of Venice* (2010) edited by John Drakakis, Arden/Bloomsbury.

[13] They add: "From an evolutionary perspective, the primacy of warmth makes sense because another's intent for good or ill matters more to survival than whether the other can act on those goals" (Cuddy et al., 2008, p. 89).

JEW
Signior Antonio, many a time and oft
In the Rialto you have rated me
About my moneys and my usances.
Still have I borne it with a patient shrug,
For sufferance is the badge of all our tribe.
You call me misbeliever, cut-throat dog,
And spit upon my Jewish gaberdine,
And all for use of that which is mine own.
Well, then, it now appears you need my help.
Go to, then, you come to me, and you say,
"Shylock, we would have moneys." You say so.
You, that did void your rheum upon my beard
And foot me as you spurn a stranger cur
Over your threshold, moneys is your suit.
What should I say to you? Should I not say,
"Hath a dog money? is it possible
A cur can lend three thousand ducats?" Or
Shall I bend low and in a bondman's key,
With bated breath and whispering humbleness,
Say this: "Fair sir, you spat on me on Wednesday last,
You spurned me such a day; another time,
You called me dog; and, for these courtesies,
I'll lend you thus much moneys."
(1.3.101–124)

Interpreting this scene through the lens of the SCM, we can affirm that the stereotyped subject articulates in detail the behavioral consequences of his perceived status as a highly competent and very cold person in the eyes of his Venetian interlocutors. He specifies the contradiction inherent in Antonio's passive facilitation and active harm. Antonio, however, remains committed to the abusive behaviors that flow from his prejudiced beliefs.

Another feature of the SCM that is captured by Shakespeare's play involves the primacy of warmth and the potentially transformative role of empathy and perspective taking. The negotiation of the contract between Shylock and Antonio involves a three-way conversation and interchange of views that could have moderated the evolving hostility. Antonio unkindly and recklessly refuses an offer of "kindness" from Shylock, who in turn suggests a contract that is anything but kind. In Shakespeare's English, the word "kind" is layered and polyvalent, suggesting not only niceness, or generosity, as the word is used today, but also including the etymological sense of kinship,[14] or shared ingroup status, which broadly speaking implies seeing things from a shared perspective. It seems reasonable to suggest that the Shakespearean sense of "kindness" is not far from what we mean today by empathy.

Following Antonio's rebuff, the exchange ends with the contract involving the pound of flesh:

JEW
Why, look you, how you storm.
I would be friends with you and have your love,
Forget the shames that you have stained me with,
Supply your present wants and take no doit
Of usance for my moneys, and you'll not hear me.
This is kind I offer.
BASSANIO
This were kindness.
JEW
This kindness will I show.
Go with me to a notary, seal me there
Your single bond, and, in a merry sport,
If you pay me not on such a day,
In such a place, such sum, or sums, as are
Expressed in the condition, let the forfeit
Be nominated for an equal pound
Of your fair flesh, to be cut off and taken
In what part of your body pleaseth me.
ANTONIO
Content, in faith: I'll seal to such a bond
And say there is much kindness in the Jew.
(1.3.133–149)

The passive facilitation cued by the ambivalent LW/HC stereotype can take the form of mercantile patronage, and such is the case here. Shylock recognizes the mixed consequences of his outsider stereotyped status, and his daughter Jessica, too, acknowledges her outsider status. She, however, "may still identify with aspects of the societal reference group" (Cuddy et al., 2008, p. 78), whereas Shylock is faithful to his "tribe," to use his word. When he initially points to Antonio's contradictory behavior, his words are an appeal to reason and therefore, to some extent, an invitation to see things from his point of view. Rebuffed, Shylock retaliates.

Empathy and perspective taking counteract negative stereotyping (Pettigrew and Tropp, 2008) and its consequent prompts and effects; therefore, this scene of contract negotiations can be interpreted to mean that if Antonio had listened with any degree of empathy to Shylock or to Bassanio ("This were kindness"), rather than scorning a momentary potential for mutual perspective taking, events might have played out differently. The negative consequences might not have been triggered. When the tables turn again, and appeals for empathy are made on Antonio's behalf, Shylock has been emotionally devasted by his daughter's deception, her elopement with one of Bassanio's associates, and her theft, all compounded by further harassment in the streets. In Act 3, he rehearses his dehumanization, refuses to offer empathy to Antonio, and rejects Salarino's reasonable point. His powerful rhetorical volley expresses his anger:

SALARINO
Why, I am sure, if he forfeit, thou wilt not take his flesh: what's that good for?
JEW
To bait fish withal; if it will feed nothing else, it will feed my revenge. He hath disgraced me, and hindered me half a million, laughed at my losses, mocked at my gains, scorned

[14] As in Hamlet's famous quibble to Claudio: "A little more than kin, and less than kind." (Shakespeare, 1987, 1.2.65)

> my nation, thwarted my bargains, cooled my friends, heated mine enemies, and what's his reason? I am a Jew. Hath not a Jew eyes? Hath not a Jew hands, organs, dimensions, senses, affections, passions? Fed with the same food, hurt with the same weapons, subject to the same diseases, healed by the same means, warmed and cooled by the same winter and summer as a Christian is? If you prick us do we not bleed? If you tickle us do we not laugh? If you poison us do we not die? And if you wrong us shall we not revenge? If we are like you in the rest, we will resemble you in that. If a Jew wrong a Christian, what is his humility? Revenge. If a Christian wrong a Jew, what should his sufferance be by Christian example? Why, revenge! The villainy you teach me I will execute, and it shall go hard but I will better the instruction. (3.1.46–66)

Empathy continues to be at issue in the courtroom scene in Act 4: appeals for kindness and perspective are tossed back and forth. Portia, in her cross-dressed role as the "young doctor of Rome" (4.1.151–152) delivers a celebrated set speech in praise of mercy:

> PORTIA
> Then must the Jew be merciful.
> JEW
> One what compulsion must I? Tell me that.
> PORTIA
> The quality of mercy is not strained:
> It droppeth as the gentle rain from heaven
> Upon the place beneath. It is twice blest:
> It blesseth him that gives and him that takes.
> 'Tis mightiest in the mightiest; it becomes
> The throned monarch better than his crown.
> (4.1.178–186)

Portia frames her legal arguments by the Christian theological concept of mercy, which she subsequently identifies with charity, Latin *caritas*, or God's unbounded love (4.1.257). This is interesting in relation to Luther's implication about competing for that love, as there is no point in competing for what is unlimited. *Caritas* plausibly directs us away from prejudice and toward the variety of Christian humanism that saw all human beings as equal; however, theology no doubt takes my argument too far afield. The critical point is that, however it is named, empathy and perspective taking – and reason – are refused on all sides, and a dangerous and angry dehumanization of a stereotyped subject is unleashed. The play acts out what happens when empathy is denied. It shows the workings of social prejudice based on stereotyped intergroup and interpersonal perceptions, and it shows how the destructive dynamic could have been, but was not, interrupted by empathic perspective taking.

Scholars and artists, including Egervari, have vehemently drawn out the profound failure of empathy in this play, noting that in spite of her beautiful words, Portia not only refuses empathy, but is the most cruel:

> Portia's – or Shakespeare's – behavior toward Antonio is in fact as cruel as anything Shylock does. The scene is drawn out excruciatingly, and its theatrical power has much less to do with the quality of mercy than with the pleasure of sadism on the one hand and revenge on the other. (Orgel, 2003, p. 159)

Stephen Orgel points out that the "old law that Portia suddenly invokes allows . . . for *us* to have *our* revenge":

> [T]he old law is a secret, in effect an *ex post facto* law, which applies only to Shylock, and has been invoked – indeed invented – solely to put him at the mercy of the court. This is a striking example of the play's tendency toward overkill, because the forgotten law is Shakespeare's invention, appearing in none of the sources, and quite unnecessay to the plot. (Orgel, 2003, p. 160)

Egervari, too, exercises what might be called overkill: his "Portia," a cultivated and empathetic Gypsy woman, gives the "quality of mercy speech" in the costume of Hiter, moustache etc., and furthermore is awarded the most brutal of all the many deaths, her head forced into a bucket of burning coals. But there is nothing even superficially soothing about Egervari's play.

Cuddy, Fiske and Glick point out that negative behavior associated with ambivalent social stereotypes works to maintain the social status quo:

> Despite their ambivalent content, envious and paternalistic stereotypes still function to maintain the status quo and defend the position of societal reference groups (also see Jost et al., 2001 for this argument). Further, as a form of cross-dimensional ambivalence (MacDonald and Zanna, 1998), these combinations are psychologically consistent for perceivers. [who] can imagine a group as being warm but incompetent or as competent but cold without experiencing the psychological tension that is classically assumed (e.g., by Freud) to be integral to ambivalence. [T]his has obscured the true nature of important forms of prejudice. These include the oldest form of prejudice – sexisim, which has long fostered inequality through paternalism (Glick and Fiske, 1996; Jackman, 1994) – and the most severe form of prejudice – genocidal hatred, which is most commonly directed toward successful, envied minorities (Glick, 2002, 2005). (Cuddy et al., 2008, p. 76)

Prejudice and discriminatory practises against the Jewish minority are represented as the legal normal in Shakespeare's dramatized version of Venice, and the plot supports this discriminatory status quo, with the expiry of a Jewish family line, the confiscation of Jewish material wealth by the Christian majority, and Shylock's forced conversion to Christianity; all can be interpreted as positive outcomes. The play's conclusion as a Christian, if not quite comedic, resolution, can be read as mercy: Shylock's life is spared, and, with some unclarity, half of his worldly goods will go to his daughter's husband, Lorenzo, rather than to Antonio. Venetian society is stabilized, and three marriages symbolize the continuity of the upper class. For such reasons, this play is classically termed a

comedy. Today, we might term it a thought experiment in social psychology.

Shakespeare's *Merchant* reassures the ingroup, composed of the early modern Christian elite, and it shores up the prejudiced, anti-Semitic status quo. Egervari's adaptation pushes this cruel, comedic trope to the extreme. Is it possible to refer to SS control of the Auschwitz death camp as a status quo? Following "Shylock's" killing, "Tubal" murders the actors one by one, "Jessica" going last in a scene of sexual humiliation. The light goes out on a solitary man, examining a diamond solitaire – seated calmly, smoking a cigar, listening to a waltz. In Egervari's play, psychological tension is brought to a boil, not by the stereotype *per se*, but by its pre-eminence in the world of the play, located inside a prison, inside Auschwitz. Egervari's "Merchant" alerts, shocks, and warns, but in no way reassures.

ANTI-NAZI THEATER: TIBOR EGERVARI "SHYLOCK" IN AUSCHWITZ

For over two decades, Egervari wrote, adapted and directed theater projects staging the deconstruction of the stereotype of the "old Jew" (to use his term). "*Shakespeare's* The Merchant of Venice *in Auschwitz*" is the only one to survive as a play, but there were companion works. His 2011 adaptation of Marlowe's *The Jew of Malta* deconstructed the Jew stereotype by using a dresser, inspired by Japanese theater: a beautiful young female actor gradually transformed, using make-up and costume, into a hideous "old Jew" – under the audience's gaze, in full sight. The stereotype is not the person. Earlier, in 1998, he collaborated with renowned conductor Georg Tintner on a touring production of composer Viktor Ullmann's and librettist Peter Kien's one-act opera, *The Emperor of Atlantis*, *or Death's Refusal*, composed in the "model" concentration camp Terezín (Theresienstadt), in 1943–4. Costuming and theatrical transformations dramatically expose the reality that the human beings are Jews, in the costumes of the *Häftlinge*; the Emperor singing the aria is a Jew. Egervari's directorial style draws on intensifying techniques learned from Japanese Noh and the theater work of Luigi Pirandello, Antonin Artaud, Bertolt Brecht, Jerzy Grotowski, and others (T. Egervari, personal communication, Ottawa, June 24, 2015). As a survivor and an artist, his ongoing implication with the trauma of Auschwitz is expressed through theater, and his "Merchant" is an extraordinary accomplishment.

Egervari's "Merchant" harnesses the power of Shakespeare's, following through, as Shakespeare does, with Shylock's defeat. The difference is that Egervari's "Shylock" is a Nazi commander/actor-director who is staging the play in order to prove the reality of the toxic Jew stereotype that justifies his mass murders. The dramatic deconstruction of the anti-Semitic stereotype "Shylock" is founded in the first place on the theater basics of costuming and acting, and the play's success as an anti-Nazi work is founded on theater's power to change minds.

How is this work readable using the SCM and BIAS map? As discussed above, the SCM identifies warmth and competence as universal dimensions of social perception, and posits that warmth and competence judgments are based on the socially contingent and temporally mutable antecedents of competition and status. "People viewed as competitors are judged as lacking warmth, whereas people viewed as non-competitors are judged as warm; people viewed as high status are judged as competent, whereas people viewed as low status are judged as incompetent" (Cuddy et al., 2008, pp. 92–93). While the two underlying dimensions of warmth and competency are universal, the stereotype traits themselves can and do change.

The SCM exposes the disconnect between real individuals and the stereotypes that are their unwelcome doubles. It exposes the fact that the all-important warmth of the stereotype/perception is not determined by actual warmth but by perception of social structural competition, and competency is not determined by actual competence but by social status, which may be undeserved. Complex histories of conflict and collective memory underlie both competition and status, yet there is an actual disconnect and non-correspondence between the motivating conditions for the stereotype *per se* and any given person or group to whom that stereotype, with all of its effects, is applied. Stereotypes are real, but they are not real people. Nonetheless, in Egervari's "Merchant" it is the mission and the passionate intention of the Nazi commander/actor-director "Shylock" to prove the opposite.

The play opens in the dark, inside a locked prison in the death camp. The first character to speak is the Nazi lieutenant commander who is directing Shakespeare's *Merchant*, and playing Shylock. He sees the play as a vector for his message (i.e., the stereotype), and with respect to his choice to play the hated Jew, he will explain. The SCM can offer another reason: his appropriation of the role reflects the envy he feels toward the Jew stereotype because of his prejudiced belief in the exaggerated competency of the Jews as powerful conspirators (Cuddy et al., 2008). His casting of the other roles also reflects this belief: "Tubal" is an SS Officer; two gypsy women and a common criminal *kapo* play Portia, Nerissa, and Launcelot Gobbo, respectively. The Venetian elite, "Antonio," "Bassanio," "Gratanio" and the others, are real Jewish prisoners, and "Jessica" is a German actress. All the Jewish characters are played by so-called "pure Aryans" (Egervari, 2009, p. 143). What reason for this reversal? asks "Jessica." "Shylock" replies:

> Do you honestly believe those Yids would project the image
> I wish to show of them?
> We're the only ones who can unveil their true identity.
> (Egervari, 2009, p. 144)

"Shylock" insists on offensive and derogatory terminology at all times to refer to the Jewish characters (but not to the actual Jewish prisoners), while he crucially affirms that the stereotype is the true Jewish "identity." His envious need to assert himself

in relation to the Jew stereotype, suggested by his initial decision to play Shylock, is exposed as well by his belief that he alone can reveal, through the power of theatrical performance, the truth of the prototypical exemplar:

> SHYLOCK Jessica!
> JESSICA Good morning, sir.
> SHYLOCK I am your father!
> JESSICA Yes, in the play, but . . .
> SHYLOCK We are in the play! Listen to me very carefully. As my assistant has told you, this concerns a project of the highest importance. You have been chosen for your talent, I've seen you perform; because you're a pure Aryan, like me, like Tubal, and you are here on official assignment. It's our duty to unveil the true face of this enemy race, which the Führer has defined as a moral plague worse than the black plague of early times. Have you read *Mein Kampf*? (Egervari, 2009, p. 143)

The first principle affirmed by the Nazi criminal theater director is the supposed identity between the Jew stereotype and real Jewish people, something, of course, that is completely disproven in detail – if proof were necessary, and it seems unfortunately that it is – by current research in social psychology, and especially by the SCM and BIAS map, which illuminates the nature of all stereotypes. In the world of this play, however, the Nazi commander believes in his ontological fallacy and supports his argument using Shakespeare's *Merchant*. As the play proceeds, he also refers to well-known works of anti-Semitic propaganda including *Mein Kampf* and *The Protocols of the Elders of Zion*. Believing that the Jewish prisoners would subvert his message in the projected performance, he has given the Jewish roles to the Nazis, and the Gentile and elite Venetian roles to the prisoners.

As a method actor in the tradition of "good' theater schools of the 1930s" (Egervari, 2009, p. 122), "Shylock" insists that the cast remain in their roles at all times. He himself evolves gradually into his character, a fatal transformation that is visually represented on the stage:

- He is "in his thirties, dressed in sports clothes – black shorts, white vest – a towel around his neck" p. 117;
- "lying on his stomach [for a massage] . . . "covered with a large towel" p. 121;
- in his bathrobe and has covered his head" p. 122;
- "practises a Hasidic song as he glues on his beard" p. 154;
- "costume and makeup are almost complete" p. 155;
- "rage bordering on madness" p. 164;
- "his prostration" p. 166;
- "Shylock is in his dressing room" p. 171;
- "Enters Shylock, who now appears as a Hasidic Jew" p. 171.

At the end, he achieves an appearance that demonstrates – or so he wishes – the dangerous reality of the Jew stereotype. However, the very fact that the audience and the other players have seen his theatrical transformation, his costuming, and his blocked and choreographed actions exposes the stereotype as a theatrical role and undermines his intention.

As I have mentioned, choreographed costuming is also a necessary aspect of stereotype deconstruction in Egervari's *The Jew of Malta*, where a "dresser" transforms a beautiful young female actor into Marlowe's vicious and visceral representation of the Jew stereotype. Egervari's production of *The Emperor of Atlantis* also featured a complex staging of costume changes, setting, and music. (Van Vlasselaer, 1998)

In Egervari's "Merchant," the transformation of the unnamed German actress into the Jewish daughter and heiress "Jessica" involves the transference of the play's father–daughter conflict into her dressing room and onto her physical body. The real actor loses her identity, so recalling the many inflictions intended to destroy the identities of the incarcerated people in the Nazi concentration camps. The world of the play and the world of the Holocaust become entangled.

> SHYLOCK [to "Jessica"] Has no one ever told you that it is the soldier's main duty to study the enemy? You definitely need to read *Mein Kampf*. She has always longed to leave her father whom she despises, just like she despises her Jewish condition. She secretly read books which her father forbade her to read. We have hidden a cross, some books on mythology, and the Gospels in your dressing room. You are to read them in secret, and if I, Shylock, catch you in the act, you will be beaten for it.
> JESSICA Beaten . . . for real . . .? But you have no right. I'm German, and Aryan, a Christian.
> SHYLOCK Not quite anymore, and not yet.
> JESSICA I don't understand, and anyway, under these conditions, I'm afraid I will have to refuse the part.
> SHYLOCK I would like you to fully understand our situation: this has nothing to do with your little theater in the provinces, and you were not hired, you were conscripted! Furthermore, we are at the front. Our enemies are in front of you, and you will not be able to leave this place before we get to the final solution.
> (Egervari, 2009, p. 146)
> [. . . .]
> SHYLOCK [to "Launcelot"] You see her, she's a Jewess now. This morning, she was still an Aryan, but now, she's a darling, stinking Yid. The magic of theater. (Egervari, 2009, p. 168)

COGNITION TO AFFECT TO BEHAVIOR: THE DYNAMICS OF "MINDS TRANSFIGURING TOGETHER"

There is more to Egervari's magical world. To unpack what happens, we must move to the far right edge of the BIAS map, and the hypotheses involving the emotional, behavioral and attributional consequences of stereotype perception. Moving from antecedents (warmth and competence) to consequences, Cuddy, Fiske and Glick ask how warmth and competence judgments affect the ways that targets are treated. They propose that perceptions of warmth and competence elicit predictable, differentiated patterns of social emotions, behaviors

and attibutions. People perceived as incompetent and not warm elicit contempt and disgust, and those perceived as competent but cold, e.g., in this case, Jews, elicit envy (Cuddy et al., 2008, p. 102). Cognition of the ambivalent LW/HC Jew stereotype would be typically followed by its "distinct emotional profile which elicits a discrete pattern of behavioral reponses, namely passive facilitation and active harm" (Cuddy et al., 2008, 107).

> Cognition → Affect → Behavior
> Low Warmth/High Competence Stereotype → Envy → Passive facilitation and Active Harm

A significant lack of warmth, particularly in stressful social conditions, could create "a relatively urgent need to react," and perhaps to react violently (Cuddy et al., 2008, pp. 110, 112). This dynamic sequence with its cues for action may be supported by neurological prompts, although the researchers make the important point that "representations in the brain do not mean that prejudice is hard-wired and evitable: social context affects neural responses, naturally" (Cuddy et al., 2008, pp. 135–136).

Theater is an art of action-reaction and does not neglect this powerful dynamic, which is familiar to literature across the genres, from detective novels and love stories to Sophocles. "Shylock's" theatrical transformation into the worst possible version of the Nazi Jew stereotype – all taking place inside a prison inside Auschwitz – plausibly triggers dynamic, violent action that is readable using the SCM and BIAS map.

Envy is the emotion that the SCM predicts will follow from a LW/HC stereotype. It is interesting that in Shakespeare's *Merchant,* Antonio doesn't express envy. He expresses hatred toward Shylock, as I have shown, and Shylock, of course, hates Antonio (e.g., 1.3.38). However, anger has been shown to mediate the link from envy to activation (Cuddy et al., 2008, p. 116); furthermore, "people are loath to admit envy because it implies a deficit in the self or ingroup" (Cuddy et al., 2008, p. 104). In the text, Antonio asserts his superiority, in spite of the fact that he lacks money and finds himself obliged to go to the rich Jew for help.

When speaking with the Duke about the failure of appeals to Shylock to accept payment rather than a pound of Antonio's flesh, as specifed in his contract, Antonio goes so far as to suggest that he himself is the target of Shylock's envy:

> since . . . no lawful means can carry me
> Out of his envy's reach, I do oppose
> My patience to his fury, and am armed
> To suffer with a quietness of spirit,
> The very tyranny and rage of his. (4.1.7–12)

With this claim to a patient and quiet spirit, Antonio verbally places himself on a higher moral plane than Shylock, a move that accords with the SCM's theory that envy is always directed upwards, toward that target the perceiver supposes to be superior. Antonio frames the situation such that he is the superior. It is interesting that Egervari retains this passage in his adaptation (p. 171); therefore, a doomed Jewish prisoner (an incarcerated lawyer), acting the role of Antonio, speaks these words to the "Duke" who is in fact the depraved SS officer who will shortly murder them all, with the exception of "Shylock," who is murdered by the real Jews.[15] In this context, the words become even more ironic and meaningful than they are in the Shakespearean text. They signify the moral humanity of the Jewish prisoners, which is also expressed in their dignified behavior throughout.

WHAT HAPPENS TO "SHYLOCK"?

As far as I know, the SCM and BIAS map does not explicitly address what might happen under conditions of stress when a subject targeted by the LW/HC stereotype is perceived to lose competence. Shylock loses his status/competence in *Merchant* and even more strikingly in Egervari's adaptation, where he is killed. One possibility has to do with the theory that whereas warmth judgments are other-oriented, in that they reflect how others perceive the subject, competence judgments "rebound" on that stereotyped subject (Cuddy et al., 2008, p. 89) – so, in this case, on the commander/"Shylock." In the world of Egervari's play, "Shylock" would be perceived as extremely cold, being at the same time – and very confusingly – both a Jew and a Nazi commander with status and murderous (cold to the extreme) intent. On the other hand, in the world of the play within the play, which the commander has insisted they inhabit, at the end of the courtroom scene, Shylock loses his status and his competence. Although there is no stage direction for it in Shakespeare's script, any director might choose to have Shylock at that point drop the sharpened knife with which he had intended to carve out Antonio's heart. In Egervari's adaptation, Gratiano's verbal attack (4.1.396) is moved to a position immediately preceding and cueing the following climactic action specified by a stage direction:

> Shylock is on his knees and the others surround him. As he is reciting his lines, GRATIANO grabs him by the throat and shakes him. Surprised, SHYLOCK drops his knife, which ANTONIO picks up. They all stop for a moment, and then they all jump on top of SHYLOCK. He is killed on the spot before TUBAL has time to get his weapon. (Egervari, 2009, p. 182)

In terms of the SCM, the knife is a crucial resource, and "status assesses the capability of groups to control resources" (Cuddy et al., 2008, p. 94). In the world of the play, at that moment in the action, the "Venetians" have much more status than "Shylock," who has lost everything. He loses the agency represented by that knife. Competence judgment rebounds immediately on the perceived stereotype/individual, as the model predicts.

A final argument about this moment in the adaptation. When the Nazi commander transforms into the enemy "Shylock," the world of the play becomes volatile and extremely stressed. The resulting mental conflict in the

[15] As is often the case in Shakespeare productions, actors may take on multiple roles; here the SS officer is both "Tubal" and the "Duke."

local environment of the prison on the set is destabilized by profound incongruence between the varied elements of cognitive perception and their affective consequences. The situation can be interpreted using another psychological model, that of affective incoherence, which I understand to be debilitating cognitive-affective incompatibility (Centerbar et al., 2008; Clore and Schnall, 2008).[16] This instability is a feature of Egervari's adaptation but not, perhaps, of Shakespeare's play. Cuddy, Fiske and Glick make the important point that envious stereotypes, such as "Shylock," although they are ambivalent across the dimensions of warmth and competence, are psychologically consistent for perceivers who do not experience the psychological tension that was classically assumed to be integral to ambivalence (Cuddy et al., 2008. p. 76). With respect to this question, we can observe that in Shakespeare, there is no confusion: all the Venetians are pleased at the outcome, and Shylock falls silent. It is in Auschwitz, however, that the contradiction between the players and roles, and the extreme stress of the war and of the Holocaust, produce explosive tension and confusion at the moment when "Shylock" is killed.

SUMMARY AND DIRECTIONS FOR FUTURE RESEARCH

I have shown that Shakespeare's Shylock and Egervari's post-Holocaust "Shylock" are readable using the SCM and Bias map. My interdisciplinary reading validates the SCM and BIAS map for work in literature, and offers a fresh interpretation of Tibor Egervari's anti-Nazi Shakespeare adaptation. I hope to have demonstrated the value of interdisciplinary work in such diverse fields of the arts and sciences.

The SCM and BIAS map are a powerful model for understanding the dynamic dance that begins with perception and cognition, then moves to affect and emotion, to sometimes end – at the far right edge of the map – in the worst violence possible, beyond imagining. If the model can help us to discover ways to dissolve a murderous and obdurate ethnic stereotype, that is a goal worth pursuring, as Cuddy, Fiske and Glick themselves affirm (Cuddy et al., 2008, p. 129).[17]

The archival approach developed by Durante et al. (2010) suggests a methodology for investigation of literary heritage by social psychologists. Literature, taking place as it does in the world of the imagination, provides one forum where it is possible to think about the sensitive interface between social stereotypes and social realities such as shared collective memories and demographic shifts (Winiewski and Bulska, 2019).

The SCM shows that warmth judgments are not founded on actual niceness, morality, or warmth, but by the presence or absence of social competition, which may be entirely social and structural; that competency judgments are not determined not by true competency, agency or ability, but by social status, which well be inherited or faked (Cuddy et al., 2008). This consequential finding affirms with evidence what feminists, anti-racists, and others have long known. Yet, as Grigoryev et al. (2019a) have argued, discriminatory treatment of immigrants, for example, produces poor life conditions, which can enhance the negative attitudes of the host population and serve in a sense as self-fulfilling prophecy.

Drawing on his experience as a Hungarian Jewish child caught up in the Nazi Holocaust, Tibor Egervari turned to the ancient theater arts of narrative, costume, mask, make-up, choreography and acting in order to effect the collective transformation of mind of which theater is sometimes capable. His work reminds us of theaters' precedence in human societies as a means of representing and working through intercultural violence. In Shakespeare's *A Midsummer Night's Dream*, the Amazon Queen Hippolyta speaks of theater's capacity to "transfigure minds all together"[18] – a psychological notion that suggests a kind of collective cognitive evolution for the better. For millennia, humanity believed in the gravity and importance of the arts. The role of the arts in relation to the evolution of the mind will, I hope, attract more scientific and interdisciplinary study in the future.

[16]This argument is explored in two unpublished conference papers which are available upon request (see Knutson, 2010, 2015).

[17]They also observe, "Anti-Semitism has taken the form of an envious prejudice for almost 2000 years." (p. 127)

[18] HIPPOLYTA But all the story of the night told over,
And all their minds transfigured so together,
More witnesseth than fancy's images
And grows to something of great constancy;
But howsoever, strange and admirable. (Shakespeare, 2008, 5.1.23–27)

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material; further inquiries can be directed to the corresponding author.

AUTHOR CONTRIBUTIONS

The author confirms that she is the sole contributor to this work and has approved it for publication.

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How Refugees' Stereotypes Toward Host Society Members Predict Acculturation Orientations: The Role of Perceived Discrimination

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Refugee migration leads to increased diversity in host societies and refugees have to face many stereotyped attitudes in the host society. However, there has been little research on minority group stereotypes toward host society members and how these stereotypes relate to the acculturation-relevant attitudes of refugees in their first phase of acculturation. This study surveyed 783 refugees in Germany who had migrated mostly in the so-called "refugee crisis" between 2015 and 2016. At the time of the survey in 2018, they had been in Germany for an average of 27 months (*SD* = 15 months). These refugees reported their positive and negative sociability stereotypes toward German host society members, acculturation-related orientations, shared reality values, and perceived discrimination. Results showed that positive sociability stereotypes toward host society members were associated with increased cultural adoption and shared reality. In contrast, negative sociability stereotypes negatively affected cultural adoption and shared reality. However, stereotypes showed no association at all with cultural maintenance. Interactions between sociability stereotypes and discrimination experiences highlighted a disillusion effect, in the sense that discrimination reduced the motivation to adopt the host culture more strongly among refugees who held strongly positive sociability stereotypes. The study extends knowledge on the significance of minority group stereotypes in the context of refugee migration and reveals the maladaptive consequences of discriminatory behavior against refugees by host society members.

Keywords: stereotypes, acculturation, shared reality, discrimination, refugees

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INTRODUCTION

Every year, thousands of people across the globe migrate to another country, into another culture, and into another social context searching for ways to improve their lives. Forced refugee migration to Europe increased since 2011 all the way up to the so-called "refugee crisis" in 2015 and 2016 (Bundesamt für Migration und Flüchtlinge BAMF, 2019). Subsequently, refugees from the Middle East, and North Africa have become the largest group migrating to Germany. These increased numbers of refugees have led to more and intensified contacts with members of the German host society, thus putting the issue of coexistence and acculturation at the heart of public and

political debate. Typically, these discussions focus on the acculturative interests and values of the host society and largely ignore refugees' experiences, their perspectives on integration-relevant attitudes, and the factors that influence minority acculturation orientations. Research on refugee acculturation is dominated by studies on refugees' physical and psychological well-being (Virgincar et al., 2016; Bas-Sarmiento et al., 2017; Turrini et al., 2017) or on bringing together well-being and acculturation perspectives (Lincoln et al., 2015; LeMaster et al., 2018; Hashemi et al., 2019; Berry and Hou, 2020). However, there has been less research on cognitive variables (such as migration-relevant expectations and beliefs regarding future relations with host society members) and how these influence the acculturation process, contact experiences with the host society, as well as acculturation-relevant beliefs and behaviors of refugees.

Especially stereotypes play a prominent role in shaping cognitive evaluation, beliefs, and behavioral motivations (Worchel, 1999; Fiske et al., 2002), and they have been shown to affect acculturation orientations (López-Rodríguez and Zagefka, 2015; Alcott and Watt, 2017) at least among host society members. However, there is no research addressing the effects of stereotypes on acculturation-relevant beliefs in the case of refugees or immigrants. Due to the mutuality of acculturation (intergroup processes resulting from acculturation and shaping acculturation of the host society and migrants, Berry, 2006; Horenczyk et al., 2013), it is also important to take the quality of intergroup experiences with the cultural outgroup into account, and especially, how discriminatory behavior by the host society affects acculturation of refugees. Consequently, the present study investigated the relationships between positive and negative sociability stereotypes held by refugees toward German host society members (do Germans have good or bad intentions toward refugees) and the motivation to adopt the host culture, maintain one's own cultural identity, and develop shared reality perceptions (the belief of an in-group member that the own group perceives the world in the same way as a relevant outgroup). Furthermore, we analyzed the role of different types of perceived discrimination on acculturation-relevant perspectives, as well as interactions between stereotypes and discrimination experiences to shed some light on the impact of discrimination experiences in amplifying or reducing the effects of positive and negative stereotypes on acculturation-relevant perspectives.

Acculturation Orientations and Shared Reality

Within psychology, the most influential contribution to theorizing about the coexistence of minority and majority groups is Berry's acculturation model (Berry, 1997; Sam and Berry, 2016). The framework of his model focuses on two principal dimensions that underlie immigrants' acculturation orientations: their desire to maintain their original culture and their desire to have contact with majority group members. Subsequent research has concluded that the contact dimension should be replaced by one highlighting the desire to adopt the norms, values, and cultural behaviors of the host society, because it provides a better match with the cultural maintenance dimension (Bourhis et al., 1997). Both acculturation orientations together give rise to four discrete acculturation strategies (integration, assimilation, separation, and marginalization; see Berry, 1997) with which to differentiate acculturation processes by both majority and minority groups. Integration is defined by the motivation to retain one's cultural traditions while also adopting cultural aspects of the cultural outgroup, whereas marginalization, in contrast, is specified by the rejection of both cultural identities. Assimilation orientations highlight the rejection of one's own culture and focus only on the adoption of the outgroup culture, and separation is defined by the rejection of the outgroups' culture and the motivation to maintain the culture of origin. Integration and assimilation are typically favored by majority and minority group members (Brown et al., 2016), and integration is positively associated with psychological and sociocultural adaptation (Abu-Rayya and Sam, 2016).

Berry's acculturation model (1997) and extensions to or variations of his model, such as the interactive acculturation model (IAM, Bourhis et al., 1997), the concordance model of acculturation (CMA, Piontkowski et al., 2002) or the relative extended acculturation model (REAM, Navas et al., 2005) all respect the mutuality of acculturation by focusing on the bidimensionality and bidirectionality of acculturation processes between majority and minority members (Horenczyk et al., 2013). Consequently, intergroup processes between migrants and host society members shape acculturation orientations in both groups and also result from acculturation. Thus, for a better understanding of the acculturation process, it is important to identify variables that are capable of affecting both dimensions of acculturation orientations and also display the interdependence between attitudes and beliefs held by both groups, and to determine how they affect their behavior and how this behavior is evaluated by the outgroup. Several studies have supported a bidimensional approach to acculturation orientations (e.g., Ryder et al., 2000; Flannery et al., 2001) and have shown that the underlying dimensions may be interrelated rather than orthogonal (Zagefka et al., 2009; Van Acker and Vanbeselaere, 2011, 2012), and it has been recommended that both acculturation dimensions should be assessed separately (Rudmin and Ahmadzadeh, 2001; Rudmin, 2003; Brown and Zagefka, 2011; Van Acker and Vanbeselaere, 2011). In line with this research, we investigated the dimensions of cultural adoption and maintenance separately for refugees living in Germany.

Although theorizing on acculturation between majority and minority groups focuses on cultural adoption and maintenance motivations (Sam and Berry, 2016), it ignores the importance of experienced commonalities between the cultural groups in contact with each other. However, the acculturation process is characterized by permanent comparisons between the host society and immigrant groups in terms of cultural traditions and values, institutional practices, and everyday life. Thus, experiencing that an outgroup member feels the same way about cultural traditions, behaviors, or values builds up a shared reality containing cultural aspects of both groups and facilitating successful integration. Consequently, we suggest that research on acculturation orientations could benefit from additional

variables that incorporate individual evaluations of matching aspects between one's cultural ingroup and a relevant outgroup such as shared perspectives regarding education of children, basic democratic orientations, or work ethics. One concept that accounts for perceived commonalities between social groups is shared reality (Echterhoff et al., 2009; Echterhoff, 2012). Shared reality refers to an increased motivation of individuals to develop a common understanding with others about objects, people, social groups, or values. Thus, sharing implies that individuals experience their own attitudes toward an object of interest as converging with the attitudes of other individuals. Shared reality theory further suggests that the experience of commonalities with other individuals increases the motivation to build lasting relationships. Thus, the construction of a shared reality is not limited to interpersonal relationships. Conley et al. (2015) expanded shared reality theory to address intergroup relations between ethnic minority members and White Americans. They found that higher values in shared reality predicted less prejudice toward White Americans among African and Asian Americans as well as Latinos. In line with this research, we see shared reality as the belief that a person (as a social group member) perceives the world the same way as another group (Baldwin, 2001; Sinclair et al., 2006). The development of a shared reality may act as a bonding factor between the cultural ingroup and the host society that highlights cultural aspects, norms, or behaviors that both groups value. Therefore, it can work as a culturally collective closure (Dugas and Kruglanski, 2018) in building a social category that encompasses shared cultural aspects between majority and minority. Previous research has shown that shared reality of refugees with host society members increases due to positive contact experiences between both groups (Lutterbach and Beelmann, 2020).

The Role of Stereotypes in Predicting Acculturation Orientations

The complex nature of acculturation processes is influenced by several psychological factors that shape majority and minority acculturation perspectives and thus cultural coexistence. Variables such as prejudice, social identity, similarity, and threat have been found to significantly affect acculturation-relevant orientations and beliefs (Zick et al., 2001; Florack et al., 2003; Zagefka et al., 2009, 2014; Brown and Zagefka, 2011; Navas et al., 2013; López-Rodríguez et al., 2014; López-Rodríguez and Zagefka, 2015). In addition, research has indicated that stereotypes also play a prominent role in predicting acculturation orientations (López-Rodríguez et al., 2014; López-Rodríguez and Zagefka, 2015). This is in line with the relative acculturation extended model (Navas et al., 2005) that recognizes the importance of psychosocial variables such as stereotypes in affecting majority and minority members' acculturation perspectives. Furthermore, social cognition has been shown to significantly affect acculturation processes. Specifically, social learning and acquisition of knowledge about a new group (Rudmin, 2009) lead to changes in one's stereotypical beliefs toward other social groups within the new cultural context (e.g., Stanciu and Vauclair, 2018; Stanciu et al., 2019).

In this context, stereotypes are beliefs about groups (Ashmore and Del Boca, 1981). Research on stereotypes differentiates between personal and consensual stereotypes (culturally shared beliefs about members of a distinct social group). Personal stereotypes are beliefs about social groups that have been found to be colored by personal experiences, motivational states, and individual differences (Jussim et al., 2015; Findor et al., 2020; Kotzur et al., 2020). In this study, we focused on the personal stereotypes held by the social group of refugees regarding German host society members. Research on stereotypes further distinguishes between a sociability and a competence dimension. This stems from the finding in research on person perception that trait ratings configure around intellectual versus social traits (Rosenberg et al., 1968). Subsequently, evidence around the stereotype content model (SCM, Fiske et al., 1999; Fiske et al., 2002) provided an empirical and a theoretical perspective on stereotypical judgments about social groups in terms of the categories "warmth" and "competence." The sociability dimension measures beliefs on good or bad intentions of outgroup members and focuses on outgroup traits such as kindness and helpfulness (Leach et al., 2007; Brambilla et al., 2011, 2012). There is much evidence that the sociability dimension of stereotypes has a stronger impact on impression formation and outgroup evaluation compared to competence stereotypes (for an overview, see Abele and Wojciszke, 2014).

Research on the interrelation between stereotypes and acculturation orientations has found that positive sociability stereotypes correlate strongly and positively with cultural adoption motivations among majority group members (López-Rodríguez et al., 2014). Additionally, research by Alcott and Watt (2017) has indicated that the relation between sociability stereotypes and acculturation orientations among host society members is significantly more positive toward immigrants who are perceived as integrated or assimilated, whereas it is negative toward immigrants who are perceived as separated. However, this research is limited to stereotypes and acculturation orientations held by the cultural majority. The main contribution of the present study is to analyze the relation between stereotypes and acculturation orientations from the refugees' point of view. Because the sociability dimension is associated more strongly with outgroup attitudes and acculturation relevant perceptions, we focused on the sociability dimension of stereotypes in the context of refugee migration, because it is primarily important to immigrants whether host societies will give assistance, peace, and shelter. Consequently, especially at the beginning of the acculturation process, stereotypes regarding whether or not host society members are friendly and helpful will be important to refugees. Furthermore, we analyzed the effects of both positive and negative sociability stereotypes held by refugees toward Germans on cultural adaptation, cultural maintenance, and shared reality to explore for varying effects of stereotype quality on different acculturation orientations.

The Role of Perceived Discrimination

Acculturation orientations of majority and minority groups are not necessarily independent of each other (Arends-Tóth and van de Vijver, 2003; Matera et al., 2015), and power

differences between the groups in contact with each other have a strong effect on the acculturation process (Sam and Berry, 2016). The majority constrains the choices of minority groups' acculturation strategies by either openness to cultural diversity or endorsement of ethnocentrism and discrimination against immigrants. Thus, it is important to measure the acculturation climate produced by the host society through the eyes of minority group members. Experiences of discrimination against the cultural ingroup have been shown to significantly alter acculturation-relevant attitudes and orientations and affect the way migrants acculturate to a new society (Van Oudenhoven et al., 2006). Research on the interrelation between discrimination and acculturation perspectives has used both constructs as independent and dependent variables. There is correlational evidence that discrimination experiences negatively affect participation in host societies (Ramos et al., 2016); increase over time, slow down cultural adoption, and do not affect cultural maintenance orientations (Juang and Cookston, 2009); reduce the motivation for cultural maintenance (Bagci and Canpolat, 2019); and reduce host culture orientation (Kunst and Phillibert, 2018). In addition, a study by Jasinskaja-Lathi et al. (2003) found that different acculturation beliefs also change the way discrimination is experienced and interpreted. Regarding shared reality, two studies found that less perceived discrimination significantly predicted increases in minority group members' perceptions of shared attitudes and values with majority group members (Conley et al., 2015; Lutterbach and Beelmann, 2020). The cited body of research typically uses one type of discrimination: everyday discrimination. This conceptualization of discrimination measures how regularly individuals perceive unfair treatment because of belonging to a socially devalued group. However, discrimination takes place in totally different social contexts and situations and can manifest in societal and governmental institutions. Thus, contextual discrimination focuses on unequal treatment of refugees by cultural, governmental, or societal institutions and services (e.g., by the police). Therefore, in the present study, we differentiated between everyday discrimination and contextual discrimination and analyzed their effects on acculturation orientations.

Despite the unique effects of stereotypes and discrimination, interactions between both variables might account for meaningful variations in acculturation orientations. Due to the bidimensionality and bidirectionality of acculturation (van Osch and Breugelmans, 2011; Horenczyk et al., 2013), refugees' acculturation orientations depend on not only their intergroup stereotypical beliefs but also their intergroup experiences with host society members; and their acculturation orientations shape their intergroup attitudes and behaviors. Hence, it is important to analyze how variables interact that mirror social beliefs toward the cultural outgroup and experiences with the cultural outgroup in order to determine how they affect acculturation orientations.

The Present Study

Whereas acculturation models and recent research suggest that stereotypes are important for the acculturation perspectives and preferences of majority group members, there has been little research on their role in the context of minority group members or even refugees. Thus, our present study aims to gather further empirical evidence on the interrelation between positive and negative sociability stereotypes and acculturation orientations from the refugees' point of view. Furthermore, we add shared reality perceptions as a relevant acculturation orientation of refugees to differentiate the effects of refugees' positive and negative sociability stereotypes toward German host society members on their motivation to adopt the host culture and to maintain their own culture. Second, due to the importance of mutuality in acculturation processes, we analyzed the major effect of refugees' experiences of discrimination on acculturation orientations. Third, we provide first empirical evidence on how stereotypes and perceived discrimination interact in their effect on acculturation orientations from a refugee perspective, and in addition, we also differentiate between two types of discrimination (contextual and everyday discrimination) and analyze their diverse effects in combination with positive and negative sociability stereotypes.

We conducted the study in the context of German–refugee relations because of their social, political, and societal relevance in current German society in the aftermath of the so-called "refugee crisis" in 2015 and 2016. Since the start of this crisis, approximately 1.8 million refugees have migrated to Germany and applied for asylum (Statista, 2019) in order to find protection from war, civil unrest, persecution, or intolerable socioeconomic conditions. Most refugees migrated from middle eastern countries to Germany, and the largest minority groups in Germany due to forced migration are refugees from Syria (550,000), Afghanistan (220,000), and Iraq (180,000) (Statista, 2019).

Hypotheses

The literature on stereotypes and acculturation-relevant perspectives as well as research on the relationships between discrimination experiences and acculturation orientations suggest that both variables are capable of significantly affecting the acculturation process of refugees. To guide the analyses regarding the associations between positive and negative sociability stereotypes and contextual as well as everyday discrimination experiences with cultural adoption and maintenance motivations together with shared reality values among refugees in Germany, and to analyze interactions between stereotypes and discrimination experiences regarding acculturation variables, we tested the following hypotheses:

(1) Positive sociability stereotypes will be associated positively with cultural adoption and shared reality and negatively with cultural maintenance. Negative sociability stereotypes will relate negatively to cultural adoption and perceptions of a shared reality and positively to cultural maintenance.
(2) Experiences of contextual and everyday discrimination will be associated negatively with the motivation to adopt the host culture and perceptions of shared reality and positively with cultural maintenance orientations among refugees.
(3) Positive and negative sociability stereotypes and discrimination variables will elicit significant interactions with cultural adoption, cultural maintenance, and shared

reality. Specifically, Hypothesis 3 tests 12 interactions in total—that is, four interactions (positive sociability stereotypes × contextual discrimination, positive sociability stereotypes × everyday discrimination; negative sociability stereotypes × contextual discrimination, negative sociability stereotypes × everyday discrimination) on all three dependent variables. In general, we expect that that the negative association between discrimination and cultural adoption as well as shared reality and the positive association between discrimination and cultural maintenance will become more intense in the case of higher values in positive sociability stereotypes and less intense in the case of higher values in negative sociability stereotypes.

MATERIALS AND METHODS

Participants

The final refugee sample consisted of 783 refugees in Thuringia, Germany. We excluded 123 participants from the original dataset, because of substantial amounts of missing values on the study variables (more than 50 percent). The remaining sample had some missing data (less than 3 percent) that was imputed via linear interpolation. Regarding sociodemographic variables (see **Table 1**), data indicated 71.5 percent male and 27.8 percent female participation (five individuals reported no gender); the age of participants ranged between 18 and 68 years ($M = 31.64$, $SD = 10.39$); and nationality consisted of 49.2 percent Syrian, 27.0 percent Afghan, 13.5 percent Iraqi, and 5.0 percent Iranian (remaining 5.3 percent migrated mainly from North African countries to Germany). Furthermore, refugees reported their educational level (19.0 percent stated no graduation at all, 15.8 percent with an elementary school degree, 19.8 percent completed middle school, 29.9 percent graduated from high school, and 15.4 percent reported a university degree), the length of their stay in Germany (6.9 percent migrated in 2013/14, 73.2 percent in 2015/16, and 19.9 percent in 2017/18), their residency status (with 57.5 percent having a residency permit), the context in Germany (86.8 percent urban vs. 13.2 percent rural) and their religious affiliation (64.6 percent Sunni, 17.9 percent Shiite, 5.9 percent Christian, 6.9 percent other, and 4.6 percent reporting no religion). Regarding gender, age, and variation in origin of participants, the dataset matched the distribution of refugees in Thuringia at the time data were collected (Bundesamt für Migration und Flüchtlinge BAMF, 2019).

TABLE 1 | Demographic variables of the total sample of refugees and the three largest refugee subgroups.

Variables	Total sample *n* = 783	Afghan refugees *n* = 210	Iraqi refugees *n* = 105	Syrian refugees *n* = 383
Gender				
Male	71.5	84.1	71.4	66.8
Female	27.8	15.9	28.6	33.2
Age	31.64(10.39)	28.54(9.23)	33.50(11.21)	32.70(10.72)
Religion				
Sunni	64.6	35.7	40.9	89.7
Shiite	17.9	51.9	15.5	0.7
Christian	5.9	6.4	2.7	3.0
Other	6.4	2.6	36.4	2.1
None	4.6	3.4	4.5	4.4
Context				
Urban	86.6	83.2	86.7	89.8
Rural	13.2	16.8	13.3	10.2
Residency status				
Residency permit	57.5	42.9	50.5	72.6
Other	42.5	57.1	49.5	27.4
Length of stay				
2013/2014	6.9	8.6	1.0	7.6
2015/2016	73.2	85.2	68.6	77.8
2017/2018	19.9	6.2	30.5	14.6
Education				
No graduation	19.0	46.4	18.1	7.6
Elementary school	15.8	20.8	14.3	13.4
Middle school	19.8	12.1	22.9	23.8
High school	29.9	15.5	16.7	37.4
University	15.4	5.3	18.1	17.8

All demographic variables in percent except for age (in means and standard deviations).

Procedure and Measures

Data were collected as part of the project *Thüringen Monitor Integration* (Beelmann et al., 2019) that surveyed refugees in urban and rural areas of Thuringia, Germany in 2018 (data were collected during the first half of 2018). The questionnaire was translated into an Arabic and a Persian version via back-translation (Peña, 2007). Trained native speakers (mostly students from Friedrich Schiller University with a refugee migration background themselves) gathered the data in sheltered accommodations for refugees, refugee associations, language and integration courses, mosques, at the Friedrich Schiller University Jena, and in private settings. Participation was limited to refugees who migrated to Germany between 2013 and 2018 and had a minimum age of 18 years. In the beginning, refugees were informed about the purpose of the study and how to respond to the questionnaire. Any questions they had were answered by the native speakers. Participants received a compensation of 10 euro after completing the questionnaire. On average, refugees took between 90 and 120 min to complete the questionnaire. Alongside the following measures (see **Table 2** and **Appendix**), the questionnaire contained further subsections that asked for flight experiences and actual situation in Germany, integration-relevant political and social attitudes, contact experiences and friendships with Germans, language skills and integration courses, as well as future expectations.

Stereotypes were operationalized in line with the sociability dimension of stereotype content (Brambilla and Leach, 2014). We differentiated between a positive and a negative sociability dimension regarding German host society members and assessed each quality from the refugee perspective with three items on a five-point rating scale asking to what extent stereotypes apply to all Germans in general from a refugee group perspective. Positive sociability stereotypes were assessed with the adjectives *gentle*,

TABLE 2 | Correlations between the study variables and descriptive statistics.

Variable	*M(SD)*	2	3	4	5	6	7
(1) Positive sociability stereotypes	3.40(0.79)	–0.25**	–0.31**	–0.16**	0.50**	–0.05	0.59**
(2) Negative sociability stereotypes	2.45(0.75)	–	0.25**	0.33**	–0.19**	–0.03	–0.21**
(3) Contextual discrimination	1.59(0.50)		–	0.43**	–0.14**	0.05	–0.34**
(4) Everyday discrimination	1.62(0.43)			–	–0.11**	–0.03	–0.26**
(5) Cultural adoption	4.05(0.72)				–	–0.20**	0.63**
(6) Cultural maintenance	3.77(0.87)					–	–0.13*
(7) Shared reality	3.46(0.99)						–

*Both types of discrimination were measured on three-point scales and the remaining study variables on a five-point rating scale. *p < 0.05; **p < 0.01.*

helpful, and *trustworthy* whereas negative sociability stereotypes were measured with the adjectives *arrogant*, *hostile*, and *rejecting*. The rating ranged from 1 = *nobody* to 5 = *all*. Higher values indicated more positive and negative sociability stereotypes. The internal consistency of the positive sociability scale was α = 0.76 and reached α = 0.66 in case of the negative sociability scale.

Acculturation orientations were assessed with two nine-item scales (Nguyen and Von Eye, 2002; Berry et al., 2006) measuring the motivation to adopt the German host society culture or maintain one's own cultural identity in the German context. The cultural adaptation scale asked refugees to imagine future life in Germany and how likely it was that they would adopt German traditions, values, and behaviors (e.g., *When I think about my future life in Germany, I would like to adopt German values*). On the contrary, the cultural maintenance scale assessed the same items regarding the motivation to retain one's cultural traditions, values, and behaviors when living in Germany (e.g., *When I think about my future life in Germany, I would like to maintain the values of my country of origin*). Both scales measured acculturation orientations on a five-point scale from 1 = *disagree completely* to 5 = *agree completely*. Higher values indicated higher motivation for cultural adaptation and maintenance. Internal consistency was α = 0.83 for cultural adoption and α = 0.88 for cultural maintenance.

Shared reality perceptions were operationalized with three items asking how far refugees thought their attitudes, experiences, and perspectives on everyday life match those held by Germans (Conley et al., 2015; Lutterbach and Beelmann, 2020). The scale ranged from 1 = *disagree completely* to 5 = *agree completely*. Refugees rated, for example, the item: *Germans and I share the same outlook on the world*. Higher values indicated increased shared reality. The internal consistency of the scale was α = 0.77.

Discrimination experiences were measured with two scales. First, contextual discrimination was assessed in terms of discriminatory experiences by refugees in different contexts such as *institutional* contexts, by the *police,* or when *looking for a new apartment* (Worbs et al., 2016). This instrument measured discrimination with eight items on a three-point scale ranging from 1 = *no experience at all* to 3 = *very often*. The internal consistency of the scale was α = 0.85. Second, we applied the *Everyday Discrimination Scale* (Clark et al., 2004; Lewis et al., 2012) to differentiate between different types of discrimination against refugees via four items (e.g., *I was offended by Germans*). Again, everyday discrimination was measured on a three-point scale from 1 = *no experience at all* to 3 = *very often*. Internal consistency was α = 0.77. Higher values indicated more perceived contextual as well as everyday discrimination.

RESULTS

Table 2 reports means (*M*), standard deviations (*SD*), and zero-order correlations of all measures. Refugees reported having more positive sociability stereotypes ($M = 3.40$, $SD = 0.79$) than negative sociability stereotypes ($M = 2.45$, $SD = 0.75$) toward German host society members, $t(782) = 122.74$, $p < 0.001$, and experienced the same amount of contextual ($M = 1.59$, $SD = 0.50$) as well as everyday discrimination ($M = 1.62$, $SD = 0.43$) caused by Germans, $t(782) = -1.12$, $p = 0.262$. The correlations between positive sociability stereotypes and cultural adoption ($r = 0.50$, $p = 0.002$) and shared reality ($r = 0.59$, $p = 0.001$) were significant and positive, and, in contrast, significantly negative between negative sociability stereotypes and cultural adoption ($r = -0.19$, $p = 0.006$) and shared reality values ($r = -0.21$, $p = 0.005$). Regarding the correlations between the discrimination scales and acculturation variables, contextual discrimination correlated significantly and negatively with cultural adoption ($r = -0.14$, $p = 0.007$); and shared reality ($r = -0.34$, $p = 0.004$) and everyday discrimination also correlated significantly negatively with cultural adoption ($r = -0.11$, $p = 0.008$) and shared reality ($r = -0.26$, $p = 0.005$). Only cultural adoption ($r = -0.20$, $p = 0.005$) and shared reality values ($r = -0.13$, $p = 0.024$) correlated significantly and negatively with cultural maintenance values.

We conducted a hierarchical regression analysis to test the unique effects of positive and negative sociability stereotypes (Hypothesis 1) and contextual as well as everyday discrimination (Hypothesis 2) on cultural adaption, cultural maintenance, and shared reality. Additionally, we tested for interaction effects between the stereotypes and discrimination variables in predicting acculturation orientations (Hypothesis 3). Thus, in Step 1 we entered the demographic variables gender, age, religion, context, residency status, length of stay, education, and social group as predictors of cultural adoption, cultural maintenance, and shared reality. In Step 2, we entered positive and negative sociability stereotypes in addition to the sociodemographic variables. Step 3 analyzed the effects of contextual and everyday discrimination on the three acculturation outcomes, controlling for demographic factors. In Step 4, we entered positive and negative sociability stereotypes as well as contextual and everyday discrimination experiences and demographic variables as predictors of acculturation orientations (to analyze the simple effects regarding the interaction effects). Finally, in

Step 5, we added interaction terms between the stereotype and discrimination variables to analyze the interaction effects on cultural adoption, cultural maintenance and shared reality. For the interaction analysis in Step 5, we mean-centered the variables measuring stereotypes and discrimination (Field, 2013). A *post hoc* sensitivity analysis revealed that the R^2 increase from Step 4 to Step 5 (inclusion of four interaction terms leading to an R^2 increase of 0.01 in all dependent variables due to a total of 25 predictor variables) had a power of 0.77 for data from 783 refugees (calculated with G*Power 3.1) in the case of cultural adaption and shared reality. Regarding cultural maintenance, the sensitivity analysis showed a power of 0.67. Consequently, analyses had sufficient power for the detection of a small effect regarding the prediction of cultural adoption and shared reality, but was limited in the case of cultural maintenance (Cohen, 1988).

Table 3 reports the hierarchical regression analysis. Regressions weights in Step 1 revealed that cultural adoption was predicted significantly and negatively by gender ($\beta = -0.11$, $p = 0.001$), predicted positively by age, predicted positively by a Christian in reference to a Sunni religious affiliation, and predicted negatively by refugees who reported no education or middle school education compared to refugees with a high school degree. Regarding cultural maintenance, increased motivations to hold on to refugees' ingroup culture were predicted positively by gender and negatively by length of stay (in comparison to refugees migrated in 2015/2016), and predicted negatively by Afghan and Iraqi refugees in reference to Syrian refugees. Shared reality was predicted positively by age, predicted negatively by no education and middle school education compared to refugees with high school education, and predicted negatively by Afghan in reference to Syrian refugees. Demographic variables accounted for a significant amount of variance in cultural adoption, $R^2 = 0.08$, $F(df = 8, 775) = 9.04$, $p < 0.001$, cultural maintenance, $R^2 = 0.03$, $F(df = 8, 775) = 4.59$, $p < 0.001$, and shared reality, $R^2 = 0.11$, $F(df = 8, 775) = 12.09$, $p < 0.001$.

In testing Hypothesis 1, Step 2 of the hierarchical regression showed that cultural adoption was predicted significantly and positively by positive sociability stereotypes as well as being predicted significantly and negatively by negative sociability stereotypes. Cultural maintenance orientations were not predicted by either quality of sociability stereotypes. However, shared reality was predicted positively by positive sociability stereotypes and negatively by negative sociability stereotypes. Demographic and stereotype variables accounted for an increased and significant amount of explained variance in cultural adoption, $R^2 = 0.27$, $F(df = 19, 764) = 12.60$, $p < 0.001$, $\Delta R^2 = 0.19$, shared reality, $R^2 = 0.30$, $F(df = 19, 764) = 4.54$, $p < 0.001$, $\Delta R^2 = 0.19$, and cultural maintenance, $R^2 = 0.15$, $F(df = 19, 764) = 6.06$, $p = 0.001$, $\Delta R^2 = 0.01$.

Step 3 of the hierarchical regression tested Hypothesis 2 by analyzing the unique effect of contextual and everyday discrimination experiences on acculturative orientations held by refugees living in Germany. Cultural adoption was predicted significantly and negatively by contextual discrimination but not by everyday discrimination. The orientation to maintain one's culture in the host context was predicted negatively by contextual discrimination and predicted positively by everyday discrimination. Regarding shared reality values, contextual as well as everyday discrimination were significant and negative predictors. In contrast to Step 1, demographic and discrimination variables accounted for an increased and significant amount of explained variance in cultural adoption, $R^2 = 0.11$, $F(df = 19, 764) = 4.14$, $p < 0.001$, $\Delta R^2 = 0.03$, cultural maintenance, $R^2 = 0.16$, $F(df = 19, 764) = 6.15$, $p < 0.001$, $\Delta R^2 = 0.01$, and shared reality, $R^2 = 0.16$, $F(df = 19, 764) = 6.45$, $p < 0.001$, $\Delta R^2 = 0.05$.

To test Hypothesis 3, we analyzed the simple effects of both stereotype measures and discrimination variables on cultural adoption, cultural maintenance, and shared reality (Step 4), which, in turn, delivered the basis to interpret the interaction effects resulting from Step 5.

Thus, Step 4 integrated positive as well as negative sociability stereotypes and contextual as well as everyday discrimination to predict acculturation orientations, and it tested for interaction recommendations in regressions (Field, 2013). Cultural adoption was predicted significantly and positively by positive sociability stereotypes and predicted negatively by negative sociability stereotypes and contextual discrimination. Cultural maintenance was not predicted significantly by both sociability stereotype variables or by both discrimination experiences. Regarding shared reality, positive sociability stereotypes appeared as a positive predictor, and negative sociability stereotypes as well as contextual and everyday discrimination were found as negative predictors. Demographic, stereotype, and discrimination variables increased the amount of significant explained variance in cultural adoption, $R^2 = 0.28$, $F(df = 21, 762) = 11.90$, $p < 0.001$, $\Delta R^2 = 0.01$ compared to Step 2, and $\Delta R^2 = 0.16$ compared to Step 3, cultural maintenance, $R^2 = 0.16$, $F(df = 21, 762) = 5.60$, $p < 0.001$, $\Delta R^2 = 0.01$ in comparison to Step 2 (no increment in variance explanation in comparison to Step 3), and shared reality, $R^2 = 0.32$, $F(df = 21, 762) = 14.70$, $p < 0.001$, $\Delta R^2 = 0.02$ regarding Step 2, and $\Delta R^2 = 0.16$ concerning Step 3.

Step 5 analyzed 12 interactions between sociability stereotypes and discrimination experiences on acculturation orientations held by refugees in Germany. Regarding cultural adoption, all interaction terms elicited significant effects. Besides the negative interaction term between negative sociability stereotypes and contextual discrimination, the interaction effects between positive sociability stereotypes and contextual as well as everyday discrimination and between negative sociability stereotypes and everyday discrimination were all positive (see **Figure 1**). Regarding the simple effects, the positive interaction terms in the case of positive sociability stereotypes indicated that with a stronger negative association between contextual as well as everyday discrimination and cultural adoption, the positive relation between positive sociability stereotypes and cultural adoption became more powerful. The positive interaction between negative sociability stereotypes and everyday discrimination showed that with an intensified negative relation between negative sociability stereotypes and cultural adoption, the positive relation between everyday discrimination and cultural adoption became stronger. Furthermore, the negative interaction term between negative sociability stereotypes and

TABLE 3 | Hierarchical regression analysis predicting acculturation orientations by demographic variables, sociability stereotypes, and discrimination experiences as well as interactions between sociability stereotypes and discrimination.

	Cultural adoption				Cultural maintenance				Shared reality			
Model	***B***	***SE***	**β**	***p***	***B***	***SE***	**β**	***p***	***B***	***SE***	**β**	***p***
1 (Constant)	3.77	0.16		<0.001	4.13	0.19		<.001	3.33	0.20		<0.001
Gender (men = 0; women = 1)	–0.19	0.05	–.13	<0.001	0.19	0.07	0.10	0.004	–0.11	0.08	–0.05	0.186
Age	0.01	0.01	0.11	0.001	–0.01	0.01	–0.02	0.488	0.01	0.01	0.14	<0.001
Religion (Reference = Sunni)												
Shiite – Sunni	–0.04	0.07	–0.06	0.517	–0.08	0.08	–0.09	0.346	0.03	0.10	0.03	0.749
Christian – Sunni	0.24	0.11	0.35	0.030	–0.08	0.14	–0.10	0.550	0.10	0.16	0.10	0.530
Other – Sunni	–0.12	0.13	–0.18	0.352	0.01	0.16	0.01	0.990	–0.23	0.19	–0.23	0.241
None – Sunni	0.05	0.11	0.08	0.623	0.09	0.14	0.11	0.494	0.18	0.16	0.18	0.276
Context (rural = 0; urban = 1)	0.07	0.07	0.03	0.325	–0.02	0.09	–0.01	0.812	0.16	0.10	0.06	0.122
Residency status (permit = 0; other = 1)	–0.04	0.05	–0.03	0.455	–0.02	0.07	–0.01	0.773	–0.15	0.08	–0.08	0.056
Length of stay (Reference = 2015, 2016)												
2013/2014 – 2015/2016	–0.05	0.10	–0.08	0.578	–0.25	0.12	–0.30	0.035	–0.11	0.14	–0.11	0.443
2017/2018 – 2015/2016	0.06	0.07	0.09	0.382	–0.24	0.09	–0.29	0.006	0.014	0.11	0.14	0.188
Education (Reference = High school)												
No graduation – high school	–0.20	0.08	–.28	0.016	0.10	0.10	0.11	0.316	–0.34	0.11	–0.35	0.003
Elementary school – high school	–0.12	0.07	–0.17	0.118	0.09	0.09	0.11	0.338	–0.16	0.11	–0.17	0.138
Middle school – high school	–0.20	0.07	–0.29	0.004	–0.01	0.08	–0.02	0.866	–0.24	0.10	–0.25	0.015
University – high school	–0.03	0.08	–0.04	0.690	–0.18	0.09	–0.21	0.052	–0.05	0.11	–0.05	0.621
Social group (Reference Syrian refugees)												
Afghanistan – Syria	–0.04	0.07	–0.05	0.593	–0.24	0.08	–0.34	<0.001	–0.34	0.10	–0.35	<0.001
Iraq – Syria	0.14	0.07	0.21	0.054	–0.18	0.09	–0.25	<0.001	0.10	0.11	0.10	0.359
2 (Constant)	2.98	0.19		<0.001	4.19	0.26		<0.001	2.06	0.27		<0.001
Gender (men = 0; women = 1)	–0.17	0.05	–0.11	<0.001	0.19	0.07	0.10	0.004	–0.09	0.07	–0.04	0.213
Age	0.01	0.01	0.06	0.036	–0.01	0.01	–0.02	0.507	0.01	0.01	0.09	0.004
Religion (Reference = Sunni)												
Shiite – Sunni	–0.09	0.06	–0.14	0.123	–0.08	0.08	–0.09	0.357	–0.05	0.09	–0.05	0.586
Christian – Sunni	0.19	0.10	0.29	0.050	–0.08	0.14	–0.09	0.558	0.03	0.14	0.03	0.842
Other – Sunni	–0.15	0.12	–.23	0.193	0.01	0.16	0.01	0.983	–0.27	0.17	–0.27	0.112
None – Sunni	0.05	0.10	0.06	0.646	0.10	0.14	0.11	0.488	0.18	0.14	0.18	0.207
Context (rural = 0; urban = 1)	0.09	0.06	0.04	0.138	–0.02	0.09	–0.01	0.811	0.21	0.09	0.07	0.025
Residency status (permit = 0; other = 1)	–0.04	0.05	–0.02	0.470	–0.02	0.07	–0.01	0.770	–0.14	0.07	–0.07	0.040
Length of stay (Reference = 2015, 2016)												
2013/2014 – 2015/2016	–0.06	0.09	–0.09	0.479	–0.25	0.12	–0.29	0.036	–0.11	0.12	–0.11	0.379
2017/2018 – 2015/2016	0.03	0.07	0.03	0.687	–0.25	0.09	–0.29	0.006	0.08	0.09	0.08	0.406
Education (Reference = High school)												
No graduation – high school	–0.18	0.07	–0.26	0.012	0.10	0.10	0.11	0.318	–0.32	0.10	–0.32	0.002
Elementary school – high school	–0.11	0.07	–0.16	0.112	0.09	0.09	0.11	0.338	–0.14	0.10	–0.14	0.150
Middle school – high school	–0.17	0.06	–0.25	0.007	–0.02	0.08	–0.02	0.855	–0.20	0.09	–0.20	0.028
University – high school	–0.01	0.07	–0.01	0.907	–0.18	0.09	–0.21	0.051	0.01	0.10	0.01	0.921
Social group (Reference Syrian refugees)												
Afghanistan – Syria	–0.03	0.06	–0.05	0.588	–0.24	0.09	–0.34	<0.001	–0.24	0.09	–0.24	0.009
Iraq – Syria	0.17	0.07	0.25	0.010	–0.19	0.09	–0.25	<0.001	0.14	0.10	0.15	0.123
Positive sociability stereotypes	**0.35**	**0.03**	**0.41**	**<0.001**	**–0.01**	**0.04**	**–0.01**	**0.723**	**0.52**	**0.04**	**0.41**	**<0.001**
Negative sociability stereotypes	**–0.08**	**0.03**	**–0.09**	**0.005**	**–0.02**	**0.04**	**–0.01**	**0.970**	**–0.19**	**0.04**	**–0.14**	**<0.001**
3 (Constant)	4.41	0.19		<0.001	3.94	0.24		<0.001	4.44	0.27		<0.001
Gender (men = 0; women = 1)	–0.21	0.05	–0.14	<0.001	0.20	0.07	0.10	0.003	–0.16	0.07	–0.08	0.035
Age	0.01	0.01	0.09	0.010	–0.01	0.01	–0.01	0.592	0.01	0.01	0.11	0.002
Religion (Reference = Sunni)												
Shiite – Sunni	–0.05	0.07	–0.06	0.502	–0.07	0.08	–0.08	0.375	0.01	0.10	0.01	0.924
Christian – Sunni	0.19	0.11	0.27	0.089	–0.06	0.14	–0.07	0.642	–0.01	0.16	–0.01	0.983
Other – Sunni	–0.12	0.12	–0.18	0.348	0.01	0.16	0.01	0.999	–0.22	0.19	–0.22	0.248
None – Sunni	0.04	0.11	0.05	0.728	0.10	0.14	0.11	0.460	0.13	0.16	0.14	0.396
Context (rural = 0; urban = 1)	0.06	0.07	0.03	0.403	–0.02	0.09	–0.01	0.845	0.14	0.11	0.05	0.169
Residency status (permit = 0; other = 1)	–0.05	0.05	–0.03	0.375	–0.02	0.07	–0.01	0.788	–0.16	0.08	–0.08	0.038
Length of stay (Reference = 2015, 2016)												
2013/2014 – 2015/2016	–0.06	0.09	–0.07	0.594	–0.025	0.12	–0.29	0.034	–0.11	0.14	–0.11	0.439
2017/2018 – 2015/2016	0.03	0.07	0.09	0.387	–0.024	0.09	–0.28	0.007	0.13	0.10	0.13	0.208

(Continued)

TABLE 3 | Continued

	Cultural adoption				Cultural maintenance				Shared reality			
Model	***B***	***SE***	β	***p***	***B***	***SE***	β	***p***	***B***	***SE***	β	***p***
Education (Reference = High school)												
No graduation – high school	–0.20	0.08	–0.30	0.010	0.11	0.10	0.12	0.272	–0.39	0.11	–0.40	<0.001
Elementary school – high school	–0.12	0.07	–0.18	0.101	0.09	0.09	0.10	0.334	–0.17	0.11	–0.17	0.116
Middle school – high school	–0.22	0.07	–0.32	0.001	–0.06	0.08	–0.01	0.945	–0.29	0.10	–0.30	0.003
University – high school	–0.04	0.07	–0.06	0.588	–0.18	0.09	–0.02	0.057	–0.07	0.11	–0.08	0.483
Social group (Reference Syrian refugees)												
Afghanistan – Syria	0.02	0.07	0.02	0.790	–0.26	0.09	–0.35	<0.001	–0.24	0.10	–0.24	0.018
Iraq – Syria	0.14	0.07	0.20	0.062	–0.18	0.09	–0.24	<0.001	0.07	0.11	0.08	0.479
Contextual discrimination	**–0.21**	**0.06**	**–0.15**	**<0.001**	**–0.11**	**0.07**	**–0.05**	**0.049**	**–0.31**	**0.08**	**–0.16**	**<0.001**
Everyday discrimination	**–0.04**	**0.06**	**–0.02**	**0.497**	**0.13**	**0.08**	**0.06**	**0.045**	**–0.30**	**0.09**	**–0.13**	**<0.001**
4 (Constant)	3.10	0.22		<0.001	3.98	0.30		<0.001	2.69	0.31		<0.001
Gender (men = 0; women = 1)	–0.19	0.05	–0.13	<0.001	0.20	0.07	0.10	0.003	–0.12	0.07	–0.06	0.083
Age	0.01	0.01	0.07	0.044	–0.01	0.01	–0.01	0.585	0.01	0.01	0.08	0.010
Religion (Reference = Sunni)												
Shiite – Sunni	–0.09	0.06	–0.13	0.498	–0.08	0.08	–0.08	0.373	–0.05	0.09	–0.05	0.545
Christian – Sunni	0.17	0.10	0.27	0.090	–0.06	0.14	–0.07	0.644	–0.03	0.14	–0.03	0.859
Other – Sunni	–0.16	0.12	–0.23	0.351	0.01	0.16	0.01	0.996	–0.26	0.17	–0.27	0.118
None – Sunni	0.04	0.06	0.04	0.713	0.11	0.14	0.12	0.445	0.15	0.14	0.15	0.289
Context (rural = 0; urban = 1)	0.09	0.09	0.04	0.169	–0.02	0.09	–0.01	0.862	0.19	0.09	0.07	0.039
Residency status (permit = 0; other = 1)	–0.04	0.07	–0.03	0.410	–0.02	0.07	–0.01	0.786	–0.15	0.07	–0.07	0.031
Length of stay (Reference = 2015,2016)												
2013/2014 – 2015/2016	–0.06	0.09	–0.09	0.486	–0.25	0.12	–0.29	0.036	–0.12	0.12	–0.11	0.366
2017/2018 – 2015/2016	0.03	0.07	0.04	0.649	–0.25	0.09	–0.28	0.006	0.08	0.09	0.08	0.397
Education (Reference = High school)												
No graduation – high school	–0.17	0.07	–0.26	0.015	0.11	0.10	0.12	0.271	–0.35	0.10	–0.35	<0.001
Elementary school – high school	–0.11	0.07	–0.17	0.097	0.09	0.09	0.10	0.327	–0.15	0.10	–0.15	0.127
Middle school – high school	–0.17	0.06	–0.26	0.005	–0.01	0.09	–0.01	0.945	–0.23	0.09	–0.23	0.011
University – high school	–0.01	0.07	–0.01	0.976	–0.17	0.09	–0.20	0.059	–0.01	0.10	–0.01	0.926
Social group (Reference Syrian refugees)												
Afghanistan – Syria	0.06	0.06	0.09	0.360	–0.26	0.10	–0.34	<0.001	–0.18	0.09	–0.18	0.043
Iraq – Syria	0.17	0.07	0.26	0.009	–0.18	0.09	–0.24	<0.001	0.13	0.10	0.13	0.171
Positive sociability stereotypes	**0.35**	**0.03**	**0.41**	**<0.001**	**–0.01**	**0.04**	**–0.01**	**0.899**	**0.49**	**0.04**	**0.39**	**<0.001**
Negative sociability stereotypes	**–0.07**	**0.03**	**–0.08**	**0.017**	**–0.01**	**0.04**	**–0.01**	**0.780**	**–0.16**	**0.04**	**–0.11**	**<0.001**
Contextual discrimination	**–0.12**	**0.05**	**–0.09**	**0.015**	**0.05**	**0.07**	**0.03**	**0.451**	**–0.18**	**0.07**	**–0.09**	**0.012**
Everyday discrimination	**0.06**	**0.06**	**0.04**	**0.306**	**0.06**	**0.08**	**0.02**	**0.456**	**–0.16**	**0.08**	**–0.07**	**0.049**
5 (Constant)	3.07	0.22		<0.001	4.01	0.31		<0.001	2.65	0.32		<0.001
Gender (men = 0; women = 1)	–0.19	0.04	–0.13	<0.001	0.20	0.07	0.11	0.003	–0.12	0.07	–0.06	0.084
Age	0.01	0.01	0.07	0.033	–0.01	0.01	–0.01	0.642	0.01	0.01	0.09	0.008
Religion (Reference = Sunni)												
Shiite – Sunni	–0.08	0.06	–0.12	0.196	–0.06	0.08	–0.07	0.457	–0.05	0.09	–0.05	0.583
Christian – Sunni	0.18	0.10	0.27	0.067	–0.05	0.14	–0.06	0.692	–0.01	0.14	–0.01	0.923
Other – Sunni	–0.18	0.12	–0.26	0.137	–0.05	0.16	–0.06	0.763	–0.29	0.17	–0.29	0.088
None – Sunni	0.03	0.10	0.04	0.795	0.10	0.14	0.12	0.471	0.14	0.14	0.14	0.333
Context (rural = 0; urban = 1)	0.09	0.06	0.05	0.154	–0.01	0.09	–0.01	0.888	0.20	0.09	0.07	0.032
Residency status (permit = 0; other = 1)	–0.04	0.05	–0.02	0.389	–0.02	0.07	–0.01	0.787	–0.14	0.07	–0.07	0.043
Length of stay (Reference = 2015/2016)												
2013/2014 – 2015/2016	–0.06	0.09	–0.08	0.524	–0.24	0.12	–0.28	0.044	–0.10	0.12	–0.11	0.402
2017/2018 – 2015/2016	0.02	0.07	0.03	0.794	–0.26	0.09	–0.30	0.004	0.07	0.09	0.07	0.434
Education (Reference = High school)												
No graduation – high school	–0.17	0.07	–0.26	0.013	0.10	0.10	0.12	0.289	–0.35	0.10	–0.36	<0.001
Elementary school – high school	–0.12	0.07	–0.18	0.083	0.09	0.09	0.11	0.328	–0.15	0.10	–0.15	0.121
Middle school – high school	–0.17	0.06	–0.26	0.005	–0.01	0.08	–0.01	0.963	–0.23	0.09	–0.23	0.010
University – high school	0.01	0.07	0.01	0.949	–0.16	0.09	–0.19	0.075	0.01	0.10	0.01	0.961
Social group (Reference Syrian refugees)												
Afghanistan – Syria	0.06	0.06	0.09	0.336	–0.24	0.09	–0.34	<0.001	–0.17	0.09	–0.17	0.059
Iraq – Syria	0.17	0.07	0.27	0.007	–0.17	0.09	–0.23	<0.001	0.14	0.10	0.14	0.137
Positive sociability stereotypes	0.02	0.03	0.02	0.682	–0.59	0.04	–0.37	<0.001	0.49	0.04	0.39	<0.001
Negative sociability stereotypes	–0.23	0.04	–0.24	<0.001	–0.16	0.05	–0.09	<0.001	–0.15	0.05	–0.11	0.001

(Continued)

TABLE 3 | Continued

	Cultural adoption				Cultural maintenance				Shared reality			
Model	***B***	***SE***	β	***p***	***B***	***SE***	β	***p***	***B***	***SE***	β	***p***
Contextual discrimination	–0.36	0.05	–0.22	<0.001	–0.98	0.07	–0.38	<0.001	–0.19	0.07	–0.09	0.012
Everyday discrimination	–0.71	0.05	–0.37	<0.001	–0.47	0.08	–0.37	<0.001	–0.17	0.08	–0.07	0.037
Positive sociability stereotypes × Contextual discrimination	**0.13**	**0.01**	**0.29**	**<0.001**	**0.23**	**0.02**	**0.37**	**<0.001**	**0.08**	**0.02**	**0.13**	**<0.001**
Positive sociability stereotypes × Everyday discrimination	**0.11**	**0.01**	**0.22**	**<0.001**	**0.17**	**0.02**	**0.20**	**<0.001**	**0.19**	**0.02**	**0.33**	**<0.001**
Negative sociability stereotypes × Contextual discrimination	**–0.06**	**0.01**	**–0.11**	**<0.001**	**0.03**	**0.02**	**0.04**	**0.068**	**0.01**	**0.02**	**0.01**	**0.648**
Negative sociability stereotypes × Everyday discrimination	**0.14**	**0.01**	**0.33**	**<0.001**	**0.05**	**0.02**	**0.08**	**<0.001**	**0.02**	**0.02**	**0.03**	**0.376**

Bold variables display simple effects and interactions of stereotypes and discrimination on acculturation orientations and shared reality.

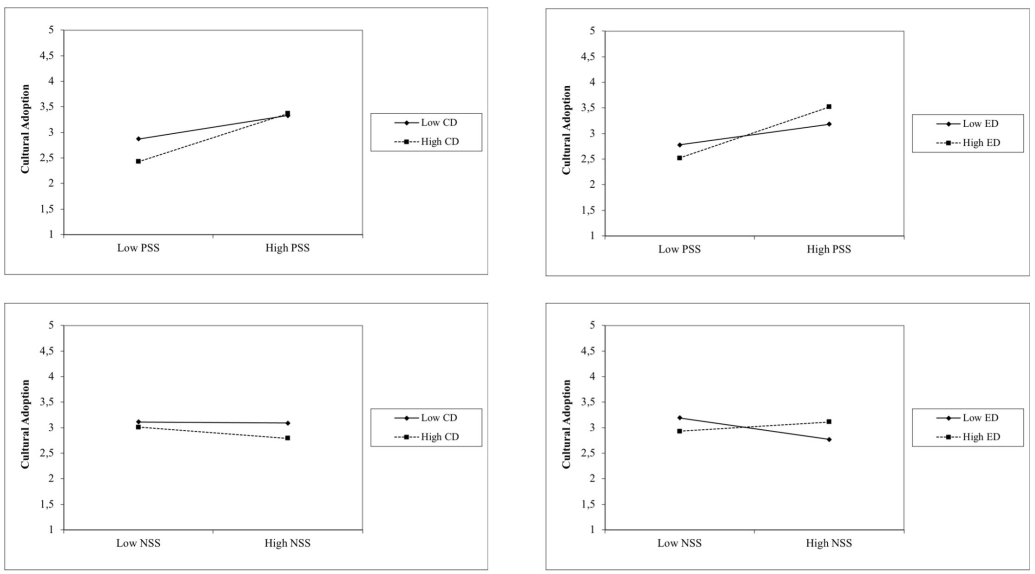

FIGURE 1 | Interactions between sociability stereptypes and discrimination experiences among refugees on cultural adoption orientations. PSS, positive sociability stereotypes; NSS, negative sociability stereotypes; CD, contextual discrimination; ED, everyday discrimination.

contextual suggested that a stronger negative association between negative sociability stereotypes and adoption motivations was accompanied by a less negative relation between contextual discrimination and cultural adoption (or vice versa).

The interaction analysis of cultural maintenance showed three significant positive interactions between (a) positive sociability stereotypes and contextual discrimination, (b) positive sociability stereotypes and everyday discrimination, and (c) negative sociability stereotypes and everyday discrimination. This indicated crossover interactions (Aiken and West, 1991) due to the non-significant main effects of positive and negative sociability stereotypes and contextual and everyday discrimination on cultural maintenance orientations (see Step 4). **Figure 2** shows these crossover effects, indicating that refugees with higher levels in positive sociability stereotypes and both discrimination variables reported a stronger motivation to maintain their culture. In contrast, refugees with high values in negative sociability stereotypes and low experiences of everyday discrimination were found to report a decreased motivation to retain their ingroup's culture.

Finally, shared reality was predicted significantly by positive interactions between positive sociability stereotypes and contextual as well as everyday discrimination (see **Figure 3**). Regarding the simple effects resulting from Step 4, the positive interactions terms of positive sociability stereotypes indicated that with a stronger negative association between contextual as well as everyday discrimination and shared reality, the positive relation between positive sociability stereotypes and shared reality became more intense.

In comparison to Step 4, demographic, stereotype, discrimination, and interaction variables accounted for small and significant increments of explained variance in cultural adoption, $R^2 = 0.29$, $F(df = 25, 758) = 10.80$, $p < 0.001$, $\Delta R^2 = 0.01$, cultural maintenance, $R^2 = 0.17$, $F(df = 25, 758) = 5.23$, $p < 0.001$, $\Delta R^2 = 0.01$, and shared reality, $R^2 = 0.33$, $F(df = 25, 767) = 12.80$, $p < 0.001$, $\Delta R^2 = 0.01$.

With regard to the significant impact of different demographic indicators on all acculturation orientations, we additionally conducted interaction analyses between the stereotype, discrimination, and demographic variables. In the case of gender, there were two significant interactions. Negative sociability stereotypes and gender interacted positively on cultural adoption ($\beta = 0.29$, $p < 0.001$) and shared reality ($\beta = 0.37$, $p < 0.001$) indicating that the negative effect of negative sociability

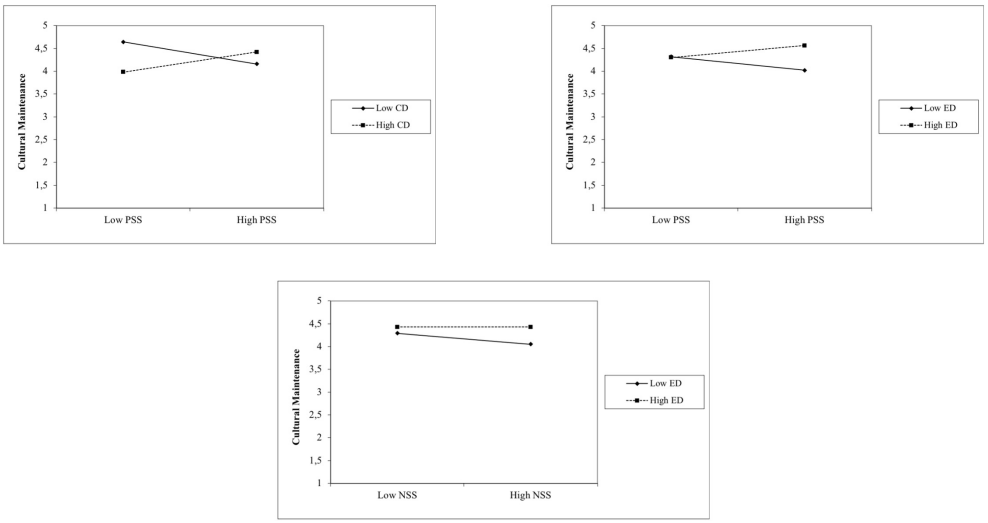

FIGURE 2 | Cross-over interactions between sociability stereptypes and discrimination experiences among refugees on cultural maintenance orientations. PSS, positive sociability stereotypes; NSS, negative sociability stereotypes; CD, contextual discrimination; ED, everyday discrimination.

stereotypes (see **Table 3**, Step 2, $\beta = -0.09$, $p < 0.001$, in case of cultural adoption, $\beta = -0.14$, $p = 0.004$, in case of shared reality) was stronger among female refugees (simple effects for females were $\beta = -0.11$, $p < 0.001$ in case of cultural adoption, and $\beta = -0.04$, $p < 0.001$, in case of shared reality). All other interaction effects were not significant. We also calculated three-way interactions to test for demographic interference regarding the 12 interactions between stereotypes and discrimination experiences, but no significant interaction terms emerged.

DISCUSSION

The present study examined how positive and negative sociability stereotypes toward host society members and contextual as well as everyday discrimination experiences influenced the acculturation orientations and shared reality perceptions held by refugees. It also analyzed interactions between stereotypes and discrimination experiences regarding the impact on acculturation orientations and shared reality values.

Unique Effects of Sociability Stereotypes and Discrimination Experiences

Regarding Hypothesis 1, results revealed that the perception of host society members as sociable was associated positively with the motivation of refugees to adopt relevant German cultural traditions and values as well as to perceive commonalities with the German host culture. Nevertheless, these positive sociability stereotypes held by refugees were not associated significantly with the motivation to maintain their cultural identity when imagining their future life in Germany. Negative sociability stereotypes toward German host society members were related negatively to the motivation to adopt the German host culture, and also associated negatively with shared reality values; but as in the case of positive sociability stereotypes, there was no significant association between negative sociability stereotypes and cultural maintenance orientations. Thus, Hypothesis 1 was supported regarding the asymmetrical associations between positive and negative sociability stereotypes and cultural adoption motivations as well as shared reality, but not in the case of cultural maintenance orientations.

These findings confirm that positive sociability stereotypes are fundamentally related to acculturation orientations and shared reality perceptions among refugees, and they are in line with previous research on the relationship between stereotypes and acculturation preferences among majority group members (Lee and Fiske, 2006; Maisonneuve and Testé, 2007). For example, the studies by Montreuil and Bourhis (2001, 2004) found that acculturation preferences in the majority point of view differ regarding the valuation or devaluation of immigrant groups. The study by López-Rodríguez et al. (2014) also showed that majority stereotypes were associated with acculturation preferences for immigrants. Furthermore, the research by López-Rodríguez et al. (2014) found that the interrelation between stereotypes and cultural adoption was stronger than the association with cultural maintenance—a result also found by Maisonneuve and Testé (2007). However, the asymmetrical effects of positive and negative sociability stereotypes on cultural adoption orientations are problematic. Successful integration is defined by both cultural adaption and cultural maintenance (Berry, 1997, 2001), but negative sociability stereotypes are accompanied by decreases in the motivation to adopt aspects of the host society. Thus, this pattern suggests that negative sociability stereotypes may promote the acculturation strategy of separation, although it is rarely preferred by either majority or minority groups (Brown et al., 2016).

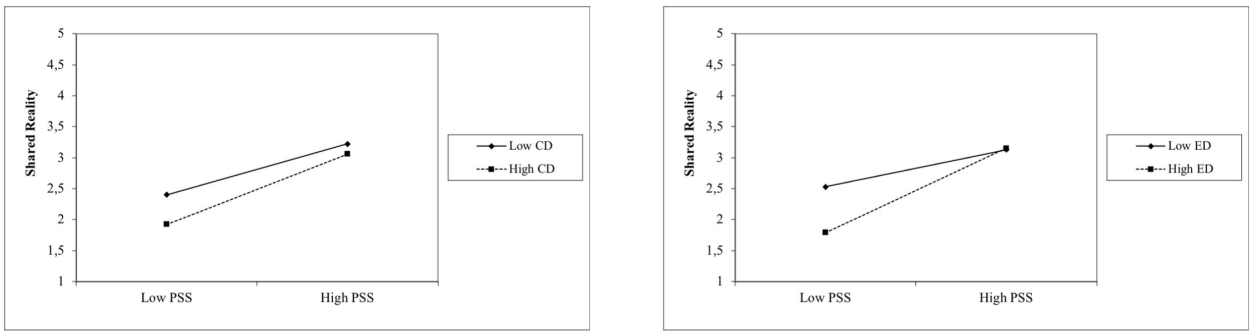

FIGURE 3 | Interactions between sociability stereptypes and discrimination experiences among refugees on shared reality. PSS, positive sociability stereotypes; CD, contextual discrimination; ED, everyday discrimination.

Another important aim of the current study was to examine the impact of different discrimination experiences on refugees' acculturation orientations to respect acculturative experiences with the host society. We examined contextual and everyday discrimination experiences. Regarding Hypothesis 2, results mostly indicated that both discrimination subtypes were associated negatively with cultural adoption and shared reality values. However, in the case of cultural maintenance orientations, contextual discrimination related negatively to the motivation to maintain one's culture, and in contrast, everyday discrimination experiences related positively to higher values in cultural maintenance.

Like other studies on the relationship between discrimination experiences and acculturation orientations (Berry et al., 2006; Te Lindert et al., 2008; Juang and Cookston, 2009), the results of our analyses point in the direction that perceived discrimination is associated with lower acculturation into the host society. This is also stressed by longitudinal evidence reported by Ramos et al. (2016) showing that perceived discrimination is associated with a perceived reduction of permeability, which, in turn, results in avoiding the host society, and simultaneously endorsing one's own cultural group. Nonetheless, other longitudinal research has indicated that the link between both concepts is stronger, when discrimination is predicted by acculturation orientations (Motti-Stefanidi et al., 2018). Furthermore, our study highlights that everyday discrimination leads to a stronger motivation to maintain one's cultural heritage. This is in line with the rejection–identification model (Branscombe et al., 1999) stating that minority group members focus more strongly on their cultural ingroup to seek the protection of ingroup members against discrimination by the majority. But interestingly, contextual discrimination works the other way around by reducing the motivation to maintain cultural aspects of the ingroup. Discriminatory and prejudiced contexts are locations and situations with predictable and systematic inequalities that are longstanding, invariable, and highly dependent on social group membership (Murphy et al., 2018). Thus, refugees might be motivated to discard aspects of their cultural ingroup in favor of ending systematic experiences of discrimination.

Interactions Between Sociability Stereotypes and Discrimination Experiences

The most important contribution of this article is the novel evidence on the interaction between stereotypes and discrimination experiences, and how these interactions are associated with acculturation orientations among refugees. We found substantial support for our Hypothesis 3, because nine of the 12 interaction terms were associated significantly with acculturation orientations. Overall, the pattern of results emphasized, as expected, that discrimination experiences of refugees become more intensified when refugees hold high values in positive sociability stereotypes, and become less important when refugees already hold high values in negative sociability stereotypes toward host society members.

Regarding cultural adoption orientations and shared reality values, interactions between positive sociability stereotypes and both types of discrimination resulted in a disillusion effect. Because the interactions were positive, a stronger positive relation between positive sociability stereotypes and cultural adoption as well as shared reality was associated with stronger negative relations between discrimination experiences and both dependent measures. Thus, it is especially refugees who are likely and motivated to adopt aspects of the host culture and to perceive commonalities with host society members due to their positive sociability stereotypes who suffer from discrimination by the hosting society regarding their motivation to adopt the host culture and to develop a shared reality. In contrast, the interaction between negative sociability stereotypes and contextual discrimination showed that a stronger negative relationship between negative stereotypes and cultural adoption was associated with a weaker negative relation between contextual discrimination and cultural adoption or vice versa. This interaction indicated that with a stronger rejection of the host society culture due to negative beliefs about host society members, discrimination experiences become less meaningful for refugees' cultural adoption orientations and shared reality values.

Regarding cultural maintenance, analyses revealed crossover interactions (Aiken and West, 1991). Thus, there were no significant associations between cultural maintenance

orientations and positive and negative sociability stereotypes, and contextual and everyday discrimination. However, crossover interactions indicate that the association between a predictor and a dependent variable is opposite, depending on the value of the second predictor. Hence, the interaction between positive sociability stereotypes and contextual as well as everyday discrimination indicated that refugees with high values in positive sociability stereotypes and high values in perceived discrimination reported a pronounced motivation to maintain their own culture. Furthermore, the interaction between negative sociability stereotypes and everyday discrimination showed that high levels in everyday discrimination experiences were associated with higher levels in cultural maintenance among low and high levels of negative stereotypes.

Taken together, our research gives ample evidence that strong discrimination experiences elicit a maladaptive effect on successful integration, because they reduce the motivation to adopt aspects of the host culture, reduce the perception of sharedness between the host society and one's cultural ingroup, and increase the motivation to maintain one's own culture among refugees holding strong positive sociability stereotypes toward the host society. Hence, increased negative encounters and discrimination experiences are likely to lead to separating acculturation strategies among refugees who actually had the potential to integrate into the host society.

Research on intergroup contact has shown that individuals who are high in positive outgroup evaluations, high in their motivation to learn about social outgroups, and highly motivated to extend their social self tend to seek more intergroup encounters (Kauff et al., 2020). Consequently, refugees with positive sociability stereotypes and an increased motivation to adopt cultural aspects of the host society end up in more intergroup experiences, situations, and contexts. Thus, increased intergroup contact increases the potential for experiencing discrimination. Such disillusioning experiences within the acculturation process are likely to lead to acculturative stress (Berry, 2006), especially in the case of an experienced ambiguity between one's own motivations toward biculturality and perceptions that host society members are not motivated to accept other cultures.

Limitations and Strengths of the Present Research

The cross-sectional nature of the study is a major impediment to causal inferences concerning the bidirectionality of acculturation. Future research should assess stereotypes, discrimination, and acculturation orientations among majority and minority groups in a longitudinal approach to fully analyze and understand the mutuality of acculturation between migrants and their host society.

In addition, generalizability is limited by the significant impact of various sociodemographic variables on the dependent acculturation measures. However, the sample was representative for refugees living in Germany in terms of gender, age, and country of origin (Beelmann et al., 2019). Concerning the educational level, the sample was much more educated than the average refugee population that migrated to Germany. Furthermore, interaction analyses between stereotypes and demographics as well as between discrimination experiences and demographics as well as three-way interactions found only three significant interactions regarding gender and residency status. Thus, our main analyses were mostly free of covariate interactions.

Regarding the assessment of stereotypes, our research is limited to personal stereotypes. Consensual or cultural stereotypes have been found to be more accurate, less positive, and less colored by individual experiences, motivational states, and individual differences (Jussim et al., 2015; Findor et al., 2020; Kotzur et al., 2020). Furthermore, cultural stereotypes are likely to be more connected with real positions of social groups within societal structures.

From a measurement point of view, some of our measures could be improved and extended. We used only three items to measure both positive and negative sociability stereotypes. Nonetheless, the effects of stereotypes on acculturation orientations replicate most findings of earlier research on the interrelation between stereotypes and acculturation in a majority sample (López-Rodríguez et al., 2014). Hence, we do not think these limited measures had any major consequences in terms of threatening the validity of our results. Regarding potential new measures, it would be necessary to develop an instrument measuring all dimensions of shared reality and not just perceived commonalities between ingroup and outgroup. A comprehensive measure of shared reality has to consist of a cognitive dimension regarding contents to share, an affective dimension regarding the experience of commonalities with outgroup members, and a metadimension regarding the sensation that the outgroup member experiences this commonality as well.

Another limitation stems from the translation of the items into Arabic and Persian. The data acquisition used the translation technique of back-translation by native speakers as well as the method of decentering (Sechrest et al., 1972) to ensure linguistic equivalence (Peña, 2007). However, specific linguistic concepts and constructs cannot be translated into another cultural context without describing or defining their meanings and contents (e.g., terms from German migration law that have no equivalent in Arabic or Persian). This is especially problematic in the case of paper-and-pencil questionnaires. Nevertheless, data collection was always accompanied by native speakers of both Persian and Arabic language groups to explain the modus operandi of the questionnaire and to answer questions raised by the participants.

Regarding the strengths of the present research, the study is the first to analyze the relationships between positive and negative sociability stereotypes and acculturation orientations as well as shared reality from a refugee perspective. Furthermore, the analyses tested for interaction effects between stereotypes and discrimination to respect the bidimensionality and bidirectionality of the acculturation process. In addition, the methodological strengths of this study are that it is based on a large sample of refugees living in Thuringia, Germany, there were a series of demographic variables to control for the hierarchical regression analysis, multiitem scales of the analyzed variables, and mostly enough power to detect small interaction effects.

Implications for Future Research and Practice

Future research should investigate the interrelation between stereotypes and acculturation orientations among both refugees and host society members and contrast the effects of sociability but also of competence and morality stereotypes on preferences for cultural adoption, cultural maintenance, and the development of a shared understanding with the cultural outgroup. Furthermore, future empirical research should contrast the effects of different dimensions of stereotypes regarding the social ingroup and the social outgroup among minority and majority groups in predicting acculturative orientations. Another line of research might look for variables that promote successful integration of refugees into the host society to determine whether such variables are capable of increasing motivation to adopt the host culture and maintain the culture of one's origin. Regarding the interaction between stereotypes and discrimination, it might be interesting to add other variables such as threat to identity (Molina et al., 2015; Tsukamoto and Fiske, 2017), realistic or symbolic threat (Stephan and Renfro, 2002), empathy (Maisonneuve and Taillandier-Schmitt, 2016), or other important intergroup variables that could interact with stereotypes or discrimination experiences in predicting acculturation motivations by both majority and minority group members. These variables might also act as protective factors to reduce the maladaptive power of discrimination experiences on successful integration.

Regarding practice, the present results indicate that programs designed to promote successful acculturation should address majority group member prejudices and tendencies to discriminate against refugees (Beelmann and Lutterbach, 2020). Promoting refugees' social skills so that they can deal more competently with the stereotypes and discriminatory behavior of the host society could be an additional strategy to support integration efforts (e.g., Beelmann et al., 2020). In general, these programs need to be designed in a culturally sensitive way (Castro et al., 2010; Sundell et al., 2016) that reflects the target-group-specific stereotypes and acculturation motivations while making people aware of the impact of perceived discrimination on acculturation orientations. The challenge is to come up with ways to construct such programs so that they do not further intensify tensions between both cultural groups, but promote the creation of integration-relevant attitudes and the recognition that discrimination plays a role in social life and should not lead to maladaptive acculturation strategies such as separation or marginalization.

CONCLUSION

The main contribution of this study was to bring together stereotypes toward host society members held by refugees and perceptions of discrimination provoked by host society members to analyze intergroup beliefs and experiences and their effects on acculturation-relevant orientations. Alongside the unique effects of positive and negative stereotypes, and contextual as well as everyday discrimination on acculturation perceptions of refugees, we explored interactions between these variables. Discrimination was maladaptive, especially among refugees high in positive sociability stereotypes, resulting in a stronger rejection of the host culture and a pronounced motivation to maintain one's own culture in the new cultural context.

To ensure successful acculturation between refugees and host society members, public and political debates, policy, and integration practices have to focus on and discuss the problem of discrimination against refugees. Societal strategies need to reduce systemic discrimination, but also develop a cultural climate that promotes diversity and multiculturality. Facilitating positive encounters between refugees and host society members sets a foundation for reduced negative stereotypes, reduced discrimination, and reduced threat in both groups, and it enables acculturation strategies that are characterized by adopting the outgroup culture and maintaining one's own cultural identity—that is, successful integration.

DATA AVAILABILITY STATEMENT

The dataset presented in this article was uploaded to GESIS. Requests to access the dataset should be directed to https://www.gesis.org/angebot/archivieren-und-registrieren/datenarchivierung/datenzugang/.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ethics Center at Friedrich Schiller University. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

SL: data aquisition, execution of data analysis, and text preparation. AB: project management and text preparation. Both authors contributed to the article and approved the submitted version.

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Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

APPENDIX: ITEMS

Cultural Adoption

When I think about my future life in Germany, I would like to adopt German values.
When I think about my future life in Germany, I would like to adopt German traditions.
When I think about my future life in Germany, I would like to adopt the German language.
When I think about my future life in Germany, it is important to me to socialize with Germans.
When I think about my future life in Germany, I would like to adopt German gender conventions.
When I think about my future life in Germany, I would like to have German friends.
When I think about my future life in Germany, I would like to adopt German behaviors.
When I think about my future life in Germany, I would like to adopt German values regarding child education.
When I think about my future life in Germany, I would like to adopt German work values.

Cultural Maintenance

When I think about my future life in Germany, I would like to maintain the values of my country of origin.
When I think about my future life in Germany, I would like to maintain the traditions of my country of origin.
When I think about my future life in Germany, I would like to maintain the language of my country of origin.
When I think about my future life in Germany, it is important to me to socialize with people from my country of origin.
When I think about my future life in Germany, I would like to maintain gender conventions in line with the conventions of my country of origin.
When I think about my future life in Germany, I would like to have friends from my country of origin.
When I think about my future life in Germany, I would like to maintain behaviors that are typical for my country of origin.
When I think about my future life in Germany, I would like to maintain values regarding child education.
When I think about my future life in Germany, I would like to maintain work values that are typical for my country of origin.

Shared Reality

Germans and I share the same outlook on the world.
My attitudes are quite similar to those held by most Germans.
If I were to interact with a German person, chances are good that we would agree about lots of things.

Positive and Negative Sociability Stereotypes

Regarding the group of Germans in general, for how many Germans do the following characteristics apply?
Positive: Gentle, helpful, trustworthy. Negative: arrogant, hostile, rejecting.

Contextual Discrimination

To what extent have you been disadvantage in Germany, because of being a refugee?
Regarding job search; by state institutions; at a restaurant; while looking for an apartment; at the hospital; by the police; at the club; in public transportation.

Everyday Discrimination

To what extent have you made negative experiences in your everyday life, because of being a refugee in Germany?
I was treated without respect.
I was offended by Germans.
I was threatened by Germans.
I was physically attacked by Germans.

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The India Face Set: International and Cultural Boundaries Impact Face Impressions and Perceptions of Category Membership

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This paper serves three specific goals. First, it reports the development of an Indian Asian face set, to serve as a free resource for psychological research. Second, it examines whether the use of pre-tested U.S.-specific norms for stimulus selection or weighting may introduce experimental confounds in studies involving non-U.S. face stimuli and/or non-U.S. participants. Specifically, it examines whether subjective impressions of the face stimuli are culturally dependent, and the extent to which these impressions reflect social stereotypes and ingroup favoritism. Third, the paper investigates whether differences in face familiarity impact accuracy in identifying face ethnicity. To this end, face images drawn from volunteers in India as well as a subset of Caucasian face images from the Chicago Face Database were presented to Indian and U.S. participants, and rated on a range of measures, such as perceived attractiveness, warmth, and social status. Results show significant differences in the overall valence of ratings of ingroup and outgroup faces. In addition, the impression ratings show minor differentiation along two basic stereotype dimensions, competence and trustworthiness, but not warmth. We also find participants to show significantly greater accuracy in correctly identifying the ethnicity of ingroup faces, relative to outgroup faces. This effect is found to be mediated by ingroup-outgroup differences in perceived group typicality of the target faces. Implications for research on intergroup relations in a cross-cultural context are discussed.

Keywords: normed face stimuli, India and U.S., cultural differences, subjective impressions, stereotypes

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INTRODUCTION

It has been noted that psychology conducts its research largely on people from Western, educated, industrialized, rich, and democratic countries—coined WEIRD societies by Henrich et al. (2010). Social psychology, despite its focus on the importance of social context for psychological functioning, is no exception in this regard. Within the area of intergroup relations, studies on stereotyping, group attitudes, and intergroup behavior, have been conducted largely with participants from the United States and Western Europe, investigating how people perceive,

judge, and interact with social groups that are culturally relevant to these parts of the world. By comparison, studies with participants and/or target groups from non-WEIRD societies are few and far between (e.g., Jahoda, 1959; Kashima et al., 2003; Cuddy et al., 2009; Durante et al., 2017). The limited empirical scope raises questions about how research findings might generalize to other cultural contexts. And it leaves the field with missed opportunities for studying psychological determinants of intergroup relations.

Ironically, recent efforts to improve methodological practices in psychology (Kahneman, 2012; Asendorpf et al., 2013; Open Science Collaboration, 2017) carry some risk to further exacerbate this situation. For example, in order to improve experimental control and to facilitate comparisons across studies, researchers are encouraged to rely on standardized procedures and materials in their studies (Shrout and Rodgers, 2018). However, such standardization is likely to come at the expense of methodological diversity. A case in point is the Chicago Face Database (CFD; Ma et al., 2015), a collection of face images and norming data that our lab developed and made available as a free resource for use as stimulus materials in research.

The database provides easy access to face images that are uniform in terms of image quality, lighting, camera positioning, model pose, and other potentially confounding aspects of photographs. The face images come with extensive norming data that cover physical attributes (e.g., face height, width, luminance, etc.) as well as subjective impressions of the faces (e.g., perceived age, attractiveness, trustworthiness, etc.), allowing researchers to select images for particular face attributes while controlling for other factors that are extraneous to the research question. The database was inspired by the International Affective Picture System (IAPS; Lang et al., 1997), a stimulus database that has seen widespread use in research involving emotion and affect. Similar to the IAPS, the CFD was intended to facilitate and help standardize the broad variety of psychological research that involves the presentation of face stimuli to participants (e.g., impression formation, intergroup processes, stereotyping, prejudice, emotions). Since its release just 5 years ago, the database has seen rapid adoption, with more than 7,000 downloads and 700 published papers that report studies with CFD faces.

An explicit goal in developing the database was also to broaden the demographic composition of face images available to researchers. The existing image resources available include either exclusively Caucasian faces (Ekman and Friesen, 1976; Troje and Bülthoff, 1996; Lundqvist et al., 1998), or only a relatively small number of non-Caucasian faces (Tottenham et al., 2009; Langner et al., 2010; DeBruine and Jones, 2017; see **Table 1** for a list of widely used image sets and their ethnic makeup). In contrast, the CFD now offers images and norming data for nearly 600 Asian, Black, Latino, and White males and females.

While the database makes it easier for researchers to include non-Caucasian faces in their studies, all CFD models were volunteers recruited in the U.S. As a result, the ethnic diversity represented in the database remains limited to a subset of U.S. ethnic social groups. And the composition of these groups reflects the obvious limitations of a convenience sample. For instance, models of the database who self-identified as *Asian* are predominantly U.S.-born models with East Asian ancestry, covering only a portion of the ecological diversity of faces on the Asian continent. Likewise, the subjective norming data included in the database were collected with U.S. rater samples. They offer information on how attractive etc. the faces appear to U.S. participants, but raise the question whether these impressions might be different for perceivers of different cultural background and/or group identity.

While researchers have employed creative methods such as morphing and caricatures to generate additional non-Caucasian face stimuli from the limited number of available base faces (e.g., Byatt and Rhodes, 1998; Krumhuber et al., 2015), the focus of existing face databases on Caucasian faces has obvious methodological and conceptual implications. The reliance on U.S.-specific norms for stimulus selection may introduce experimental confounds if the norms don't generalize to non-U.S. participants. The use of face stimuli that insufficiently capture the ecological diversity of faces may adversely impact a study's external and internal validity (Wells and Windschitl, 1999) and yield incorrect effect estimates or fail to identify important moderators (Fiedler, 2011). In addition, the ready availability of certain ethnicities in the database may influence what target groups are being chosen for investigation in the first place, curtailing research on hypotheses for which materials aren't readily available.

The Current Research

The research reported in this paper aims to address some of these issues and improve the usefulness of the database for work with non-U.S. participants and non-U.S. faces. It has three specific goals. First, we describe the development of an expansion to the

TABLE 1 | Face image sets and their ethnic makeup.

Database	Number of models by ethnicity	
CFD-India	Indian Asian	142
CFD (Ma et al., 2015)	Asian	109
	Black	197
	Caucasian	183
	Latino	108
FACES (Ebner et al., 2010)	Caucasian	171
KDEF (Lundqvist et al., 1998)	Caucasian	70
Facelab London Set (DeBruine and Jones, 2017)	Asian	19
	Black	13
	Caucasian	69
	Multiethnic	1
NimStim (Tottenham et al., 2009)	Asian	6
	Black	10
	Caucasian	25
	Latino	2
POFA (Ekman and Friesen, 1976)	Caucasian	14
RaFD (Langner et al., 2010)	Caucasian	39
	Moroccan	18

CFD with face images of individuals recruited in India, drawing on a large non-U.S. ethnic group that accounts for approximately 18% of the world population (United Nations Department of Economic and Social Affairs Population Division, 2019). Second, we explore the extent to which subjective impressions of these faces are culturally dependent. And, third, we investigate whether differences in target face familiarity and perceived group typicality impact judgments of face ethnicity.

The India Face Set

The new image set introduced here includes high resolution face images of 142 unique individuals, displaying a variety of facial expressions (neutral, angry, fearful, and happy). The images are standardized according to the procedures used for the CFD and, hence, can serve as stimuli side-by-side with the original U.S. face images. They are accompanied by comprehensive norming data. Beyond the physical face attributes and subjective impressions that are part of the CFD, these norms now also include self-reported background information on the models (e.g., ancestry, home state, religious affiliation, caste, and SES measures). All materials are available as a free resource at www.chicagofaces.org.

Cultural Dependency of Subjective Image Norms

A second goal of the current research is to explore the extent to which the subjective rating norms are culturally dependent and the extent to which these ratings might differ for ingroup and outgroup faces. Although some studies have found impressions from faces to be consistent across culturally diverse rater samples (Wagatsuma and Kleinke, 1979; Bernstein et al., 1982; Cunningham et al., 1995) several recent studies have documented systematic cultural differences in what impressions perceivers glean from faces (Sutherland et al., 2018; Wang et al., 2019; Jones et al., 2021). Moreover, there are various theoretical arguments and related empirical findings that would suggest impressions for ingroup faces and outgroup faces to differ. For example, the mere exposure hypothesis (Zajonc, 1968) predicts that more familiar faces should be judged more positively. In fact, faces with feature sets near the population average are perceived to be more familiar (Langlois et al., 1994). And familiar faces, in turn, are judged as more likable (Zebrowitz et al., 2008), trustworthy (Lewicki, 1985), and attractive (Winkielman et al., 2006; Zebrowitz, 1996). To the extent that Indian and U.S. faces differ systematically in their feature sets, and that raters are relatively more familiar with their ingroup, one would expect ingroup faces to be viewed more positively. Theories of intergroup behavior, such as social identity theory (Tajfel et al., 1979), would similarly predict impressions to reflect ingroup favoritism, with impressions of ingroup faces to be more positive.

On the other hand, social stereotypes may also impact impressions of both ingroup and outgroup faces with regard to particular stereotypic attributes. For example, the stereotype content model suggests that groups viewed as competitors are perceived to be less warm, and groups of lower status as less competent (Fiske et al., 2002). With regard to the groups of interest to the current research, Lee and Fiske (2006) observed that U.S. participants' stereotypes of Indian Asian immigrants are similar in content and valence to the stereotypes U.S. participants hold about their own ingroup. Also, though we are unaware of any direct data on this issue, a 2014 Pew Research Center Survey suggests that the majority of Indians hold favorable (58%) or very favorable (30%) views of the U.S. (Pew Research Center, 2014). Based on these data we might expect impression ratings to reflect mutual admiration, rather than ingroup favoritism.

To explore these possibilities, we collected subjective impression ratings in a full ingroup-outgroup design, with samples of Indian and U.S. participants each rating both Indian Asian and Caucasian face images on a variety of attributes (e.g., attractiveness, competence, etc.). The design allowed us to identify separate effects of participant and target group on face impressions, and test for evidence of stereotyping and ingroup/outgroup favoritism in these ratings.

Judgments of Face Ethnicity

Finally, a third goal of the research was to determine whether differences in familiarity with Indian and Caucasian faces would impact participants' ability to identify face ethnicity. Across domains, stimulus familiarity has been found to impact processing efficiency (Posner and Keele, 1968; Lewellen et al., 1993) and categorization (e.g., Smith, 1967; Johnson and Mervis, 1997; Whittlesea and Leboe, 2000). In the case of faces, it has been suggested that familiar ingroup faces function as a perceptual default facilitating their processing and identification, while impeding the processing and identification of other-race faces (e.g., Goldstein and Chance, 1980; Rhodes et al., 1987; Macron et al., 2009). Hence we expected greater accuracy in judgments of familiar faces, with Indian Asian faces to be more likely classified as such by Indian raters than U.S. raters, whereas the opposite should hold for Caucasian faces.

MATERIALS AND METHODS

Face Stimuli

The present study used Caucasian and Indian Asian target faces as experimental stimuli. Caucasian face stimuli were randomly drawn from the existing pool of CFD images depicting Caucasian models from the U.S. (for a full list of target images, see the online **Supplementary Material**). Face stimuli for Indian Asian targets were collected at the University of Chicago Center in Delhi, India. Potential volunteers were contacted via convenience sampling, snowball sampling as well as pamphlets that were distributed to various cultural organizations with memberships from different regions in India. Volunteers were required to be between the ages of 18 and 50. Of the resultant volunteers, 53 were female and 91 were male. Self-report data about the volunteers' location within India (87 North Indian, 15 South Indian, 15 West Indian, 12 North East Indian, 7 Central Indian, 7 East Indian), religion (79 Hindu, 25 Muslim, 19 Sikh, 18 Christian, 1 Jain, 1 agnostic, 1 no religion), caste category, native language, education, employment and annual income were collected as was information about location of birth, current location of residence and ancestry.

Photo Sessions

Upon arrival participants were each asked to carefully read an informed consent and image release form. The forms were made available in both English and Hindi, and upon request were translated on site to other Indian languages. For illiterate participants, the experimenter read aloud the consent instructions and probed for comprehension. Afterward, participants changed into a gray t-shirt (the same type of shirt worn by all models of the existing CFD image set). Next, at the participants' discretion, they removed any make-up and jewellery. If needed, they were encouraged to shave and adjust their hair so that it did not obstruct the face. We chose not to enforce compliance with these grooming preparations as they may have interfered with cultural practices. For example, some married women in India wear vermillion on the apex of their hairline and/or a traditional necklace. Tradition may prevent them from appearing in public without these signifiers of their married status. Likewise, men may grow a beard or wear a turban for religious purposes. In such instances, volunteers were photographed as is.

For the actual photo session, volunteers were then seated at a fixed distance from a digital camera. The technical setup for these sessions followed closely the procedures used for the existing CFD image set, described in detail in Ma et al. (2015). Volunteers were asked to make neutral, happy (with both open and closed mouth smile), angry and fearful expressions while also maintaining an upright and straight head position. Each volunteer completed three rounds of photographs. In the first round, they received a prompt (e.g., "make a closed mouth smile"), and when necessary, the photographer followed up with more specific directions (e.g., "Please try to engage your eyes in the smile"). The second and third round repeated the full cycle of facial expressions. Volunteers who struggled reaching credible expressions were offered illustrations taken from Ekman and Friesen (1976). This resulted in multiple photographs for each volunteer displaying each of the requested facial expressions. Sessions lasted approximately 30 min. At the conclusion, refreshments were provided and thereafter volunteers were thanked and compensated with Rs. 500.

Image Standardization

From the resulting pool of images, we selected one neutral expression image per volunteer, based on head position (i.e., straight and upright) image quality (i.e., in focus), and how neutral the expression indeed was. Using these criteria, two (for a subset of targets, three) independent judges first rated each image and identified their top three face stimuli. Next, these top picks were used to settle on a consensual best choice for the final image selection[1].

The selected images were edited using Adobe Photoshop software (version 20) following the standardization procedures described in Ma et al. (2015). RAW image files were corrected for uniform color temperature and exposure across images, matching the existing CFD materials. Where necessary, additional corrections were made to reach a realistic skin tone. Next, we made digital modifications to select images, to remove any blemishes, markings or tattoos, facial or ear piercings, as well as any earrings, hair accessories and/or jewelry[2]. All images were then resized so that the size of the core facial features was more or less equivalent across all images and consistent with the existing CFD face stimuli. For this, a 796 pixels (wide) × 435 pixels (high) template was fit over the target's core facial features, adjusting the image size such that either the eyebrow-lip distance matched the template height, and/or the max. cheekbone distance matched the template width. Finally, a white background was inserted, and the image was exported to a 2,444 pixels by 1,718 pixels JPEG file (see **Figure 1** for sample images).

Norming Data

The standardized neutral expression images serve as the basis for the norming data, which include both objective measures of physical face features and subjective ratings of face impressions. The latter are the focus of our question whether subjective image norms are culturally dependent. In contrast, the objective norms are part of the image set development and provide descriptive information on the physical attributes of the new face sample. We report them here in order to document the steps we took to capture the physical attributes of the India face set.

Subjective Norms

Subjective ratings of the 284 target faces (142 Indian Asian, 142 Caucasian) with neutral facial expressions were obtained using two separate tasks (A and B) designed with Qualtrics Research Suite Software. Task A asked Indian and U.S. participants to rate the Indian Asian and Caucasian faces on a range of attributes. In task B a separate sample of Indian and U.S. participants was asked to rate the Indian Asian and Caucasian target faces for their group typicality. Participant recruitment and data collection for both tasks were conducted using Amazon's Mechanical Turk.

Task A

In a within-subjects design, each participant was presented with 8 target faces—2 Caucasian male, 2 Caucasian female, 2 Indian Asian male, and 2 Indian Asian female. For each participant, these 8 faces were selected at random from the target pool, with no replacement until all of the target faces were judged once for that iteration. The entire task took approximately 15 min to complete; U.S. participants were compensated with $3 and Indian participants with Rs. 100.

For each target, participants first saw the target pictured at the top of the computer screen followed by prompts below to estimate the target's age, race (with response options: Chinese Asian, Japanese Asian, Indian Asian, Other Asian, Black, Hispanic/Latino, White/Caucasian, and Other) and gender. Next,

[1]Faces with emotional expressions are not of immediate interest to the current study. Their selection and standardization followed the procedures outlined in Ma et al. (2015).

[2]For targets with traditional signifiers, like the aforementioned vermillion head marking (sindoor), or a marriage necklace (mangal sutra), we prepared duplicate image versions where technically feasible. Both versions were processed in identical fashion, except version 1 removed the signifiers whereas version 2 kept them intact. Version 1 was used for the norming data collection. But as researchers may be interested in alternate versions of the same target, both are distributed with the CFD-India image set.

FIGURE 1 | Sample Stimuli from the India Face Set.

the target image remained, but the prompts were replaced, asking participants to rate their impression of the target on the following dimensions: attractive, warm, competent, trustworthy, happy, sad, disgusted, surprised, fearful/afraid, angry, threatening, masculine, feminine, baby-faced, and unusual (such that they would stand out in a crowd). For each target, these attributes were presented across two successive screens and the ordering of attributes within each screen was chosen at random. Participants responded with a Likert scale of 1 (Not at all) through 4 (Neutral) to 7 (Extremely). The next screen showed a prompt asking participants to characterize the social status of the target from 1 (Low) through 7 (High). To facilitate these ratings, the prompt was accompanied by the following explanation: People of high status are typically thought to be wealthy and well-educated, working in highly paid jobs whereas those who are of low status are thought to be poor and not well-educated (or not educated at all), typically working in low paid positions or unemployed (see Lakshmi et al., 2019). All items but for status, competence and warmth were drawn from Ma et al. (2015). Status, warmth and competence were included to assess any evidence of stereotyping as suggested by the Stereotype Content Model (Fiske et al., 2002).

In addition to these items, Indian participants received several additional prompts that were omitted for U.S. participants as the queries required more detailed knowledge of Indian culture. Specifically, Indian participants were asked to further estimate the ethnicity of each Indian Asian target (with response options: North Indian, South Indian, North East Indian, East Indian, West Indian, Anglo Indian, and Other), their caste category (upper, middle, lower and tribe) and their religious affiliation (Hindu, Muslim, Christian, Sikh, Buddhist, Jain, Jewish, Parsi/Zoroastrian, No religion, and Other). These data are not of interest to the current study but are available via the norming data distributed with the CFD-India face set.

We took several steps to ensure data quality. Participants completed a bot check (captcha) and a Geo-IP check at the start of the task. The Geo-IP check filtered for participant IP addresses to be located either in India or the United States while excluding participants connected via a Virtual Private Network (VPN) to mask their country location. Following the Bot/Geo-Ip check, the actual survey began with an instructional manipulation check (IMC; Oppenheimer et al., 2009). This IMC was intended to screen out random clicking participants. It consisted of a set of instructions at the top of the screen, followed by a Likert scale with items labeled 1 through 9, and an arrow at the bottom of the screen. Instructions asked participants to advance to the next screen by clicking on the arrow and to ignore the scale items.

1,709 Indian participants and 2,937 U.S. participants offered consent and cleared the bot check. Of these, 1,226 Indian participants and 1,839 U.S. participants passed the Geo-IP test and completed their task. Of these participants, 981 (80%) Indian participants and 1,371 (75%) U.S. participants responded accurately to the attention check, suggesting similar data quality in the India and U.S. samples. Of these, 878 Indian participants (238 female, average age = 33.51, age sd = 8.48) and 900 U.S. participants (392 female, average age = 37.61, age sd = 11.39) self-reported as Asian Indian and White/Caucasian, respectively, and had no missing data in their records.

Task B

For this second task, we divided the 284 target faces into four subsets along target gender and ethnicity: Indian Asian females, Indian Asian males, Caucasian females, and Caucasian males. In a between-subjects design with face subset as the between-participant factor, each participant was presented with 40 target faces chosen at random from one of these four face subsets. The entire task took about 10 min to complete; U.S. participants were compensated with $2 and Indian participants with Rs. 70.

Depending on the experimental condition, participants were instructed that they would see pictures of Indian Asian males (Indian Asian females; Caucasian males; Caucasian females). The instructions further explained that these people would differ in terms of how much their physical features resemble the features of Indian (White) people. For example, their skin color, hair, eyes, nose, cheeks, lips, and other physical features, may be more Indian/White (i.e., typical of Indians/White people) or less Indian/White (i.e., less typical of Indians/White people). Their task would be to rate how Indian (White) looking each person's physical features were. Thereafter participants saw Indian Asian (Caucasian) male (female) targets one at a time, and rated how typical that person's physical features are of Indian (White) people. They were offered a 5-point scale (less typically Indian (White) looking, somewhat typically Indian (White) looking, fairly typically Indian (White) looking, more typically Indian (White) looking and very typically Indian (White) looking.

Participants also completed the same set of bot check (captcha), Geo-IP check, and ICM used in task A. Given the screen layout and response format stayed consistent in this task, rather than switch from screen to screen as in task A, we included a second attention check. For this check, the very last target trial displayed a female Latino target face with the word "Less" superimposed on the forehead. Instructions asked participants to select the response option that matched the word displayed on the face.

339 Indian and 594 U.S. participants offered consent and cleared the bot check. Of these, 335 Indian and 459 U.S. participants also cleared the Geo-IP check. 260 (78%) Indian and 348 (76%) U.S. participants responded accurately to the first attention check, of which 218 Indian and 276 U.S. participants also responded accurately to the second attention check, again indicating similar data quality in the India and U.S. samples. Among this participant set, 215 Indian participants (51 female, average age = 31.35, age sd = 7.46) and 207 U.S. participants (91 female, average age = 37.19, age sd = 12.02) self-reported as Asian Indian and White/Caucasian, respectively and completed the entire task.

Objective Norms

For the Caucasian faces included in the current study, measurements of the physical features are available as part of the existing CFD norming data. For the Indian Asian face stimuli, we carried out physical measurements in accordance with the procedures described in Ma et al. (2015). **Table 1** in the **Supplementary Material** summarizes all measures and the calculations used to obtain them. In response to requests from researchers, and because the literature in some cases has used multiple definitions for a given measure, the objective norms have been expanded since the original release of the database. We included the full expanded set of physical norms in our assessment of the Indian Asian face stimuli. Specifically, the following measurements were obtained: median luminance of the face, nose width, nose length, lip thickness, face length, height and width of each eye, face width at the most prominent part of the cheek, face width at the mouth, face width at the ears, forehead length, distance between each pupil and the top of the head, distance between each pupil and the upper lip, distance between pupils, chin length, length of cheek to chin for both sides of the face, the distance between the middle of each brow and the hairline atop that brow, face color (red, green, blue), hair color (red, green, blue), thickness of each eyebrow and eyelid. Using the CFD measurement guide (available on the database website), three coders independently completed the measurements in Adobe Photoshop. For each face and measure, the coders' average measurements were computed and individual measurements that exceeded the mean by 20% in either direction were flagged. These differences were then discussed and reconciled by the research team (consisting of the three coders, joined by A.L., and B.W.) A final set of measures was obtained based on the resulting raters' averages. The inter-rater reliability for these measurements was acceptable to high (Cronbach's alpha equaled 0.69 on face width at cheeks, and was between 0.72 and 0.99 on all other attributes).

RESULTS

Subjective Norms

Our analyses focus on the subjective impression and ethnic classification ratings. Specifically, these analyses address two questions with regard to how the participant sample (India vs. U.S.) may have impacted ratings of the target faces: (1) do the resulting stimulus norms for the target groups vary with the participant sample, and if so, do these differences reflect stereotyping and/or ingroup favoritism? (2) do perceptions of face ethnicity vary with participant sample, such that categorization accuracy is higher for ingroup than outgroup targets? Across analyses, participant and target group were each contrast coded (0.5 = Indian/Indian Asian, −0.5 = U.S./Caucasian)[3].

Impression Ratings

We first considered whether the subjective stimulus norms varied with participant sample and whether any of these differences varied with target group, across impression attributes. Next, we examined the specific effects on individual impression attributes. For the overall effect, we ran a linear mixed effects model using the lme4 package (Bates et al., 2015) in R with participant impression ratings as the dependent variable and participant group and target group as independent variables. In this analysis, attribute ratings were standardized within each attribute, and then averaged across attributes per participant per target. Participant and target face were included as random effects variables. The full set of results from this analysis is available in **Supplementary Material**. We focus here on the participant group main effect and the target group by participant group interaction. There was no significant main effect of participant group ($p = 0.722$) but there was indeed a significant interaction effect between participant and target group [$t_{(12188.4)} = -7.71$, $p < 0.001$, $\eta^2_p = 0.005$ (0.00, 0.01)]. Across attributes, both Indian participants [Caucasian

[3]Our analyses are based on 172 targets of Indian Asian ethnicity. In addition, the India face set includes 12 models of North East Indian Asian ethnicity that were not considered for the current *analyses*.

faces: Mean z score = 0.621 vs. Indian Asian faces: Mean z score = −0.749; $t_{(12188.4)} = -9.28$, $p < 0.001$] and U.S. participants [Caucasian faces: Mean z score = 0.359 vs. Indian Asian faces: Mean z score = −0.233; $t_{(12188.4)} = -3.89$, $p < 0.001$] gave higher impression ratings for Caucasian faces than Indian Asian faces, however this effect was significantly higher among Indian participants.

To clarify how participant group impacted each of the impression attributes, and whether any of these differences varied with target group, we conducted separate linear mixed effects models for each attribute (using the same model specifications as in the parent model, but scores were not standardized within attribute since we were not combining data across attributes for these analyses). Means and test statistics for the participant group and target group main effects are reported in **Table 2** (see the online **Supplementary Material** for a complete set of test statistics). In these analyses, participant group had a main effect on impression ratings for happiness, anger, surprise, fear, masculinity, babyface, competence and perceived status. Indian, compared to U.S. participants rated the target faces to be more happy [$t_{(1769.9)} = 3.24$, $p = 0.001$, $\eta^2_p = 0.006$ (0.00, 0.01)] and less angry [$t_{(1770.2)} = -2.89$, $p = 0.004$, $\eta^2_p = 0.005$ (0.00, 0.01)]. Several impression attributes showed target group main effects: Indian Asian faces were judged to be less babyfaced [$t_{(278.8)} = -7.58$, $p < 0.001$, $\eta^2_p = 0.170$ (0.11, 0.24)] and more unusual [$t_{(251.2)} = 3.10$, $p = 0.002$, $\eta^2_p = 0.040$ (0.01, 0.08)] than Caucasian faces. In addition, participant group by target group interactions emerged for attractiveness, competence, trustworthiness, anger, masculinity, babyfacedness, unusualness, and status. A breakdown of these interactions is reported in **Table 2**. Next, we explored whether these observed effects reflected any systematic pattern of stereotyping and/or ingroup favoritism.

Stereotyping

Here we considered the ratings for the basic stereotype dimensions suggested by the Stereotype Content Model (SCM; Fiske et al., 2002; also see Kervyn et al., 2015), warmth, trustworthiness, and competence. In our analyses, stereotyping could be evidenced as a target group main effect, such that participants from both India and the U.S. differentiate Indian Asian from Caucasian faces in similar fashion. Alternatively, Indian and U.S. participants could stereotype their respective ingroup and outgroup differently, resulting in a participant by target group interaction. While analyses for the competence ratings showed no significant target group main effect ($p = 0.800$), a significant main effect of participant group, qualified by a significant interaction effect between target group and participant group emerged [$t_{(12199.4)} = -4.45$, $p < 0.001$, $\eta^2_p = 0.002$ (0.00, 0.00)]. Simple slopes analyses reveal that U.S. participants rated Indian Asian faces (Mean = 4.61, SD = 1.28) as marginally more competent than Caucasian faces [Mean = 4.55, SD = 1.32; $t_{(12199.4)} = 1.75$, $p = 0.080$]. On the other hand, Indian participants, rated Caucasian faces (Mean = 4.20, SD = 1.50) as significantly more competent than Indian Asian faces [Mean = 4.11, SD = 1.56; $t_{(12199.4)} = -2.19$, $p = 0.030$; see

TABLE 2 | Attribute ratings by participant group and target group.

Attribute	Effect means and standard deviations			
Attractive	Participant × Target***	All Ps	India Ps**	U.S. Ps**
	All Targets***	$4.07_{(1.62)}$	$4.04_{(1.65)}$	$4.09_{(1.59)}$
	India Targets**	$3.88_{(1.62)}$	$3.79_{(1.65)}$	$3.96_{(1.58)}$
	U.S. Targets	$4.26_{(1.60)}$	$4.30_{(1.61)}$	$4.21_{(1.60)}$
Warm	Participant × Target	All Ps	India Ps	U.S. Ps
	All Targets	$3.88_{(1.58)}$	$3.87_{(1.58)}$	$3.89_{(1.58)}$
	India Targets	$3.86_{(1.58)}$	$3.84_{(1.58)}$	$3.88_{(1.58)}$
	U.S. Targets	$3.90_{(1.57)}$	$3.91_{(1.57)}$	$3.90_{(1.57)}$
Competent	Participant × Target***	All Ps***	India Ps*	U.S. Ps
	All Targets	$4.37_{(1.43)}$	$4.15_{(1.53)}$	$4.58_{(1.30)}$
	India Targets**	$4.36_{(1.45)}$	$4.11_{(1.56)}$	$4.61_{(1.29)}$
	U.S. Targets**	$4.38_{(1.42)}$	$4.20_{(1.50)}$	$4.55_{(1.32)}$
Trustworthy	Participant × Target*	All Ps	India Ps	U.S. Ps
	All Targets	$4.33_{(1.42)}$	$4.32_{(1.47)}$	$4.34_{(1.38)}$
	India Targets	$4.34_{(1.42)}$	$4.30_{(1.46)}$	$4.37_{(1.38)}$
	U.S. Targets	$4.32_{(1.42)}$	$4.33_{(1.47)}$	$4.32_{(1.38)}$
Happy	Participant × Target	All Ps**	India Ps**	U.S. Ps*
	All Targets **	$3.37_{(1.75)}$	$3.47_{(1.73)}$	$3.28_{(1.77)}$
	India Targets*	$3.25_{(1.73)}$	$3.33_{(1.70)}$	$3.17_{(1.75)}$
	U.S. Targets**	$3.50_{(1.77)}$	$3.60_{(1.74)}$	$3.40_{(1.79)}$
Angry	Participant × Target*	All Ps**	India Ps	U.S. Ps
	All Targets	$2.85_{(1.78)}$	$2.76_{(1.72)}$	$2.93_{(1.83)}$
	India Targets**	$2.87_{(1.77)}$	$2.76_{(1.70)}$	$2.97_{(1.83)c}$
	U.S. Targets*	$2.83_{(1.78)}$	$2.76_{(1.73)}$	$2.90_{(1.83)c}$
Sad	Participant × Target	All Ps	India Ps*	U.S. Ps
	All Targets*	$3.20_{(1.82)}$	$3.23_{(1.81)}$	$3.17_{(1.82)}$
	India Targets	$3.31_{(1.82)}$	$3.35_{(1.82)}$	$3.26_{(1.82)}$
	U.S. Targets	$3.09_{(1.80)}$	$3.11_{(1.79)}$	$3.08_{(1.82)}$
Disgusted	Participant × Target	All Ps	India Ps	U.S. Ps*
	All Targets	$2.76_{(1.75)}$	$2.77_{(1.69)}$	$2.76_{(1.82)}$
	India Targets	$2.79_{(1.76}$	$2.79_{(1.68)}$	$2.80_{(1.83)}$
	U.S. Targets	$2.74_{(1.75)}$	$2.76_{(1.69)}$	$2.71_{(1.81)}$
Surprised	Participant × Target	All Ps***	India Ps**	U.S. Ps**
	All Targets***	$2.71_{(1.77)}$	$2.91_{(1.72)}$	$2.52_{(1.81)}$
	India Targets**	$2.65_{(1.75)}$	$2.83_{(1.70)}$	$2.47_{(1.79)}$
	U.S. Targets**	$2.78_{(1.79)}$	$2.98_{(1.73)}$	$2.57_{(1.83)}$
Fearful	Participant × Target	All Ps***	India Ps	U.S. Ps*
	All Targets	$2.81_{(1.75)}$	$2.95_{(1.71)}$	$2.68_{(1.79)}$
	India Targets**	$2.86_{(1.76)}$	$2.98_{(1.71)}$	$2.74_{(1.79)}$
	U.S. Targets**	$2.77_{(1.75)}$	$2.92_{(1.71)}$	$2.62_{(1.78)}$
Threatening	Participant × Target	All Ps	India Ps	U.S. Ps
	All Targets	$2.96_{(1.79)}$	$2.98_{(1.75)}$	$2.93_{(1.84)}$
	India Targets	$2.96_{(1.79)}$	$2.98_{(1.74)}$	$2.94_{(1.84)}$
	U.S. Targets	$2.95_{(1.8)}$	$2.98_{(1.76)}$	$2.93_{(1.83)}$
Masculine	Participant × Target*	All Ps***	India Ps	U.S. Ps
	All Targets	$3.84_{(2.07)}$	$3.75_{(2.08)}$	$3.93_{(2.06)}$
	India Targets**	$3.89_{(2.10)}$	$3.78_{(2.11)}$	$4.01_{(2.09)}$
	U.S. Targets*	$3.80_{(2.04)}$	$3.73_{(2.05)}$	$3.86_{(2.02)}$

(Continued)

TABLE 2 | Continued

Attribute	Effect means and standard deviations			
Feminine	Participant × Target	All Ps	India Ps	U.S. Ps
	All Targets	$3.81_{(2\cdot17)}$	$3.81_{(2\cdot21)}$	$3.80_{(2\cdot13)}$
	India Targets	$3.70_{(2\cdot19)}$	$3.71_{(2\cdot24)}$	$3.70_{(2\cdot13)}$
	U.S. Targets	$3.91_{(2\cdot15)}$	$3.91_{(2\cdot17)}$	$3.91_{(2\cdot13)}$
Babyfaced	Participant × Target**	All Ps***	India Ps**	U.S. Ps**
	All Targets***	$3.14_{(1\cdot84)}$	$2.94_{(1\cdot81)}$	$3.34_{(1\cdot85)}$
	India Targets**	$2.92_{(1\cdot81)}$	$2.69_{(1\cdot74)}$	$3.16_{(1\cdot84)}$
	U.S. Targets**	$3.37_{(1\cdot85)}$	$3.20_{(1\cdot84)}$	$3.53_{(1\cdot84)}$
Unusual	Participant × Target***	All Ps	India Ps*	U.S. Ps**
	All Targets**	$3.09_{(1\cdot79)}$	$3.13_{(1\cdot75)}$	$3.04_{(1\cdot82)}$
	India Targets	$3.14_{(1\cdot78)}$	$3.09_{(1\cdot75)}$	$3.19_{(1\cdot82)}$
	U.S. Targets**	$3.04_{(1\cdot79)}$	$3.18_{(1\cdot76)}$	$2.90_{(1\cdot82)}$
Status	Participant × Target***	All Ps***	India Ps**	U.S. Ps**
	All Targets***	$4.42_{(1\cdot31)}$	$4.58_{(1\cdot30)}$	$4.27_{(1\cdot29)}$
	India Targets**	$4.17_{(1\cdot32)}$	$4.26_{(1\cdot33)}$	$4.09_{(1\cdot31)}$
	U.S. Targets**	$4.67_{(1\cdot24)}$	$4.89_{(1\cdot19)}$	$4.45_{(1\cdot26)}$

All cell values are Means$_{(SD)}$; Main Effects indicated at "All Targets"/"All Participants" cells (for Target and Participant main effects respectively); Interaction effects indicated at "Participant × Target" cells; Simple effects indicated at "India Ps"/"U.S. Ps"/"India Targets"/"U.S. Targets" cells;$p \leq 0.05$.**$p \leq 0.01$.***$p \leq 0.001$.*

Table 2]. Trustworthiness ratings showed no significant main effect of target group or participant group, but again, yielded a significant interaction effect between target group and participant group, with the respective outgroup faces being seen as more trustworthy (Indian participants: Mean = 4.33, *SD* = 1.47; U.S. participants: Mean = 4.37, *SD* = 1.38) than the ingroup (Indian participants: Mean = 4.30, SD = 1.46; U.S. participants: Mean = 4.32, *SD* = 1.38) ratings [$t_{(12185\cdot9)} = -2.20$, $p = 0.028$, $\eta^2_p = 0.0004$ (0.00, 0.00); see **Table 2**]. Simple slopes analyses for comparing the target group means within participant group were not significant (all *p*s > 0.270). No significant effects emerged for perceived warmth (all *p*s > 0.141).

Group perceptions of competence have reliably been found to correlate with and be informed by perceived social status (Fiske et al., 1999; Caprariello et al., 2009), suggesting that ratings of perceived social status should parallel our results for competence. In fact, the analyses for perceived status do yield this target group by participant group interaction [$t_{(12170\cdot4)} = -8.28$, $p < 0.001$, $\eta^2_p = 0.006$ (0.00, 0.01)]. However, the pattern of means deviates somewhat from the results for perceived competence. Simple slopes analyses indicate that, while both participant groups rated Caucasian faces higher in status, this effect was greater among Indian participants [Caucasian faces: Mean = 4.89, *SD* = 1.19 vs. Indian Asian faces: Mean = 4.26, *SD* = 1.33; $t_{(12170\cdot4)} = -11.41$, $p < 0.001$] than U.S. participants [Caucasian faces: Mean = 4.45, *SD* = 1.26 vs. Indian Asian faces: Mean = 4.09, *SD* = 1.31; $t_{(12170\cdot4)} = -6.34$, $p < 0.001$; see **Table 2**]. Given this pattern, correlations between perceived competence and status remain modest ($r = 0.31$).

In summary, our analyses for participants' ratings of warmth, competence, and trustworthiness show no overall target group differences for warmth, competence, or trustworthiness. However, we do observe differentiation in the impressions of Indian and U.S. Caucasian faces between the two participant groups. For competence and trustworthiness, both participant groups rated the respective outgroup somewhat higher than their own ingroup.

Ingroup favoritism

The second question we posed regarding the impression ratings is whether participants would see ingroup targets overall more favorably than outgroup targets. The results for perceived competence and trustworthiness we just summarized would suggest that if anything the current data show the reverse pattern, with outgroup faces receiving more favorable ratings than ingroup faces, on these attributes. In order to address this question more systematically, we calculated two scores to capture the favorability of the impressions: a positivity score using the ratings from all positively valenced impression attributes (attractive, warm, competent, trustworthy, happy; Cronbach's $\alpha = 0.81$) and a negativity score with the ratings of all negatively valenced attributes (angry, sad, disgusted, fearful, threatening; Cronbach's $\alpha = 0.86$). We calculated a difference score (positivity score—negativity score) as an indicator of impression favorability (Wittenbrink, 2007). We then analyzed these favorability scores in a linear mixed effects model using the lme4 package in R to analyze the data with the favorability scores as the dependent variable and target group and participant group as independent variables. We employed random intercepts for participant and target face stimulus.

The full set of results from this analysis is available in the online **Supplementary Material**. We focus here on ingroup favoritism, which is represented by the target group and participant group interaction. The effect was small but significant [$t_{(12171\cdot5)} = -2.24$, $p = 0.025$, $\eta^2_p = 0.0004$ (0.00, 0.00)]. For U.S. participants, impressions of ingroup faces were marginally more favorable than their impressions of outgroup faces [Ingroup faces: Mean = 1.23, SD = 1.73; Outgroup faces: Mean = 1.05, SD = 1.71; $t_{(12171\cdot5)} = -1.81$, $p = 0.070$]. For Indian participants on the other hand this pattern reversed. Impressions of outgroup faces were significantly more favorable than their impressions of ingroup faces [Ingroup faces: Mean = 0.90, *SD* = 1.67; Outgroup faces: Mean = 1.16, *SD* = 1.76, $t_{(12171\cdot5)} = -2.87$, $p < 0.001$).

Typicality

A final impression item asked participants to rate the target faces in terms of group typicality. We first examined the effects of target group and participant group on perceived target typicality. Analyses of these typicality ratings employed the same mixed effects model used for all other impression attributes. With regard to effects involving participant group, these analyses yielded a significant main effect—Indian participants (Mean = 3.46, *SD* = 1.18) rated typicality overall higher than U.S. participants [Mean = 3.24, *SD* = 1.28; $t_{(15902\cdot2)} = 12.87$, $p < 0.001$, $\eta^2_p = 0.010$ (0.01, 0.01)]. This main effect was qualified by a significant interaction effect between participant group and target group [$t_{(15902\cdot2)} = 12.84$, $p < 0.001$, $\eta^2_p = 0.010$ (0.01, 0.01)]. Simple slopes analyses indicate that Caucasian faces (Mean = 3.41, *SD* = 1.29) were perceived as significantly more typical than

Indian Asian faces (Mean = 3.04, *SD* = 1.24) by U.S. participants [$t_{(15902.2)} = -6.15$, $p < 0.001$] but the same difference did not emerge for Indian participants (Caucasian faces: Mean = 3.41, *SD* = 1.14; Indian Asian Faces: Mean = 3.51, *SD* = 1.22; $p = 0.140$). Unrelated to our question of interest, there was also a significant main effect of target group on perceived typicality—Caucasian faces (Mean = 3.41, *SD* = 1.22) received higher typicality ratings overall than Indian Asian faces [Mean = 3.28, *SD* = 1.25; $t_{(270.3)} = -2.45$, $p = 0.015$, $\eta^2_p = 0.020$ (0.00, 0.06)].

Face Categorization

Our second primary research question concerned perceptions of face ethnicity for the two target groups and whether they would vary with participant sample. Because of greater familiarity with ingroup faces, we expected participants to more accurately identify the ethnicity of their respective ingroup faces.

Categorization Accuracy

To address this question we calculated for each target face the probability of accurate categorization as a proportion of the number of times the target face was categorized correctly (i.e., an Indian Asian face identified as Asian Indian, and a Caucasian face judged to be Caucasian), relative to the number of times it was categorized at all. The resulting accuracy score served as the dependent variable in a binomial generalized linear model using the lme4 package (Bates et al., 2015) in R with target group and participant group as independent variables. Weights were added to the model based on categorization count; i.e., the number of times each target was categorized at all.

Consistent with the expected ingroup accuracy advantage, there was a significant interaction effect between target group and participant group [$t_{(543)} = 36.69$, $p < 0.001$, odds ratio = 19.31 (16.49, 22.62); see **Figure 2**]. Simple slopes analyses of the interaction between target group and participant group indicate that among U.S. participants, the probability of accurate categorization was significantly higher for Caucasian faces (Mean = 0.85, *SD* = 0.17) than for Indian Asian faces [Mean = 0.45, SD = 0.16; $t_{(543)} = -34.23$, $p < 0.001$]. Indian participants showed a similar ingroup accuracy bias. For them, the probability of accurate categorization was significantly higher for Indian Asian faces (Mean = 0.80, *SD* = 0.17) than for Caucasian faces [Mean = 0.59, *SD* = 0.16; $t_{(543)} = 17.09$, $p < 0.001$]. Unrelated to our primary question, there was a significant main effect of target group [$t_{(543)} = -13.39$, $p < 0.001$, odds ratio = 0.58 (0.54, 0.63)]: Categorization accuracy was overall higher for Caucasian faces (Mean = 0.72, *SD* = 0.21) than Indian Asian faces (Mean = 0.62, *SD* = 0.24).

Typicality

Another factor that might impact the categorization of faces is their ethnic typicality. That is, one might expect faces that are seen to be more typically Indian in appearance to be more readily classified as Indian Asian. In fact, such effects of typicality on categorization are well established. A robin is more readily recognized as a bird than an ostrich (Rosch, 1973). Face categorization, including categorization by ethnicity, is no exception and is similarly sensitive to typicality effects (Maddox and Gray, 2002; Locke et al., 2005). We therefore used the typicality impression ratings we already reported earlier to test whether the observed ingroup advantage in categorization accuracy is mediated by perceptions of typicality prevalent in the two participant groups.

For ingroup advantage in categorization accuracy to be mediated by perceived typicality, two conditions have to be met: (1) typicality should affect categorization accuracy (a test of the link between perceived typicality and categorization accuracy); and (2) ingroup-outgroup differences in typicality should affect ingroup outgroup differences in categorization accuracy (a test

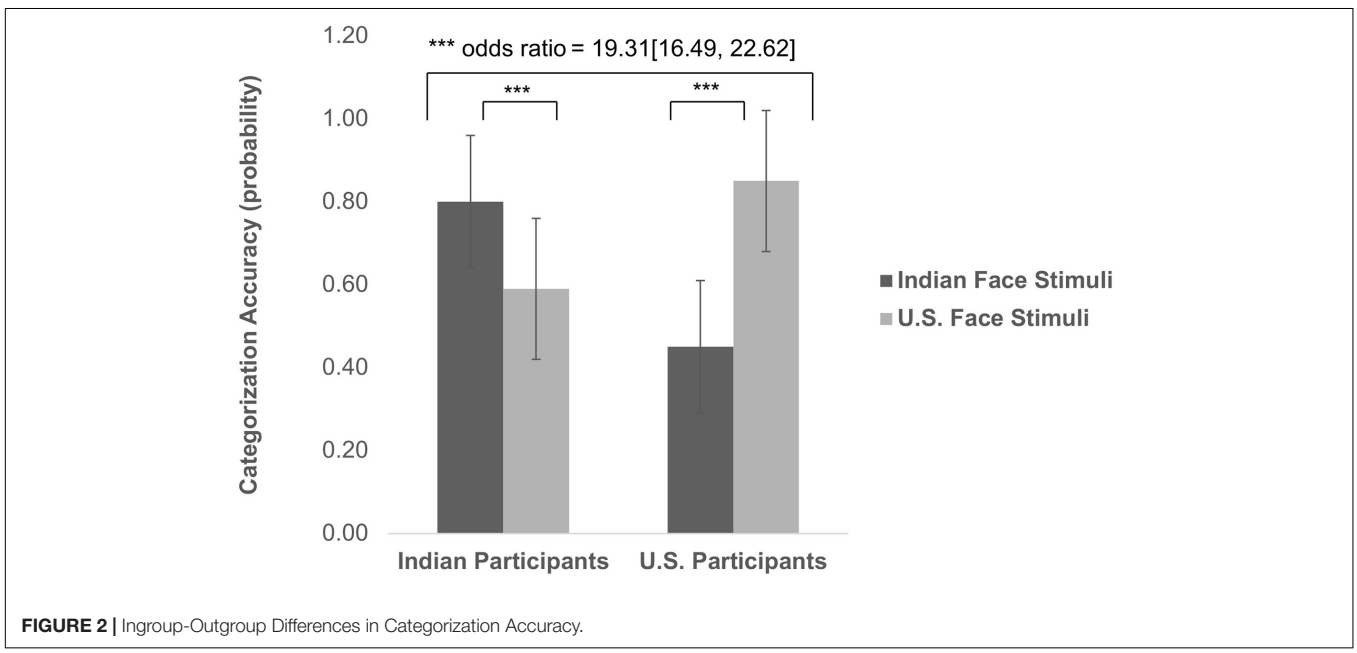

FIGURE 2 | Ingroup-Outgroup Differences in Categorization Accuracy.

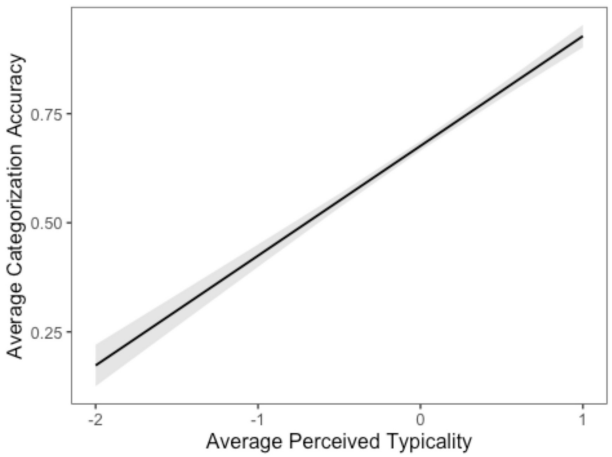

FIGURE 3 | Average Perceived Typicality and Categorization Accuracy.

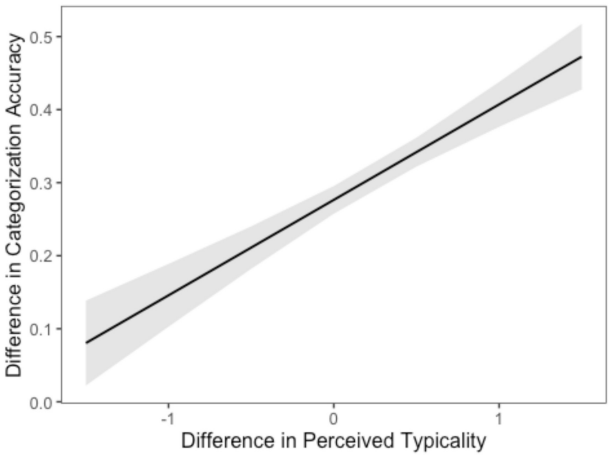

FIGURE 4 | Ingroup-Outgroup Differences in Perceived Typicality and Categorization Accuracy.

of the link between ingroup advantage, perceived typicality and categorization accuracy; see Judd et al., 2001).

For each target, we calculated a mean typicality rating and categorization accuracy score for ingroup participants, as well as a mean typicality rating and categorization accuracy score for outgroup participants. Using these measures, we obtained four values for each target: average typicality rating (across ingroup and outgroup), average categorization accuracy (across ingroup and outgroup), difference in typicality rating (ingroup–outgroup) and difference in percentage accuracy(ingroup–outgroup). Using these scores, we set up two linear models to test the influence of group membership and typicality ratings on categorization accuracy.

The first linear model used average categorization accuracy as dependent variable and mean centered average typicality as independent variable. There was a significant intercept [Mean = 0.68, $t_{(270)} = 119.30$, $p < 0.001$] suggesting that on average, categorization accuracy was significantly above zero controlling for typicality. Average typicality added significantly to categorization accuracy [$t_{(270)} = 21.24$, $p < 0.001$, $\eta^2 = 0.630$ (0.57, 0.67)], with categorization accuracy improving with higher perceived average typicality (see **Figure 3**). In other words, average typicality did affect categorization accuracy.

In the second linear model, difference in categorization accuracy served as the dependent variable and the ingroup/outgroup difference in average typicality ratings served as the independent variable. There was a significant intercept Mean = 0.28, $t_{(270)} = 28.55$, $p < 0.001$, suggesting that on average, ingroup/outgroup difference in categorization accuracy was significantly above zero, controlling for ingroup/outgroup difference in average typicality. Ingroup-outgroup difference in mean typicality ratings added significantly to the ingroup-outgroup difference in categorization accuracy. As the ingroup-outgroup difference in mean rating increased, so did the ingroup-outgroup difference in categorization accuracy [$t_{(270)} = 7.96$, $p < 0.001$, $\eta^2 = 0.190$ (0.12, 0.26); see **Figure 4**].

Thus, these analyses suggest that the effect of familiarity (as determined by group membership) on categorization accuracy was mediated significantly albeit not fully, by perceived typicality.

Miscategorization

Finally, we explored what categories were used in error when Indian Asian faces were not identified as Indian Asian, and Caucasian faces not judged to be Caucasian. Toward this, we selected all instances of inaccurate categorizations and identified the two most common ethnicities participants chose in these instances, Middle Eastern and Hispanic/Latino, accounting for 54.65% of all erroneous categorizations. For each target face, we then generated percentages of inaccurate categorization as (1) Middle Eastern and (2) as Latino, separate for Indian participants and U.S. participants, respectively. For example, to calculate the percentage of inaccurate categorization as Middle Eastern, the number of times a target was inaccurately categorized as Middle Eastern was divided by the number of times it was inaccurately categorized at all. As with accurate categorizations, we employed a binomial generalized linear model using the lme4 package (Bates et al., 2015) in R to analyze the data with probability of inaccurate categorization as Middle Eastern and Latino, respectively, as the dependent variables and target group and participant group as independent variables, weighted by target categorization count.

For inaccurate categorization into Middle Eastern, there was a significant effect of target group such that Indian Asian faces (Mean = 0.31, *SD* = 0.26) were inaccurately categorized as Middle Eastern with higher probability than Caucasian faces were [Mean = 0.21, *SD* = 0.22; $t_{(504)} = 1.97$, $p = 0.049$, odds ratio = 1.18 (1.00, 1.38)]. However, this main effect was qualified by a significant interaction between target group and participant group [$t_{(504)} = -5.32$, $p < 0.001$, odds ratio = 0.42 (0.30, 0.58)]: For both participant groups, errors made for outgroup faces were more likely to be misjudged as Middle Eastern, compared to ingroup faces with errors. Simple slopes analyses indicate that

that U.S. participants inaccurately categorized Indian Asian faces (Mean = 0.42, *SD* = 0.23) as Middle Eastern at a significantly higher probability than they did Caucasian faces [Mean = 0.22, *SD* = 0.28; $t_{(504)} = 5.33$, $p < 0.001$]. Indian participants on the other hand, categorized Caucasian faces (Mean = 0.21, *SD* = 0.15) as Middle Eastern at a significantly higher probability than they did with Indian Asian faces [Mean = 0.18, *SD* = 0.23; $t_{(504)} = -2.29$, $p = 0.020$].

For inaccurate categorization into Latino, there was a significant main effect of target group such that Caucasian faces (Mean = 0.46, *SD* = 0.30) were inaccurately categorized as Latino more often than were Indian Asian faces [Mean = 0.19, *SD* = 0.20; $t_{(504)} = -14.12$, $p < 0.001$, odds ratio = 0.31 (0.27, 0.37)]. The main effect was again qualified by a significant target group and participant group interaction [$t_{(504)} = -2.47$, $p = 0.014$, odds ratio = 0.67 (0.48, 0.92)]. Indian participants inaccurately categorized Caucasian faces (Mean = 0.36, *SD* = 0.20) as Latino at a significantly greater probability than they did Indian Asian faces [Mean = 0.10, *SD* = 0.16; $t_{(504)} = -10.51$, $p < 0.001$). U.S. participants as well, inaccurately categorized Caucasian faces (Mean = 0.58, SD = 0.35) as Latino at a significantly greater probability than they did Indian Asian faces, but his effect was smaller than among Indian participants [Mean = 0.27, *SD* = 0.20; $t_{(504)} = -9.47$, $p < 0.001$].

Interestingly, and related to our main research questions with respect to the effect of participant group, we also observed a significant main effect of participant group such that U.S. participants (Mean = 0.32, *SD* = 0.28) inaccurately categorized faces as Middle Eastern at a significantly higher probability than Indian participants did [Mean = 0.20, *SD* = 0.19; $t_{(504)} = -7.71$, $p < 0.001$, odds ratio = 0.53 (0.45, 0.62)]. Also, U.S. participants (Mean = 0.42, *SD* = 0.32) inaccurately categorized faces as Latino at a significantly higher probability than Indian participants did [Mean = 0.24, *SD* = 0.22; $t_{(504)} = -12.83$, $p < 0.001$, odds ratio = 0.35 (0.30, 0.41)].

DISCUSSION

Human faces are an important factor in social life. Perceivers use them for a wide range of social inferences about emotions, personal identity, social category membership, traits, preferences, and even culpability in legal cases (e.g., Ekman et al., 1972; Blair et al., 2004; Zebrowitz and Montepare, 2008; Todorov et al., 2015). As a result, a good part of social psychological research involves the presentation of face stimuli. The Chicago Face Database (CFD) is a frequently used resource for this type of work. Since its release just 5 years ago, the database materials have been retrieved by over 7,000 researchers worldwide and some 700 published papers have reported studies with CFD faces. Yet, as is the case with psychological research in general, the database materials remain limited in their cultural and ethnic diversity. Not only by name, the database to-date is U.S.-centric. It contains the faces of volunteers recruited in the U.S., and its stimulus norms are based on U.S. rater samples.

With the current research we set out to broaden the scope of the database and improve its usefulness for work with non-U.S. participants and non-U.S. faces. To this effect, we introduce a new set of face stimuli representing a 142 individuals from a large non-U.S. ethnic group, Indian Asians. We report the development and standardization of these stimulus materials, which follow the established procedures of the database, so that the new Indian Asian images can be used interchangeably with the full set of CFD stimuli. With the new image set, we also provide extensive norming data that cover both the physical face attributes as well as subjective impressions of the faces. Finally, in addition to the neutral expression images relevant to the current research questions, the India face set also includes images of models making a variety of emotional expressions.

The empirical part of the current research then focused on the subjective face impressions included in the norming data. First, we asked whether the resulting face norms are culturally dependent and will vary with the participant sample. To address this issue, we collected impression ratings in a full ingroup-outgroup design with samples of Indian and U.S. participants, for both Indian Asian and Caucasian face images. Results show that impression ratings indeed varied significantly with participant group. Compared to U.S. raters, Indian participants judged faces to be more happy, surprised, fearful, and of higher social status, but less angry, masculine, babyfaced, and competent. The current results add to evidence from other recent studies that impressions from faces are to some extent culturally specific (Sutherland et al., 2018; Wang et al., 2019; Jones et al., 2021). Possibly of greater consequence for the use of these impression norms in selecting or weighting study materials, the differences between participant groups depended on the target group. For example, Indian and U.S. participants significantly differed in their ratings of Indian Asian and Caucasian faces on perceived trustworthiness. Consequently, a study among Indian participants with both Indian Asian and Caucasian faces that relied on U.S. image norms in selecting faces of similar trustworthiness would run the risk of confounding trustworthiness and face ethnicity. Hence, the current findings highlight the importance of obtaining local stimulus norms for research with non-U.S. participant samples.

We further explored whether the differences we observed between Indian and U.S. raters followed systematic patterns of ingroup favoritism and stereotyping. With regard to ingroup favoritism, we observed that U.S. participants reported marginally more favorable impressions for faces of their ingroup, compared to outgroup faces. However, Indian participants' ratings, in contrast, showed outgroup favoritism. Their impressions of outgroup faces were significantly more favorable than their impressions of ingroup faces. The result highlights the importance of conducting research on intergroup relations across diverse cultural and international settings. While the literature has generated a long history of findings demonstrating general ingroup favoritism in social judgment (Brewer, 2007), our results for the Indian participant sample clearly deviate from this established effect.

With regard to stereotyping, we focused on face ratings of warmth, competence, and trustworthiness, following the SCM by Fiske and colleagues (Fiske et al., 2002; Kervyn et al., 2015).

Overall, the results show no target group differences along the basic stereotype dimensions of the SCM. However, we did observe differentiation between the two participant groups. For competence and trustworthiness, both participant groups rated the respective outgroup somewhat higher than their own ingroup. The results may reflect the fact that, for both target groups, outgroup stereotypes are overlapping with ingroup stereotypes. Consistent with this interpretation, Lee and Fiske (2006) found U.S. stereotypes about Indian immigrants living in the U.S. to be largely similar to ingroup stereotypes. In a cluster analysis of stereotype content, Indian immigrants appeared in the same cluster as various ingroups (e.g., college students). Arguably, this study investigated a specific subset of Indian Asians, Indian immigrants in the U.S. However, we should note that in our study the impression rating task (task A) made no reference to the targets' nationality, ethnicity, or any other social category for that matter. Participants merely saw faces. Without mentioning an international context, it seems quite likely that our U.S. participants considered both the Indian Asian faces as well as the Caucasian faces to represent individuals living in the U.S. Similarly, we suspect our Indian participants considered the Indian Asian faces to depict individuals from their immediate environment, India. Caucasian faces, in contrast, are considerably less prevalent in Indian society and may be more readily assumed to be non-Indian foreigners by our Indian participants. Possibly, differences in attributions between the participant groups with regard to the targets' background may account for our results for perceived status. Our data deviate somewhat from prior findings, which generally show substantive correlations between perceived group status and perceptions of competence. However, the existing research here has generally focused on status differences within a given society (e.g., Durante et al., 2017).

The relative prevalence of stereotypic impressions for the two target groups may have been further impacted by participants misclassifying face ethnicity. As a matter of fact, as we had predicted categorization accuracy differed significantly for ingroup and outgroup faces. Moreover, the categories chosen most frequently in error differed for ingroup and outgroup faces. In these instances of misclassification, where, for example, an Indian Asian target is seen to be Middle Eastern, we would expect different stereotypes to impact the impression ratings. The observed misclassification of outgroup faces may have considerable real-world consequences, for example in forensic settings where law enforcement officers may use either explicitly or implicitly a suspect's ethnicity. Likewise, some research suggests that, post 9/11, South Asians living in the United States experienced misclassification as Middle Eastern, resulting in identity threat, stereotyping, and prejudice (Joshi, 2006; Bhatia, 2008; Poolokasingham et al., 2014).

Arguably, there is considerable value in research on group-level stereotypes; research that investigates the content and the dynamics of beliefs about entire groups. And, given the scarcity of data on the stereotypes Indians hold about people from the U.S. and vice versa, we wish more of this kind of group-level research was conducted in an international context.

Our finding that perceptions of face ethnicity depended on the raters' own group membership has both methodological as well as conceptual implications. Methodologically, our data show that what may serve as a typical Indian Asian face in a study with both U.S. and Indian participants is not an equally typical face for both participant groups. Similarly, the manipulation of target group membership or ethnicity through the use of faces (e.g., Krumhuber et al., 2015) may be compromised if the faces end up being misclassified.

Conceptually, our finding that perceptions of face ethnicity depended on the raters' own group membership is consistent with well-documented effects of familiarity on categorization speed and accuracy (e.g., Smith, 1967; Johnson and Mervis, 1997). However, in the face perception literature, few studies have directly investigated the role of familiarity for the categorization of faces by social group or ethnicity.

Indirect evidence comes from work on the "other-race-effect," whereby own-race faces are more readily and accurately identified than other-race faces (ORE, see Meissner and Brigham, 2001). One explanation for the ORE holds that face processing occurs along face dimensions that effectively differentiate among the types of faces frequently encountered (Goldstein and Chance, 1980; Valentine, 1991). As a result, more familiar own-race faces function as a perceptual default facilitating their processing and identification, while impeding the processing and identification of other-race faces.

The ORE, thus, is consistent with our finding that ethnicity can be inferred more accurately for ingroup than outgroup faces. However, ORE studies do not directly assess categorization accuracy of the stimulus faces. In fact, studies that do ask participants to classify faces by race, have found the opposite effect, showing that classification is *faster* and *more* accurate for other-race than own-race faces, an effect labeled other-classification race advantage (ORCA; see Levin, 1996; Zhao and Bentin, 2011). Yet, a notable difference between these demonstrations and our current study is that our participants chose from a list of eight ethnic categories, whereas ORCA studies use a category-verification task with a binary choice option (e.g., Asian, Caucasian). In category verification, participants see an array of faces and have to decide whether the face is either Asian or Caucasian. Such a binary choice task is likely to increase the salience of features that differentiate between the two groups used in the task (see Wang et al., 2016).

At times, social interactions may require such a binary differentiation. But often interactions lack explicit group identifiers. With considerable frequency, we encounter people not knowing their ethnic origin, whether they are from the U.S., Europe, India, the Middle East, or any other part of the world. Our data capture the kinds of face impressions people form under these circumstances. We believe research on face impression and stereotyping will benefit from considering a cross-cultural and international context in which the origin of a face is not immediately determined by a small set size of stimulus attributes. We hope the India Face set helps facilitate such research.

The data and materials for this research are available at www.chicagofaces.org.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by authors, without undue reservation, to any qualified researchers with verifiable credentials, who do not pose a risk to confidentiality and safety of our participants.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Institutional Review Board, University of Chicago. The patients/participants provided their written/online informed consent to participate in this study. Written/online informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

AUTHOR CONTRIBUTIONS

AL and BW designed and supervised image collection and standardization, designed and conducted the norming study, analyzed data, and co-wrote the manuscript. JC analyzed the data and co-wrote the manuscript. DM co-wrote the manuscript. All authors contributed to the article and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2021.627678/full#supplementary-material

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Personal Value Preferences, Threat-Benefit Appraisal of Immigrants and Levels of Social Contact: Looking Through the Lens of the Stereotype Content Model

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The study examines a model proposing relationships between personal values, positive (i.e., benefits) and negative (i.e., threats) appraisal of immigrants, and social contact. Based on a values-attitudes-behavior paradigm, the study extends previous work on personal values and attitudes to immigrants by examining not only negative but also positive appraisal and their connection with social contact with immigrants. Using a representative sample of 1,600 adults in the majority population in Israel, results showed that higher preference for anxiety-avoidance values (self-enhancement and conservation) was related to higher levels of perceived threat and lower levels of benefit, while higher preference for anxiety-free values (self-transcendence and openness to change) was related to higher levels of perceived benefits and lower levels of threat. Greater opportunities for contact and perceived benefits and lower levels of threats were related to more social contact. The model showed good fit across the total sample, and across four diverse immigrant groups in Israel (diaspora immigrants from the Former Soviet Union, Ethiopia and Western countries, and asylum seekers). In line with a Stereotype Content Model, which suggests that group-specific stereotypes are related to social structural characteristics of the group, associations between variables differed by group. Results strengthen a theoretical conceptualization that posits an indirect relationship between personal value preferences and behavior through group appraisal. They highlight the importance of comprehensive conceptualizations including both positive and negative appraisal of immigrants, which take into account the way different groups may be appraised by the majority population.

Keywords: personal values, threat-benefit model, social contact, stereotype content model, asylum seekers and immigrants, Israel

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INTRODUCTION

Based on an attitude-behavior paradigm (Ajzen and Fishbein, 1977, 1980), theory and empirical research in the area of intercultural relations has focused on the way the attitudes (i.e., cognitions) that we hold toward individuals from a different immigrant, ethnic or racial group can predict how we behave toward and interact with members of those groups. These cognitions can include the

stereotypes that we hold (Cuddy et al., 2007) and/or the degree of threat (Stephan and Stephan, 1996, 2000; Stephan et al., 2005) that we perceive these groups to manifest for us. Theories in the area of social psychology have focused on structural characteristics of groups which inform the cognitions we hold, such as their levels of status and perceived competition (in the Stereotype Content Model, SCM (Lee and Fiske, 2006; Fiske et al., 2007; Cuddy et al., 2009) or their realistic or symbolic threat (in the case of Integrative Threat theory, ITT (Stephan and Stephan, 1996, 2000). In addition, extensive research has shown the way in which the personal values that an individual holds can predict the positive or negative attitudes toward immigrants that s/he will hold (Davidov et al., 2008, 2020; Davidov and Meuleman, 2012; Beierlein et al., 2016). The current paper aims to extend previous research by combining these bodies of literature to examine the way in which the relationship between personal values and attitudes may be useful in predicting levels of contact that an individual will choose to have with immigrants in his or her society. Based on a value-attitude-behavior paradigm (Homer and Kahle, 1988), the current study examines a theoretical Threat-Benefit model (Tartakovsky and Walsh, 2016a,b, 2019) in which the Personal Values (Schwartz, 2006; Schwartz et al., 2012) which an individual holds will predict both directly and indirectly (through group appraisal) (Schwartz et al., 2010; Lönnqvist et al., 2013; Roccas and Sagiv, 2017) levels of chosen social contact with members of an immigrant group.

The study examines appraisal of, and contact with, four diverse immigrant groups in Israel, which provides a unique immigration context due to the presence of both formally welcomed or "valued" (Montreuil and Bourhis, 2001) diaspora immigrants from the Former Soviet Union, Ethiopia, and Western countries as well as asylum seekers, mainly from Sudan and Eritrea (Horenczyk and Ben-Shalom, 2006) who have a far less accepted place in Israeli society (Kritzman-Amir, 2009). Previous research has shown that attitudes of the public toward immigrant groups vary according to identity and structural characteristics of the group and according to the context in which the immigration is framed (Hellwig and Sinno, 2017; Gorodzeisky and Semyonov, 2019; Jedinger and Eisentraut, 2020) suggesting the imperative to examine to what extent the proposed model holds across immigrant groups. Specifically, research within the framework of SCM has shown that, in the eyes of the Jewish majority population, these groups show different positions on the axis of competition (i.e., warmth) and status (i.e., competence) (Durante et al., 2013). As such, we also examine the extent to which a values-threat/benefit-contact model differs for groups that vary in their meaning for the host population. In a current reality of large-scale migration and increasingly heterogeneous societies, a theoretically based understanding of what will determine the host population's willingness to interact and be in contact with immigrants is of critical importance.

A Threat-Benefit Model for Understanding Appraisal of Immigrants

One of the most popular theories of appraisal of immigrants is the Integrative Threat Theory (ITT) (Stephan et al., 1999; Stephan and Stephan, 2000). The main assumption of the ITT is that local people perceive immigrants as a threat (Stephan and Stephan, 2000). The theory delineates four types of threats that immigrants may represent for local people: realistic threat (competition for resources), symbolic threat (resulting from incompatibility in cultural values), inter-group anxiety (out-group fear), and negative stereotypes (leading to anticipated negative behavior). However, despite its popularity among researchers, ITT can be seen to have two main drawbacks. The main weakness of the theory is in its focus on the exclusively negative aspects of the perception of immigrants. Indeed, empirical studies conducted in different countries have indicated that anti-immigrant attitudes are strong in the local populations (Raijman and Semyonov, 2004; Davidov et al., 2008; Gorodzeisky and Semyonov, 2009). However, they have also demonstrated that most people in the receiving countries have some positive attitudes toward immigrants, and a substantial part of the local population supports immigration to their country (Lee and Fiske, 2006; Mayda, 2006; Leong, 2008; Velasco Gonzalez et al., 2008). As such, ITT relates to attitudes toward immigrants as representing one factor. A one-factor perspective has also been used in empirical studies regarding immigrants (Raijman et al., 2008). However, Threat-Benefit theory (TBT) theorizes (and our previous empirical studies have supported; Tartakovsky and Walsh, 2016a,b) that the levels of threats and benefits that a group represents may be considered as two factors, e.g., diaspora immigrants from the Former Soviet Union in Israel may simultaneously be considered to benefit the country by strengthening social cohesion yet may also represent an economic threat as they may compete over resources, such as jobs and housing. A two-factor model was also found in recent research in Greece in which perceived threat and perceived contribution of asylum seekers predicted attitudes toward permanent settlement (Thravalou et al., 2020). A two-factor perspective leads to the theoretical question of whether it is the perception of threat or, more so, the appreciation of benefits (i.e., positive appraisal) that will predict levels of social contact that an individual will choose to have with members of a particular immigrant group.

Another important limitation of ITT relates to the fact that it does not delineate the antecedent factors for different threats. What is it about the *individual* that leads him or her to perceive a particular immigrant group as representing a threat and/or potential benefit to the receiving society? As will be discussed later, in extension of previous literature (Davidov et al., 2008, 2020; Davidov and Meuleman, 2012; Beierlein et al., 2016), TBT assumes that it is general motivational goals expressed in personal value preferences (Schwartz et al., 2012) which affect the individual's appraisal of immigrants as threatening or/and beneficial for the receiving society.

The threat-benefit theory (Tartakovsky and Walsh, 2016a,b) delineates four types of threat (economic, physical, social cohesion, modernity) and four benefits (economic, social cohesion, humanitarian, and cultural diversity). *Economic threats* reflect a fear held by local people of losing their dominance over economic resources by competing for jobs, welfare, and other valuable social resources with the immigrants. *Physical threats* reflect a fear held by local people that immigrants may cause physical harm, including harm to the local people's bodies and property. *Threats to societal cohesion* reflect a

fear that immigrants will alter the existing local value system and introduce new behavioral norms, customs, and rituals. *Threats to modernity* reflect the fear that immigrants will bring non-modern values and behavioral norms. *Economic benefits* reflect the immigrants' potential to contribute to the economic development of the receiving country, which is related to the immigrants' readiness to take jobs that local people do not want or lack the skills to do, as well as the immigrants' readiness to work longer hours and for a lower salary. In addition, immigrants may bring valuable skills, language knowledge, and international connections that may benefit the local economy. *Cultural diversity benefits* are related to the new cultural elements (food, clothes, music, etc.) that immigrants bring with them, which may be perceived by some local people as culturally enriching the receiving society. *Humanitarian benefits* are related to the satisfaction of helping immigrants escape danger in their home countries and improve their quality of living. *Social cohesion benefits* are related to the potential ability of some culturally close groups of immigrants (e.g., diaspora Jews coming to Israel) to strengthen the dominant group in the receiving country.

Personal Values and Behavior: Direct and Indirect Paths

The relationship between personal beliefs and attitudes toward immigrants has been well-studied. In particular, research on the relationship between ideological beliefs and attitudes to immigrants has emphasized the negative association between Right-Wing Authoritarianism (RWA) and Social Dominance Orientation (SDO) on attitudes toward immigrants (Araújo et al., 2020) and the positive association with multi-cultural ideology (MCI) (Grigoryev et al., 2019a). RWA and SDO have been considered to be principle drivers of prejudice and out-group hostility, the first postulating dangerous world beliefs and the second proposing a perspective of the social world as a dangerous jungle (Duckitt and Sibley, 2009; Sinn, 2019) while MCI has been considered to forward universalizing socio-functional motives (Grigoryev et al., 2019a). Recent work emphasizes an interaction between personality variables such as RWA and SDO and context (e.g., country-level threat) (Araújo et al., 2020). The present study draws from Schwartz's theory of values (Schwartz, 1992, 2006; Schwartz et al., 2012), which defines values as desirable trans-situational goals that serve as guiding principles in people's lives. Schwartz's value theory has been suggested to be the best available nomological framework through which to examine ideological beliefs and ideological differences (Sinn, 2019) due to its richness and ability to focus on a wider range of personal beliefs than RWA and SDO.

Value preferences reflect the individual's general motivational goals, which affect the individuals' perception of reality and direct behavior (Schwartz, 2006). The theory (Schwartz et al., 2012) specifies a comprehensive set of nineteen motivationally distinct values: power (dominance and resources), achievement, hedonism, stimulation, self-direction (thought and action), universalism (nature, concern, and tolerance), benevolence (caring and dependability), humility, conformity (rules and interpersonal), tradition, security (personal and societal), and face. The theory assumes the existence of dynamic relations between values: the pursuit of each value has consequences that may conflict or may be congruent with the pursuit of other values. The conflicts and congruities among all 12 values yield an integrated structure of four higher-order value types arrayed along two orthogonal dimensions: Openness to change values (including self-direction and stimulation) emphasize readiness for new ideas, actions, and experiences. They contrast with conservation values (including conformity, tradition, and security) that emphasize self-restriction, order, and preserving the status quo. Self-enhancement values (including values of power and achievement) emphasize pursuing one's interests. They contrast with self-transcendence values (including universalism and benevolence) that emphasize transcending one's interests for the sake of others. Finally, the theory assumes that the self-transcendence and openness to change values express the goals of growth and self-expansion and are more likely to motivate people when they are free of anxiety. The self-enhancement and conservation values are directed toward protecting the self-against anxiety and threat.

As is assumed in social psychology, attitudes can assert value preferences (Hitlin, 2003; Schwartz, 2006). As such, researchers have assumed that attitudes toward minorities assert some personal values and contradict others (Sagiv and Schwartz, 1995; Schwartz, 2006). Specifically, researchers have argued that self-enhancement values (especially power) may be associated with negative attitudes toward minority groups. People who value self-enhancement tend to perceive the world as a win-lose game (Schwartz, 2006). They sense that they should compete with others and control more people and resources to succeed in life. If others are perceived as threatening to one's society, it justifies one's urgency to fight them. Perceiving others as beneficial to society contradicts one's readiness to take valuable resources from them to advance oneself. On the other hand, self-transcendence values (especially universalism) may be associated with positive attitudes toward these groups, due in part to their relationship with higher levels of empathy (Zibenberg and Kupermintz, 2016). People, for whom helping others is important, prefer to see others as more beneficial and less threatening to their society, because helping somebody who is threatening may cause cognitive dissonance. In addition, values of security and tradition may be associated with negative attitudes toward minority groups, as a need for conservation prevents the individual from perceiving a newcomer, who may shake the status quo, as positive. Lastly, openness to change values may be associated with positive attitudes toward outgroups (Schwartz, 2007), as the change and new elements that the immigrants bring may be seen as positive.

These theoretical assumptions have been mainly supported in empirical studies on attitudes toward immigrants conducted on both the individual level (Feather and McKee, 2008; Leong, 2008; Vecchione et al., 2012), and at the level of societal value preferences (Leong and Ward, 2006; Davidov et al., 2008). Analysis of data from diverse countries in the European Social Survey (ESS) (Jowell et al., 2007) showed that respondents high on conservation values reported more negative attitudes toward immigrants (e.g., did not want them to come to

their country) while those high on self-transcendence values reported more positive attitudes toward immigrants (Davidov et al., 2008; Davidov and Meuleman, 2012). However, these relationships have been found to be weaker in countries with high levels of cultural-embeddedness (Davidov et al., 2014). Similarly, individuals high on universalism values and low on group security values in Italy, Germany, and Spain were found to have more positive perceptions of immigrants (e.g., making the country a better place to live) (Vecchione et al., 2012). In addition, a recent analysis of the 2014–2015 ESS suggests that the relationship between values and attitudes toward immigrants may be partially mediated by perceived symbolic threat (Davidov et al., 2020). The current study extends this research to examine the relationships between personal values and benefits (and not just threats) among diverse groups of immigrants and to see how the value-attitude relationship further predicts levels of social contact.

A theoretical overlap between theories of intergroup relations, such as ITT (Stephan and Stephan, 2000), and personal values theory (Schwartz, 2006) can be found in their attention to levels of anxiety and threat, as experienced by the individual. For ITT (Stephan and Stephan, 2000), one of the four elements of threat relates to inter-group anxiety, as aroused by the presence of the immigrant group. In personal values theory, Schwartz (2006) differentiates between anxiety-free values (openness to change and self-transcendence) which relate to self-growth, as opposed to anxiety-avoidance values (self-enhancement and conservation) in which the individual is motivated toward self-protection against anxiety. Schwartz (2010) suggests that if people are preoccupied with pursuing specific values to control their anxiety, they have fewer psychic resources to be open to the "other," suggesting a relationship between anxiety-avoidance values and negative appraisal of immigrants. In the current study, based on a Threat-Benefit Theory, we suggest that negative (threat) appraisal of immigrants can allow attainment, expression, or fulfillment of anxiety avoidance values while positive (benefit) appraisal can enable the attainment or fulfillment of anxiety-free values.

Recent years have seen a development of theory and research on the relationship between personal values and behaviors (Bardi and Schwartz, 2003; Roccas and Sagiv, 2010). Empirical studies have shown values as related to diverse behaviors, such as voting patterns (Schwartz et al., 2010), helping behavior (Daniel et al., 2014), prosocial behaviors (Lönnqvist et al., 2013), political activism (Vecchione et al., 2015), and adolescent aggression (Benish-Weisman, 2015). Yet the mechanisms behind the relationship have been understudied. In their recent book, Roccas and Sagiv (2017) suggest that the relationship between values and behavior can be both direct and indirect, mediated by attitudes (Grunert and Juhl, 1995), valences (Feather and McKee, 2008), and perception or interpretation (Schwartz et al., 2000). Yet although limited research has examined the relationship between values and intentions for social contact (Sagiv and Schwartz, 1995), no research to date has explored an indirect path of appraisal of groups in the relationship between values and social contact. In the current study, we examine direct and indirect (through threat/benefit appraisal of immigrants) paths in the relationship between personal values and social contact with the immigrants.

Immigrants and Asylum Seekers in Israel Through the Lens of a Stereotype Content Model

In the current study, we examine the proposed model across four diverse immigrant groups. Research in Britain (Hellwig and Sinno, 2017) and Germany (Jedinger and Eisentraut, 2020) suggests that the threats that members of the majority group may feel toward different immigrant or minority groups differ, in line with perceived characteristics of the immigrant group (e.g., cultural, religious, economic). In addition, recent research in Germany (Landmann et al., 2019) also suggests that there may be particular threats that relate to refugee groups (e.g., safety, cohesion, prejudice, and altruistic threats) over and above the more traditionally conceived symbolic and realistic threats (Stephan et al., 2000). Moreover, research also suggests that these different threat perceptions may lead to different behaviors (De Rooij et al., 2018), making it important to examine how the particular relationships between values, immigrant appraisal, and social contact may differ across groups.

Recent years have seen the development of theory and empirical research around the Stereotype Content Model (SCM) (Lee and Fiske, 2006; Fiske et al., 2007; Cuddy et al., 2009). Broadly speaking SCM suggests that the stereotypes held toward particular immigrant groups are not unidimensional (good/bad) (Allport, 1954) but rather are defined along axes related to social structural characteristics of the group in question (Cuddy et al., 2009). In particular, the nature or content of the stereotype will be related to the extent to which we feel a group intends to harm us and the extent to which we feel they are capable of harming us. These two questions lead to two axes: warmth (e.g., how friendly, good-natured, sincere, and warm we perceive the group to be) which is related to the potential harm or benefit which we assess the group as representing, and competence (e.g., how capable, confident, skillful we assess the group to be) which relates to whether we believe the target group members can effectively enact the threat (Fiske et al., 1999; Fiske, 2018). Higher social status groups are generally perceived as more competent while more competitive groups are perceived as lower in warmth (Oldmeadow and Fiske, 2010). In addition, in countries with high-income inequality (such as Israel), low socio-economic status has been related to low competence but high warmth (Durante et al., 2017). Interestingly, Sevilleno and Fiske (2012) suggest that the dimensions of warmth and competence approximately parallel the underlying motivations behind RWA and SDO.

SCM stems from a basic premise that outgroups are not a monolithic body, but rather differ among themselves and represent differing threats to the population, according to perceived or actual economic, geographic, power and race relations and particular threats (Gorodzeisky and Semyonov, 2019). Stereotypes can be cultural or consensual (i.e., shared by members of a particular culture) or personal (i.e., represent the individual's views about a particular group) (Findor et al., 2020).

Cultural stereotypes, in particular, those based on demographics such as race or ethnicity have been found to be more accurate than personal stereotypes (Jussim et al., 2015), and are likely to be more connected with real positions of groups in the social structure. Personal stereotypes also tend to be more positive as they are not affected by factors such as social desirability (Kotzur et al., 2020). From a functional perspective (Neuberg et al., 2020), stereotypes play a role in enabling members of a society to identify and manage social and physical opportunities and threats which a particular group may manifest and thereby influence behavior. Stereotypes allow members of a society to assess to what extent a particular group can enable or hinder the goals. In line with SCM which focuses on cultural stereotypes (Findor et al., 2020) and a functional perspective (Neuberg et al., 2020), we assume that threat-benefit appraisal is related to structural characteristics of a group that may hinder or enable opportunities or threats for the host society (i.e., will differ by group), and which parallel underlying personal motivations (Sevillano and Fiske, 2012). As such, the extent to which threat-benefit appraisal may be salient (i.e., explain the relationship between values and contact) to the local population may vary by immigrant group and their particular perceived social structural characteristics.

Israel is a unique context in which to examine attitudes to immigrants, due to the combination of diaspora or supposedly desired immigrants (Titzmann and Stoessel, 2014), as well as more negatively viewed labor migrants and asylum seekers (Kritzman-Amir, 2012). A more nuanced examination shows varying attitudes toward the different groups, related to desirability, size, perceived resources, and possibilities for contact. In the current study, we examine appraisal of four groups of immigrants: three diaspora immigrant groups—from the FSU, Ethiopia, and Western countries such as France, the United Kingdom, and the United States—and a fourth group of asylum seekers who can be seen as occupying diverse positions along warmth-competence axes (Fiske et al., 2007). These four groups are the largest groups that have immigrated to Israel in recent years, and recent research shows they differ significantly in the levels of threat/benefit that the host population perceives them as representing (Tartakovsky and Walsh, 2019).

Together with their children born in Israel, immigrants from the FSU number about 1,100,000 Central Bureau of Statistics (2020)[1,2], while immigrants from Ethiopia number about 137,000. Since 1989 there have been approximately 66,000, 69,000, and 23,000 immigrants from France, the United States, and the United Kingdom, respectively Central Bureau of Statistics (2020)[2], and asylum seekers number about 55,000 (UNHCR, 2013). These groups differ drastically in their socio-demographic characteristics, the support they receive from the government, and their social and psychological adjustment in Israel (Afeef, 2009).

The four groups also differ in how they are perceived by the Israeli majority population. The three diaspora groups do, at least formally, enjoy a desired status among the Israeli majority population (Avineri et al., 2009; Titzmann and Stoessel, 2014). Recent research (Tartakovsky and Walsh, 2019) revealed that while the appraisal of asylum seekers in Israel is characterized by multi-domain negativity, attitudes toward diaspora groups are more nuanced and relate to the particular characteristics of the immigrant group. Immigrants from Western countries are most favorably appraised for their high levels of Jewish identity, patriotism, and social resources which they bring (Amit, 2012); appraisal of immigrants from the FSU can be described by ambivalence, as they are seen as bringing high levels of both threats (cultural, political, economic) but also benefits (economic, social cohesion) (Tartakovsky and Walsh, 2019). Immigrants from Ethiopia are appraised both by bringing some benefits (humanitarian, social cohesion) but also perceived negatively by some of the local population for their limited resources and higher levels of crime (Kahan-Strawczynski et al., 2013).

Many immigrants from FSU came with high levels of education and human capital, and studies have documented impressive levels of employment and integration (Amit, 2012; Remennick, 2012). Yet they have been subject to discrimination based on their perceived symbolic and realistic threat (Tartakovsky and Walsh, 2016a) and questioned Jewish status (Remennick, 2012). The waves of immigration from Ethiopia since the 1980s have been characterized by difficulties in integration resulting from deep cultural differences (Kaniel, 1990; Tannenbaum, 2008), as well as racism and discrimination based on skin color (Offer, 2007). On the other hand, the Ethiopian Jewish community came to Israel with a strong Jewish identity and rich culture and heritage (Schwarz, 2016). Large waves of immigrants from France have brought many religious, ideologically oriented immigrants (Ben-Rafael and Schmid, 2007), many of whom maintain a transnational identity (Amit, 2012). Little has been written about English-speaking immigrants to Israel (Walsh and Horenczyk, 2001), whose immigration is also largely driven by religious and Zionist motivations and who bring with them high levels of human capital. In contrast, while immigrants from the FSU, Ethiopia, and Western countries receive economic and psychosocial support from the state, asylum seekers have limited rights in Israel and receive no help from the state in their adjustment (Kritzman-Amir, 2009). The majority of the asylum seekers have come from Eritrea and Sudan, following significant experiences of trauma (Nakash et al., 2015), though their entrance to Israel has been highly controversial, with many parts of the society calling for their deportation.

Research within the framework of SCM (Durante et al., 2013) has suggested that FSU immigrants represent relatively high competence (e.g., high human capital) and low warmth (high economic and social cohesion threats), Ethiopian immigrants represent low competence (low status) but high warmth (little competition), Western immigrants represent high competence (high status) and high warmth (e.g., shared social and religious ideals) asylum seekers represent low competence (low status) and low warmth (high threats to personal safety and the Jewish character of Israel). One of the questions of the current study is to what extent, in the light of these differences, will a threat-benefit model differ across groups. SCM suggests that in cases

[1]http://www.cbs.gov.il/shnaton68/st02_08x.pdf

[2]https://www.cbs.gov.il/en/subjects/Pages/Immigration-and-International-Migration.aspx

in which there is little actual contact between the groups, stereotypes will play a greater role in the evaluation of other groups (Grigoryev et al., 2019b). In the case of Israel, due to the smaller numbers and geographical concentration, local population members have less actual contact with asylum seekers and Ethiopian immigrants.

The Current Study

The current study examines a theoretical model focusing on dispositional characteristics of the individual (personal values) as predicting levels of social contact directly and indirectly through the association with the positive and negative appraisal of immigrant groups (see **Figure 1**). In line with theory and the results of previous studies, we hypothesized that:

(1) Higher levels of growth anxiety-free values (openness to change and self-transcendence) would directly predict higher levels of perceived benefits, lower levels of perceived threats, and higher levels of social contact.

(2) Higher levels of self-protection anxiety-avoidance values (conservation and self-enhancement) would directly predict higher levels of perceived threat, lower levels of perceived benefit, and lower levels of social contact.

(3) Perceived benefit would positively predict social contact while perceived threat would negatively predict social contact.

(4) Personal values would indirectly predict the level of social contact through threats and benefits. As such, higher levels of perceived benefits and lower levels of threats would partly explain the positive relationship between anxiety-free values and social contact, while higher levels of perceived threat and lower levels of perceived benefits would partly explain the negative relationship between anxiety-avoidance values and social contact.

In addition, as suggested above, following the testing of the overall theoretical model, based on ideas from SCM, we also explored the extent to which the proposed model varied across diverse groups.

METHODS

Participants and Procedures

The study involved a representative sample of 1,600 adults ranging from 18 to 91 years of age (Mean age = 44.2 years, *SD* = 17.0; 51.7% female) of the majority Jewish population in Israel[3]. Of the participants 26% were single, 59% married, 9.7% divorced and 4.6% widowed. Eighty-five percent had graduated high school with a high school certificate and 35% had an academic degree. In terms of religious identification, 50% reported being secular or atheist, 31% traditional and 19% religious. Sixty-eight percent were born in Israel, 15.8% in the FSU, and 1% in Ethiopia. The remaining 15% were born outside of Israel in other countries. Sampling involved random route sampling (De Rada and Martín, 2014) across the whole of Israel inside the internationally recognized borders. The response rate was 69%, akin to those of similar surveys such as the European Social Survey (De Rada and Martín, 2014). A comparison with the Central Bureau of Statistics data regarding the Israeli Jewish

[3]Israel is composed of a majority (Jewish) and a minority (Arab) population. In the current study, we examine the theoretical model to assess and understand the appraisal of immigrants by the majority population. We expect that threat/benefit appraisal would differ between members of the majority and minority population due to their different levels of power and influence, and this will need to be examined in follow-up research.

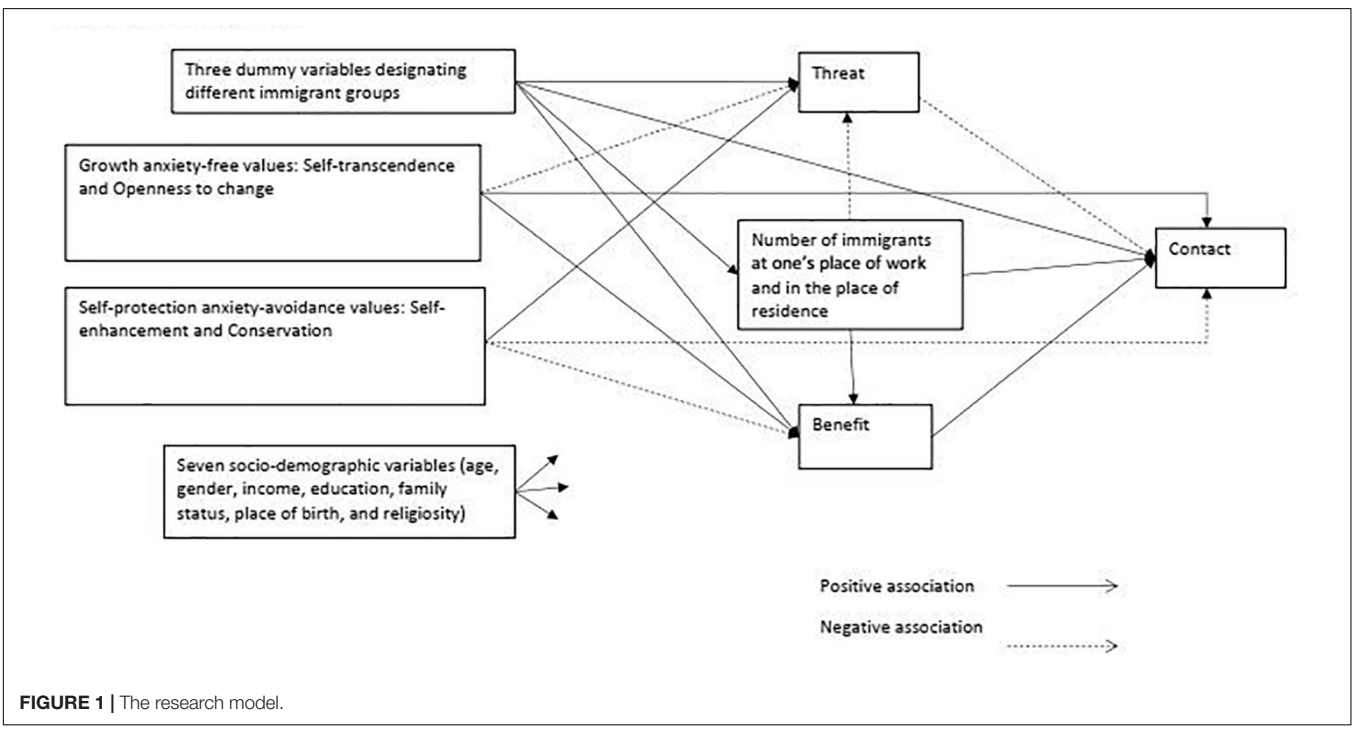

FIGURE 1 | The research model.

population Central Bureau of Statistics (2020)[2] confirmed the sample's representativeness.

Completion of questionnaires was face to face in the participant's home with a research assistant who returned up to three times to each sampled house. The questionnaires were in Hebrew; however, Russian-, Amharic-, and English-speaking interviewers were available to help those participants who had difficulties with Hebrew. Four versions were distributed. Each version asked the participants as to their answers toward one of four immigrant groups: Diaspora immigrants from the Former Soviet Union, Ethiopia, and Western countries (such as France, the United Kingdom, and the United States) and asylum seekers. The choice between the four groups in the study was randomized; however, those participants who were immigrants or children of immigrants did not answer the questionnaire regarding their own group. Thus, 400 questionnaires were received for each of the four immigrant groups in the study: Immigrants from the FSU, Ethiopia, Western Countries, and asylum seekers from African countries. Ethical approval was gained from the IRB of Bar Ilan University. Participation was voluntary and participants did not receive compensation for survey completion. Data was collected by the PORI research company[4] and the survey was funded by a grant from the Israel Science Foundation.

Measures

Personal Value Preferences

The personal value preferences were measured using the latest version of the Portrait Values Questionnaire, PVQ-R (Schwartz et al., 2012). This questionnaire consists of 57 items. Each item portrays a person's goals, aspirations, or wishes that indicate the importance of a specific value. For each item, respondents indicate how similar the described person is to them on a 6-point scale, from 1 (*not like me at all*) to 6 (*very much like me*). Item example: "It is important to him to avoid upsetting other people" (conformity). The questionnaire was tested in ten countries including Israel and has demonstrated good psychometric properties (Schwartz et al., 2012). Reliabilities for all value scales in the current study were satisfactory (as measured by Cronbach's alpha): openness to change ($\alpha = 0.84$), self-transcendence ($\alpha = 0.89$), conservation ($\alpha = 0.86$), and self-enhancement ($\alpha = 0.84$), for the pooled sample.

Immigrants' Appraisal

Appraisal of immigrants was measured by the Threats-Benefits Inventory (TBI, see Tartakovsky and Walsh, 2016a,b, 2019 for details of the development of the inventory). The questionnaire consists of 35 items which are measured on a 5-point scale, from 1 (*strongly disagree*) to 5 (*strongly agree*)[5]. Threats were examined in four areas: Economic threats (e.g., "Immigrants drain welfare funds"); Physical threats (e.g., "Immigrants commit many violent crimes against Israelis"); Threats to social cohesion (e.g., "Immigrants are a threat to the Jewish character of Israel"); Threats to modernity (e.g., "Immigrants bring non-progressive rules of raising children, e.g., physical punishment"). ***Benefits*** are measured in four areas: Economic benefits (e.g., "Immigrants have a stronger work motivation than Israelis"), Cultural diversity benefits (e.g., "Immigrants bring cultural diversity to our population and allow us to learn about cultures we might never learn about otherwise"); Humanitarian benefits (e.g., "Accepting immigrants can help to save lives"), and Social cohesion benefits (e.g., "Immigrants strengthen the Jewish character of Israel"). The structural validity of the questionnaire and its measurement invariance across different immigrant groups in Israel was confirmed in two previous studies conducted among social workers (Tartakovsky and Walsh, 2016a,b), as well as in the general sample (Tartakovsky and Walsh, 2019). In the current study, the two higher-order indexes of perceived general threat and benefit were included in the tested theoretical model. Alpha Cronbach for benefits and threats were as follows: Benefits: entire sample −0.91, Asylum seekers −0.88, Ethiopians −0.89, Western counties −0.86, FSU −0.86. Threats: entire sample −0.93, Asylum seekers −0.91, Ethiopians −0.91, Western countries −0.92, FSU −0.90.

Opportunities for Contact

Opportunities for contact with immigrants were measured by two questions: "How many immigrants are there in your workplace"?; "How many immigrants are there in your neighborhood"? [1-none (0%); 5—a great number (30% or more)]. The correlations between the two opportunity for contact variables were low (between .031 and −0.43 for the four groups), so they remained as separate variables.

Social Contact

Social contact was measured by a scale developed based on contact with immigrant questionnaires by Islam and Hewstone (1993), Voci and Hewstone (2003), and (Walsh et al., 2018). Some of the items were also taken from the Contact with Disabled Persons Scale (CDP) (Yuker and Hurley, 1987). The participants were asked to report how frequently they were in social contact with immigrants during the last year. The questionnaires contained 12 items measured on a 5-point scale from 1—*never* to 5—*very often*. Items included "You socialized at the home of an immigrant," "You shared something personal with an immigrant." Cronbach's alpha for the social contact was 0.95 for the total sample ranging from 0.86 for asylum seekers to 0.94 for FSU immigrants.

Data Analysis

Data analysis was conducted using Structural Equation Modeling (SEM; AMOS 22, Arbuckle, 2014). In the analysis, we used observed variables due to the high internal consistency of the variables in the study and a large number of variables in the model. The covariance structure of the hypothesized model was evaluated with multiple fit indexes, and the following values were regarded as indicating a good fit: CFI > 0.90, and RMSEA < 0.08 (Hooper et al., 2008; Brown, 2014). The direct, indirect, and total effects were tested using the bootstrapping method with 1,000 re-samples (Arbuckle, 2014). Due to a large number of connections

[4]https://directory.esomar.org/country87_Israel/r487_PORI.php

[5]For all questionnaires, the word immigrant was substituted with one of the following: immigrants from the FSU, immigrants from Ethiopia, immigrants from western countries such as France, the United Kingdom, or the United States, asylum seekers.

in the model and a large research sample, we demanded $p < 0.01$ as a minimal level of significance (Hochberg and Benjamini, 1990). The number of missing values in the sample was small (less than 2% for each variable), and missing data were handled using Maximum Likelihood Estimation (Allison, 2012; Arbuckle, 2014). Following SEM using the pooled sample, multi-group SEM was used to see in what way the overall model was similar or differed across the four groups.

RESULTS

Descriptive Statistics

Table 1 presents means, standard deviations, and the results of ANOVAs of all the variables in the study compared across the four immigrant groups. The participants reported the following order in the number of immigrants at their work and the residential area (from largest to smallest): immigrants from the FSU, immigrants from western countries, immigrants from Ethiopia, and asylum seekers. The appraisal of immigrants by local people also differed across the immigrant groups: immigrants from western countries were perceived as the least threatening and most beneficial for Israeli society, while asylum seekers were perceived as the most threatening and least beneficial. Finally, the frequency of social contact between locals and the immigrants also varied across immigrant groups: the most frequent social contact was with immigrants from the FSU, followed by immigrants from western countries, Ethiopia, and asylum seekers. **Table 2** shows the correlations between the study variables.

Testing of the Research Model

The research hypotheses were tested by analyzing the research model (**Figure 1**) in the entire sample (n = 1,600). The research model included the following variables: two growth anxiety-free higher-order values (self-transcendence and openness to change), two self-protection anxiety-avoidance higher-order values (self-enhancement and conservation), two higher-order indexes of the immigrants' appraisal (threat and benefit), and the variable measuring social contact with immigrants. In addition, seven socio-demographic variables (gender, age, education, income, family status, place of birth, and religiosity) were included in the model as control variables; they were connected to the values, threat, benefit, and contact. For details of the relationships between socio-demographic variables and appraisal and contact in the overall model and for each group see the online **Supplementary Appendix**.

Finally, three dummy variables reflecting the distribution of the respondents into four groups, each reporting appraisal of and contacts with one of the four immigrant groups, were also included as controls in the model. The dummy variables were connected to threat, benefit, opportunities for contact, and contact. The four values were assumed to be correlated between themselves, as well as threat and benefit, and the number of immigrants at one's place of work and in the residential area.

The model's goodness of fit indexes indicated a good fit: $\chi^2(65) = 178$; $p < 001$; $CFI = 0.987$; $RMSEA\ (CI) = 0.033$ (0.027; 0.039). The model explained a significant proportion of variance in the three predicted variables (all $p < 0.01$): contact (54%), threat (30%), and benefit (43%). **Tables 3–5** present standardized direct, indirect, and total effects of predicting variables on the values, benefit, threat, and contact in the pooled sample. The path diagram in **Figure 2** presents the significant direct effects between all variables in the model[6].

Predicting Social Contact

We hypothesized that personal value preferences of members of the receiving society would affect their contact with immigrants both directly (Hypotheses 1–2) and indirectly (Hypothesis 4). The results obtained demonstrated that only the direct effect (controlling for opportunities for contact, and socio-demographic variables) of the conservation value on contact was significant. Thus, the hypothesis regarding the direct connection between personal value preferences of members of the receiving society and their contact with immigrants was only partially supported. On the other hand, the indirect effects of all four values on contact (hypothesis 4) were significant (see **Table 4**). As can be seen in **Figure 2**, conservation and self-transcendence had indirect effects through both threats and benefits. Conservation values were negatively associated to contact through higher levels of threats ($\beta = -0.008$; $p = 0.003$) and lower levels of benefits ($\beta = -0.023$; $p < 0.001$). Self-transcendence values were positively

[6]To avoid cluttering, the effects of socio-demographic variables are not presented in the path diagram; however, they are presented in **Supplementary Figure A1**. Correlations between disturbances of the threat and benefit, as well as between the numbers of immigrants at one's place of work and in the residential area are presented in the path diagram. However, to avoid clattering, disturbances of other variables and correlations between them, as well as correlations between exogenous variables, are not presented in the path diagram. They are available from the authors upon request.

TABLE 1 | Comparison across four immigrant groups of opportunities for contact, threat-benefit appraisal and social contact [Means (SD) and ANOVA].

Variables	Asylum seekers	Ethiopians	Western countries	Former Soviet Union	$F(3, 1{,}596)$; p; partial η^2
Number of immigrants at work	1.47 (1.21)[d]	1.96 (1.26)[c]	2.39 (1.53)[b]	2.73 (1.31)[a]	67.2; 0.000; 0.112
Number of immigrants in the residential area	1.49 (0.61)[d]	2.08 (0.95)[c]	2.39 (0.89)[b]	2.86 (0.92)[a]	182; 0.000; 0.255
Perceived threat	3.00 (0.70)[a]	2.39 (0.62)[c]	2.06 (0.62)[d]	2.50 (0.59)[b]	153; 0.000; 0.223
Perceived benefit	2.38 (0.61)[d]	3.33 (0.63)[c]	3.56 (0.59)[a]	3.45 (0.57)[b]	322; 0.000; 0.377
Frequency of social contacts	1.21 (0.35)[d]	1.68 (0.64)[c]	2.17 (0.80)[b]	2.36 (0.82)[a]	234; 0.000; 0.306

Different superscript letters mean that there is a statistically significant difference between the groups ($p < 0.05$).

TABLE 2 | Correlations between the study variables (pooled sample).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Age (1)	–														
Gender (2)	0.044	–													
Family status (3)	0.623**	0.084**	–												
Education (4)	0.082**	−0.026	0.067**	–											
Religiosity (5)	−0.013	0.000	0.009	−0.131**	–										
Income (6)	0.167**	−0.204**	0.131**	0.400**	−0.097**	–									
Country of origin (1-Israel; 0-other) (7)	0.419**	0.005	0.291**	0.107**	−0.071**	0.076**	–								
Number of immigrants at work (8)	−0.075**	−0.027	−0.070**	0.061*	−0.057*	0.134**	−0.076**	–							
Number of immigrants in the residential area (9)	−0.001	−0.011	−0.049	−0.001	−0.023	0.018	0.015	0.524**	–						
Openness to change (10)	−0.108**	−0.046	−0.071**	0.022	−0.156**	0.032	−0.111**	0.077**	0.049	–					
Self-enhancement (11)	−0.112**	−0.098**	−0.063*	0.010	−0.083**	0.115**	−0.044	0.062*	−.018	0.553**	–				
Conservation (12)	0.124**	0.031	0.101**	−0.069**	0.265**	0.015	−0.026	0.023	0.053*	0.289**	0.122**	–			
Self -transcendence (13)	0.039	0.057*	0.029	−0.001	−0.046	0.003	−0.080**	0.039	0.065**	0.531**	0.130**	0.686**	–		
Benefit (14)	0.039	0.036	0.003	0.066**	−0.067**	0.069**	−0.063*	0.307**	0.297**	0.159**	0.036	0.065**	0.206**	–	
Threat (15)	0.005	−0.051*	0.009	−0.115**	0.153**	−0.010	0.046	−0.113**	−0.152**	−0.084**	0.141**	0.040	−0.119**	−0.501**	–
Contact (16)	−0.101**	−0.001	−0.105**	0.069**	−0.060*	0.089**	−0.094**	0.594**	0.537**	0.126**	0.029	−0.031	0.066**	0.482**	−0.304**

*$p < 0.05$; **$p < 0.10$.

TABLE 3 | Standardized direct effects: estimate, standard error, and level of significance (pooled sample).

Predicting variables	Contact	Threat	Benefit	Openness to change	Self-transcendence	Conservation	Self-enhancement
Threat	−0.08 (0.02)**						
Benefit	0.19 (0.02)**						
Openness to change	0.06 (0.03)*	−0.14 (0.03)**	0.06 (0.03)				
Self-transcendence	0.02 (0.03)	−0.12 (0.04)**	0.22 (0.03)**				
Conservation	−0.09 (0.03)**	0.10 (0.03)**	−0.12 (0.03)**				
Self-enhancement	−0.02 (0.02)	0.23 (0.03)***	−0.01 (0.02)				
Number of immigrants in the residential area	0.23 (0.02)**	−0.01 (0.03)	0.01 (0.02)				
Number of immigrants at work	0.33 (0.02)***	0.02 (0.03)	0.06 (0.03)*				
Gender	0.01 (0.02)	−0.03 (0.02)	0.03 (0.02)	−0.04 (0.03)	0.05 (0.03)*	0.03 (0.03)	−0.08 (0.03)**
Age	−0.06 (0.02)*	0.00 (0.03)	0.06 (0.02)*	−0.05 (0.03)	0.09 (0.03)**	0.15 (0.03)**	−0.11 (0.03)**
Education	0.03 (0.02)	−0.10 (0.02)**	0.03 (0.02)	0.00 (0.03)	−0.03 (0.03)	−0.03 (0.03)	−0.03 (0.03)
Religiosity	0.03 (0.02)	0.10 (0.02)**	−0.01 (0.02)	−0.15 (0.02)**	−0.05 (0.03)*	0.26 (0.02)**	−0.07 (0.02)**
Income	0.04 (0.02)	0.04 (0.02)	0.05 (0.02)*	0.04 (0.03)	0.01 (0.03)	0.02 (0.03)	0.12 (0.03)**
Marital status	−0.06 (0.02)*	0.02 (0.02)	−0.02 (0.02)	−0.08 (0.03)**	−0.01 (0.03)	0.02 (0.03)	−0.05 (0.03)
Place of birth	0.01 (0.02)	−0.04 (0.03)	0.03 (0.02)	0.10 (0.03)**	0.12 (0.03)***	0.07 (0.03)*	0.01 (0.03)
Group: Asylum seekers	−0.13 (0.03)**	0.55 (0.03)***	−0.65 (0.02)***				
Group: ethiopian	−0.14 (0.02)**	0.18 (0.03)**	−0.15 (0.02)**				
Group: FSU	0.02 (0.02)	0.26 (0.03)***	−0.08 (0.02)**				

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. Gender: 1–male; 2–female. Marital status: 0–single; 1–living with a partner. Place of birth: 0–foreign born; 1–born in Israel.*

TABLE 4 | Standardized indirect effects: estimate, standard error, and level of significance (pooled sample).

Predicting variables	Contact	Threat	Benefit
Openness to change	0.02 (0.01)**		
Self-transcendence	0.05 (0.01)**		
Conservation	−0.03 (0.01)**		
Self-enhancement	−0.02 (0.01)**		
Number of immigrants in the residential area	0.01 (0.01)		
Number of immigrants at work	0.01 (0.01)		
Gender	0.01 (0.01)	−0.03 (0.01)*	0.01 (0.01)
Age	0.01 (0.01)	−0.01 (0.01)	0.01 (0.01)
Education	0.02 (0.01)**	−0.01 (0.01)	0.01 (0.01)
Religiosity	−0.05 (0.01)**	0.04 (0.01)**	−0.05 (0.01)**
Income	0.01 (0.01)	0.02 (0.01)**	0.01 (0.01)
Marital status	−0.01 (0.01)*	0.01 (0.01)	−0.01 (0.01)
Place of birth	0.02 (0.01)*	−0.02 (0.01)**	0.02 (0.01)***
Group: Asylum seekers	−0.17 (0.02)**		
Group: Ethiopian	−0.04 (0.01)**		
Group: FSU	−0.04 (0.01)**		

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. Gender: 1–male; 2–female. Marital status: 0–single; 1–living with a partner. Place of birth: 0–foreign born; 1–born in Israel.*

associated with contact through lower levels of threats (β = 0.01; $p = 0.002$) and higher levels of benefits (β = 0.042; $p < 0.001$). In both cases, the benefits' path was stronger than the threats' path. Openness to change values were positively associated with contact through lower levels of threat, while self-enhancement values were negatively associated with contact through higher levels of threat. Thus, hypothesis 4 was fully confirmed.

We further hypothesized that the appraisal of immigrants as beneficial or threatening for the receiving society would predict social contact with them (Hypothesis 3). The results obtained demonstrated that the direct paths between both components of appraisal to contact were significant: as predicted, the path was positive for benefit and negative for threat. Thus, hypothesis 3 regarding the connection between appraisal and contact was fully confirmed.

Predicting Threat and Benefit Appraisal

We hypothesized that indirect effects of values on contact would be due to the connection between values and immigrant appraisal (hypothesis 4). The results obtained demonstrated that the direct effects of all values on threat were significant. In addition, the direct effects of two values on benefit were significant: self-transcendence and conservation. Thus, the hypotheses (1–2) regarding the connection between the values of members of the receiving society and their appraisal of immigrants were mostly confirmed.

Testing for the Similarities and Differences Across Immigrant Groups

We tested similarities and differences in the connections between variables across the four immigrant groups using Multi-Group Structural Equation Modeling (AMOS 22, Arbuckle, 2014). After the goodness of fit of the multi-group model was established, the model's equivalence across the four groups was tested comparing the constrained model (assuming the equivalence of the path coefficients across the four groups) with the unconstrained model (Selig et al., 2008). Finally, the direct, indirect, and total effects of all the variables in the model on contact with immigrants in each group were tested using the bootstrapping method with 1,000 re-samples with a 95% confidence interval (Arbuckle, 2014).

The multi-group model's goodness of fit indexes indicated a good fit: $\chi^2(83) = 193$; $p < 001$; *CFI* = 0.978; *RMSEA(CI)* = 0.029 (0.024; 0.034). The model's equivalence across the four groups was tested comparing goodness of fit indexes of unconstrained and constrained models (Byrne et al., 1989). The comparison indicated that the constrained model had a significantly worse fit [$\Delta\chi^2(198) = 444$, $p < 0.001$]; therefore, the path coefficients were significantly different across the four immigrant groups. **Supplementary Tables A1–A3** in the online supplement present standardized direct, indirect, and total effects of predicting variables on the threat, benefit, and social contact for each of the four groups. **Figure 3** presents significant direct effects for the four groups.

Direct Effects of Threat-Benefit Appraisal and Values on Contact

The results obtained demonstrate that the direct effect of threat on contact was significant only regarding immigrants from the FSU (β = −0.176; $p = 0.003$); however, the direct effects of benefit on contact were positive and significant for all diaspora immigrant groups: immigrants from Ethiopia (β = 0.263; $p = 0.004$), western countries (β = 0.137; $p = 0.006$), and the FSU (β = 0.270; $p = 0.004$). The direct effect of benefit on contact was also positive for asylum seekers, but its size did not reach the required level of significance (β = 0.113; $p = 0.03$). Thus, the results obtained mostly confirmed the hypothesis regarding the effect of benefit on contact and mostly did not confirm the hypothesis regarding the effect of threat on contact across different immigrant groups.

TABLE 5 | Standardized total effects: estimate, standard error, and level of significance (pooled sample).

Predicting variables	Contact	Threat	Benefit	Openness to change	Self-transcendence	Conservation	Self-enhancement
Threat	−0.08 (0.02)**						
Benefit	0.19 (0.02)**						
Openness to change	0.08 (0.03)**	−0.14 (0.03)**	0.06 (0.03)				
Self-transcendence	0.07 (0.03)*	−0.12 (0.04)**	0.22 (0.03)***				
Conservation	−0.12 (0.03)**	0.10 (0.03)**	−0.12 (0.03)**				
Self-enhancement	−0.04 (0.02)	0.23 (0.03)**	−0.01 (0.02)				
Number of immigrants in the residential area	0.23 (0.02)***	−0.01 (0.03)	0.01 (0.02)				
Number of immigrants at work	0.34 (0.02)**	0.02 (0.03)	0.06 (0.03)*				
Gender	0.02 (0.02)	−0.04 (0.02)	0.04 (0.02)*	−0.04 (0.03)	0.05 (0.03)*	0.03 (0.03)	−0.08 (0.03)**
Age	−0.06 (0.02)**	−0.01 (0.03)	0.06 (0.02)*	−0.05 (0.03)	0.09 (0.03)**	0.15 (0.03)**	−0.11 (0.03)**
Education	0.05 (0.02)**	−0.11 (0.02)**	0.02 (0.02)	−0.01 (0.03)	−0.03 (0.03)	−0.03 (0.03)	−0.03 (0.03)
Religiosity	−0.02 (0.02)	0.14 (0.02)**	−0.06 (0.02)**	−0.15 (0.02)**	−0.05 (0.03)*	0.26 (0.02)**	−0.07 (0.02)**
Income	0.04 (0.02)	0.06 (0.02)*	0.05 (0.02)*	0.04 (0.03)	0.00 (0.03)	0.02 (0.03)	0.12 (0.03)**
Marital status	−0.07 (0.02)*	0.02 (0.02)	−0.03 (0.02)	−0.08 (0.03)**	−0.01 (0.03)	0.02 (0.03)	−0.05 (0.03)
Place of birth	0.03 (0.02)	−0.05 (0.03)*	0.05 (0.02)*	0.10 (0.03)**	0.12 (0.03)***	0.07 (0.03)*	0.01 (0.03)
Group: Asylum seekers	−0.30 (0.02)**	0.55 (0.03)***	−0.65 (0.02)***				
Group: Ethiopian	−0.18 (0.02)**	0.18 (0.03)**	−0.15 (0.02)**				
Group: FSU	−0.01 (0.02)	0.26 (0.03)***	−0.08 (0.02)**				

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. Gender: 1–male; 2–female. Marital status: 0–single; 1–living with a partner. Place of birth: 0–foreign born; 1–born in Israel.*

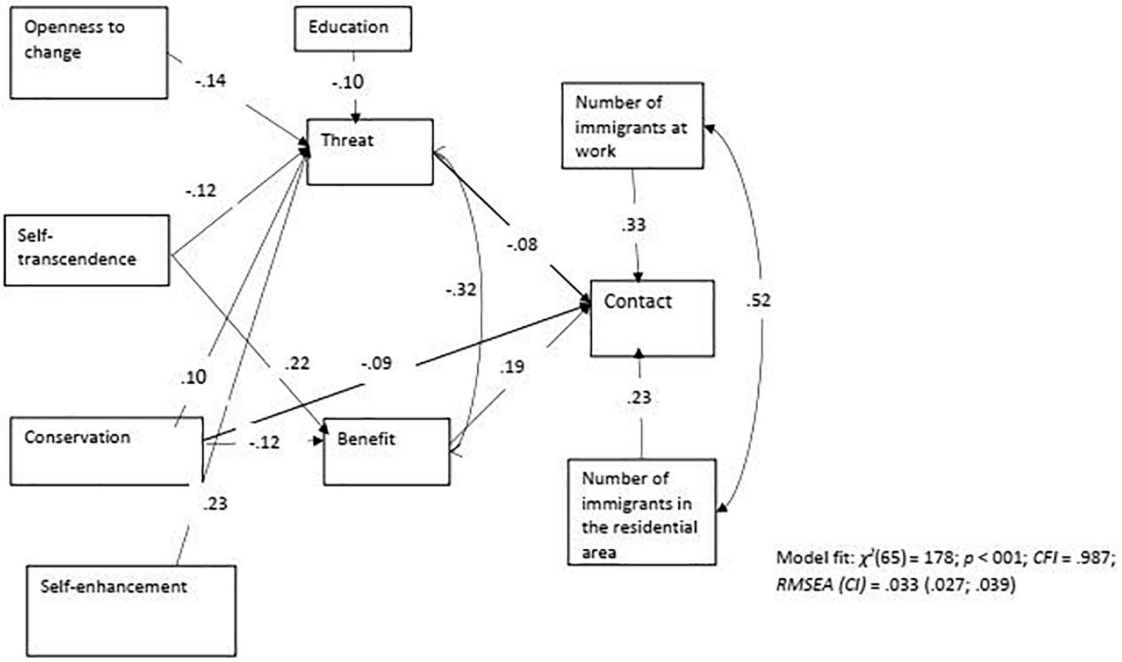

FIGURE 2 | The best fit model with statistically significant direct effects without sociodemographic variables (pooled sample N = 1,600). Gender, age, education, income, family, status, place of birth, and religiosity were included as covariates but these paths are not shown for clarity; they are available in **Supplementary Figure A1**.

Among all direct effects of values on contact, only the effect of conservation on contact was significant for two diaspora immigrant groups: immigrants from western countries and immigrants from the FSU. In addition, some indirect effects of values on contact were significant in different groups: conservation for asylum seekers (β = −0.046; p = 0.008), self-transcendence for immigrants from Ethiopia (β = 0.098; p = 0.001), self-enhancement for immigrants from Ethiopia (β = −0.075; p = 0.007) and the FSU (β = −0.069; p = 0.003), and openness to change for immigrants from western countries (β = 0.040; p = 0.003). Thus, although the size of effects varied, growth anxiety-free values were positively related to contact, while anxiety-avoidance values were negatively related to contact across different immigrant groups.

Direct Effects of Personal Values on Threat-Benefit Appraisal

Examining the direct effects of values on benefit, we found that the effect of openness to change on benefit was positive regarding all groups of immigrants, but in no group it reached the required level of significance. The effect of self-transcendence on benefit was positive and significant regarding asylum seekers and immigrants from Ethiopia. The effect of conservation on benefit was negative and significant regarding asylum seekers. The effect of self-enhancement on benefit was negative and significant regarding immigrants from Ethiopia.

Examining the direct effects of values on threat, we found that the effect of openness to change on threat was negative and significant regarding immigrants from Ethiopia and western countries. The effect of self-transcendence was negative and significant regarding asylum seekers. The effect of conservation on threat in no group reached the required level of significance. Finally, the effect of self-enhancement on threat was positive and significant among all four groups. In general, the pattern of connections between values and appraisal of immigrants confirmed the hypothesis across the four immigrant groups.

The results obtained demonstrated that direct connections between the number of immigrants in one's social surrounding and contact with them were positive and significant for both the number of immigrants in the residential area and at work regarding all immigrant groups: asylum seekers (β = 0.140; p = 0.002; β = 0.518; p = 0.002), immigrants from Ethiopia (β = 0.257; p = 0.002; β = 0.344; p = 0.001), western countries (β = 0.271; p = 0.002; β = 0.358; p = 0.002), and the FSU (β = 0.217; p = 0.001; β = 0.290; p = 0.002). Numbers of immigrants in the place of work and in the residential area were not related to their appraisal for all immigrant groups, except asylum seekers, for whom their number at work was positively and significantly related to their appraisal as beneficial (β = 0.223; p = 0.001).

Indirect Effects Between Personal Values and Contact

Significant positive indirect effects through both threat and benefit were found for openness to change and contact for Ethiopian and Western targets. Significant indirect effects (through threat only) were also found for the value of self-transcendence for asylum seeker targets and (through

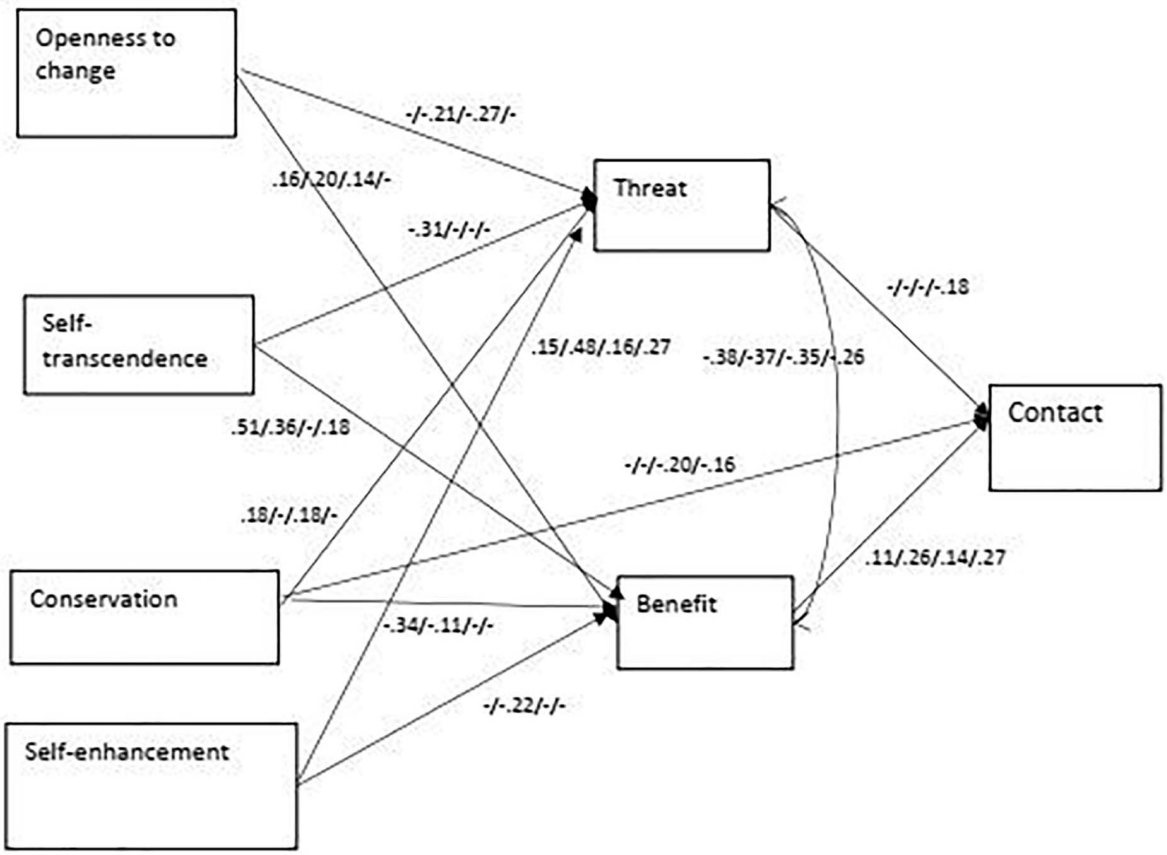

FIGURE 3 | The best fit model of values, threat-benefit apprasial and contact with statistically significant direct effects for the four groups Asylum seekers/Ethiopian/Western countries/FSU (N = 1,600).

benefit only) for Ethiopian and FSU targets. A significant indirect relationship between conservation and contact was found only for asylum seekers (through both threat and benefit), while a significant negative indirect relationship between self-enhancement and contact was found for Ethiopian (through both threat and benefit) and FSU immigrants (through threat). See **Figure 3** for significant direct effects for each of the four groups and the online supplement for tables presenting all direct and indirect effects separately for the four groups.

DISCUSSION

The current study tested a theoretical model examining the relationships between personal value preferences (Schwartz et al., 2012) and appraisal of immigrant groups as representing both a threat and a benefit to the receiving population and their association with levels of social contact. The goodness of fit measures for the theoretical model and relatively high levels of explained variance confirmed hypotheses that personal values predicted levels of appraisal, which in turn, together with opportunities for contact, predicted levels of social contact. Findings support a theoretical model in which personal values predict social contact both directly (in the case of conservation values) but also, and more notably, indirectly, through their impact on positive and negative appraisal of the immigrant group. They also extend previous research on personal values and attitudes to immigration (Davidov et al., 2008; Davidov and Meuleman, 2012; Beierlein et al., 2016; Davidov et al., 2020) by showing how they predict levels of social contact.

Higher levels of anxiety avoidance values (self-enhancement and conservation) and lower levels of anxiety-free values (openness to change and self-transcendence) predicted higher levels of perceived threat while lower levels of conservation values and higher levels of self-transcendence values predicted higher levels of perceived benefit. Results suggest that individuals, who are motivated by higher levels of anxiety, as manifested in values of conservation and self-enhancement, are more likely to perceive immigrant members as a threat and resist social contact. These results support previous findings (Davidov et al., 2020) and strengthen a synthesis between ITT (Stephan and Stephan, 1996; Stephan and Stephan, 2000) and values theory (Schwartz, 2006) in which higher levels of anxiety lead to greater perceptions of threat. The positive relationship between self-transcendence and benefits may be explained through previous research showing the relationship between self-transcendence values and the ability to be empathic and sensitive to others (Caprara et al., 2012;

Zibenberg and Kupermintz, 2016). We can suggest that the ability to take another's perspective can enable the appreciation of the benefits they bring with them. Similarly, the need for individuals high on conservation values to preserve the status quo (Schwartz et al., 2012) and the anxiety they may feel when confronted with new possibilities, would seem to make it difficult for them to appreciate the benefits that a new group can bring. Findings also strengthen the idea that appraisal of the other and establishing contact with him/her can be a means through which the individual can attain or fulfill general motivational goals expressed in personal value preferences (Sagiv et al., 2004).

Results emphasize the importance of a model of intergroup relations that takes into account both the threats and the benefits that an immigrant group may represent to the local population. Previous models have tended to emphasize the role of symbolic and realistic threat (Stephan and Stephan, 2000; Stephan et al., 2005) in predicting attitudes toward immigrants, but the current findings suggest that a more holistic perspective, in which immigrant groups may represent a host of possible benefits (economic, cultural diversity, humanitarian and social cohesion) for the receiving population is imperative for understanding what can enhance inter-group relationships (Thravalou et al., 2020). As such our model, advancing previous studies (Raijman et al., 2008), supports a two-factor model of appraisal. It is also important, both theoretically and practically to acknowledge that positive, and not just negative appraisal impacts on levels of social contact. Indeed, positive appraisal was a better predictor of contacts than negative appraisal. For only one of the groups (FSU immigrants) was there a significant direct association between threats and contact such that a perspective focusing on negative appraisal alone would not only fail to show the indirect relationships between values and contact but would also give a partial conceptual understanding of the relationship between appraisal and contact. On a theoretical level, the model reinforces a values-attitude-behavior paradigm (Homer and Kahle, 1988). From this perspective, general motivational goals affect how a person forms his/her specific attitudes, which in turn affect his/her behavior toward the specific object when a social situation provides an opportunity for the desired behavior. The direct effect of values on behavior is weak because values are too abstract as concepts. However, the conservation values may be directly related to avoiding immigrants, because they are more strongly associated with anxiety than other values (Nelissen et al., 2007; Tamir et al., 2016).

Levels of opportunities for contact, both in the neighborhood and the workplace were not directly related to levels of appraisal, suggesting that levels of appraisal may be related to more personality (values-) based than situationally based anxiety (Bouchard et al., 2004; Averill, 2015). While opportunities for contact may not change attitudes toward the group as a whole, they enable the local population to meet, interact, and potentially like individuals in the immigrant community (who they may work with or live near). Such social contact may even be despite their general appraisal of the group to which the immigrants belong.

While the general model held across groups, there were some differences in the relationships between values and appraisal among the four groups. Higher levels of benefits were associated with higher levels of social contact for all four groups, yet appraisal of an immigrant group as a threat was associated with less social contact only for immigrants from the FSU. While further research is needed to understand why this would be, we can suggest that it may be related to the number of immigrants and/or their social power and capital (Amit, 2012). In line with SCM (Fiske et al., 2007; Cuddy et al., 2008, 2009), FSU immigrants represent low warmth (i.e., high competition), and relatively high competence (high social status) which may make their threat more actual. The perceived threats for the society may prevent locals from establishing personal contact. It is interesting to examine the group differences through a SCM lens. For example, the positive relationship between self-transcendence and benefits for asylum seekers and Ethiopian immigrants and the negative relationship between self-transcendence and threat for asylum seekers may be explained by low levels of perceived competence for both groups (i.e., low social status will incline individuals for whom universalism and benevolence are important to feel greater positive and less negative appraisal). Similarly, a negative relationship between conservation and benefit for asylum seekers may be explained by their perceived status as low warmth (i.e., high competition). Overall, it is interesting that there were more associations between values and appraisal for the asylum seekers and the Ethiopian immigrants than for the FSU and Western immigrants. Connections between values and appraisal were also, in general, stronger for asylum seekers and Ethiopians than for FSU and Western immigrants. In line with SCM, we hypothesize that in cases where immigrant groups are larger and opportunities for contact are greater, the role of internal personality factors may be lower (Grigoryev et al., 2019b). Real contact, in such cases, may reduce the role of individual factors. The smaller the group, the lesser the contact and the less the individual has the chance to experience members of the group, the more values and stereotypes may predict contact.

It is also interesting to understand the differences between the groups in the indirect relationships between values and contact within an SCM lens. For example, positive indirect effects were found between openness to change and contact, through higher levels of benefits and lower levels of threats, for both Ethiopian and Western immigrants (both considered high on warmth (i.e., low competition). It may be that in the context of low competition, individuals with high levels of openness to change will be more confident to appraise incoming groups positively, thus feeling more secure in pursuing contact. As might be predicted, the negative indirect relationship between conservation and contact (through higher levels of the perceived threat and lower levels of perceived benefits) was found only for asylum seekers who represent high competition (a high threat to the status quo). Results suggest that the SCM is a helpful framework through which to understand a threats-benefits profile of specific immigrant group ("mild" outgroups, "moderate" outgroups, and "extreme" outgroups) as it provides a more nuanced understanding of how immigrant groups are perceived by the host society (Dricu et al., 2020).

Limitations

The current study involved a large representative sample of adults within the majority Jewish population in Israel and examined four diverse groups of immigrants. Despite this, further research would be needed to examine the validity of the model in additional cultural contexts and with further immigrant groups. Israel is a country that encourages cultural assimilation of diaspora immigrants (Horenczyk and Ben-Shalom, 2006), and it would be important to examine the model in countries that encourage greater levels of cultural diversity patterns (Bourhis et al., 1997). In addition, we decided to examine the majority population to test the conceptual model. It would be important to see whether the study model is applicable for members of minority populations in a society (e.g., Palestinian Israelis) and between immigrant groups (e.g., appraisal of immigrants from the FSU by Ethiopian immigrants). The cross-sectional nature of the study does not allow the assertion of causality, nor does it allow a complete assessment of mediation (Kline, 2015; O'Laughlin et al., 2018) although the model rests on theoretical constructs (Hill, 1965). Therefore, further experimental and longitudinal studies are needed to test the model and to ascertain mediation and causality. In addition, while the current study examines direct and indirect relationships between values and contact, recent literature emphasizes the interaction between personality variables and context (Cohrs and Asbrock, 2009; Araújo et al., 2020). Future research should examine the moderation effects of contextual variables on the presented model. Finally, the differences in sample sizes for the pooled sample vs. the individual groups, means that there was a difference in statistical power between these analyses.

IMPLICATIONS AND CONCLUSION

The conceptual model examined in the current study reveals the effects of personal variables on social contact with immigrants among the local population, and, as such, it has several important theoretical contributions. It expands traditional theories of threat (Stephan and Stephan, 2000) to stress the importance of a more comprehensive model of appraisal which includes both negative and positive aspects of perception of the "other." It also suggests that the individual's appraisal of an immigrant group as representing various threats and/or benefits to the society is associated with the personal value preferences that the individual holds and that this appraisal is associated with the behavioral choices the individual makes around social contact with members of the immigrant group. In addition, in line with SCM, results suggest that a comprehensive model examining values-appraisal-behavior should include a nuanced view taking into account the particular social structural characteristics of the immigrant group. Further study could examine additional behaviors that may be predicted by a values-appraisal perspective such as affirmative action, granting minority rights or permanent status, or support for pro-minority policies.

On a practical level, a means of understanding what can predict or possibly enable more social contact can be important for promoting more positive intergroup relationships in heterogeneous societies (Van Laar et al., 2005). The model suggests that to enhance intergroup relations more emphasis can be put on values-based interventions and education (Biesta, 2010; Bardi and Goodwin, 2011); e.g., strengthening values of self-transcendence and openness to change, and policy emphasizing the contributions of immigrant groups to the local society (Florack et al., 2003). However, results also suggest that values-based messaging should be nuanced according to the characteristics of the particular immigrant group and their position in the host society. For example, study results suggest that while self-transcendence-based messaging on benefits can persuade people to be in contact with immigrants from low-status groups, it is unlikely to be useful for promoting contact with high and medium-level status groups. Results also challenge immigration policies that segregate immigrants into highly concentrated immigrated neighborhoods (Hall, 2013) and do not encourage the integration of immigrants in the workplace and social environments. Such policies prevent locals from establishing important and satisfying social contacts with immigrants.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Bar-Ilan University Ethical Board. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

SW led the writing of the manuscript. ET was involved in the writing and editing and approved the final draft. Both authors equally contributed in the conceptualization of the research project, the designing and overseeing of the research project and the analysis.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2021.609219/full#supplementary-material

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The Neglected C of Intercultural Relations. Cross-Cultural Adaptation Shapes Sojourner Representations of Locals

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We investigated, by means of the Reverse Correlation Task (RCT), visual representations of the culturally dominating group of local people held by sojourners as a function of their degree of cross-cultural adaptation. In three studies, using three different methods (reduced RCT, full RCT, conceptual replication) with three independent samples of sojourners and seven independent samples of Portuguese and US-American raters, we gathered clear evidence that poor adaptation goes along with more negative representations of locals. This indicates that sojourner adaptation is reflected, at a social-cognitive level, in the valence of outgroup representations.

Keywords: cross-cultural adaptation, outgroup representations, reverse correlation task, stereotype valence, intercultural relations

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INTRODUCTION

While the increasing cultural diversity of contemporary societies brings new opportunities for socio-cultural development, it also carries the risk of intergroup tensions. Hostile responses toward a perceived increase in cultural, ethnic, or other diversity can take various forms, from prejudice and discrimination (cf. Wright and Taylor, 2007) to radicalization and acts of violence (cf. Hafez and Mullins, 2015). As previous research shows, intergroup tension is reflected in people's visual representations of ethno-cultural outgroups. For instance, majority members who are highly prejudiced against immigrants visualize a prototypical face of this outgroup as criminal and untrustworthy (Dotsch et al., 2008).

An analogous phenomenon could be expected for minority members, for example sojourners who fail to adapt to the host culture. Sojourners with adaptation difficulties are known to perceive high intergroup tension (Wilson et al., 2013), and it seems reasonable to assume that such perceptions are partly reflected in social cognitions, that is, in negative representations of locals. The current set of studies investigates, by means of Reverse Correlation (Dotsch et al., 2008), visual representations of the cultural majority held by sojourners as a function of their degree of cross-cultural adaptation.

Cross-Cultural Adaptation and Social Cognition

According to the ABC model of intercultural contact (Ward et al., 2001), adaptation occurs at three levels: Affect, Behavior, and (social) Cognition. In research practice, however, adaptation tends to be studied as bi-dimensional. The first dimension, psychological adaptation, is related to affect and refers to sojourner well-being; the second dimension, socio-cultural adaptation, is related to Behavior and refers to the quality of sojourner functioning within the host culture (Searle and Ward, 1990; Ward et al., 2001). Cognitive adaptation has received much less attention so far.

Most research on adaptation-related cognition has studied social identity shifts resulting from intercultural contact within the broader framework of acculturation research under the assumption that such identity shifts precede adaptation outcomes in a causal chain (cf., Berry, 1997; Ward et al., 2001; Ward and Geeraert, 2016). That is, the social-cognitive aspect of adaptation has been long considered as a part of the overall process rather than an outcome. In acculturation theory, this focus has recently shifted with Berry's (2015, 2017) addition of *intercultural adaptation*, a dimension that refers to "relating well" with other groups across cultural boundaries and covers social-cognitive outcomes such as "mutually positive ethnic attitudes and a lack of prejudice and discrimination" (Berry, 2017, p. 20). In acculturation research, some noteworthy although rather exceptional examples of research on social cognition aspects related to adaptation include studies by Tadmor et al. (2009), who argued that an increased cognitive complexity resulting from biculturalism may be adaptive, and studies by Stanciu and Vauclair (2018) and Stanciu et al. (2019), who proposed the stereotype accommodation hypothesis (i.e., that immigrants can incorporate the stereotypical beliefs learned in the host culture into preexisting stereotypes).

Despite these advances, social cognition still has not been systematically investigated as a distinct third dimension of cross-cultural adaptation. Yet, there are valid theoretical and empirical reasons for doing so. With our research, we intend to fill this gap in the literature by systematically examining how sojourners' representations of a typical local person, potentially reflecting the social-cognitive aspect of adaptation, are empirically interrelated with affective and behavioral adaptation.

International transitions usually imply entering a social reality dominated by the cultural outgroup, the local people. Intergroup phenomena such as perceived discrimination ($r = -0.50$, the strongest effect in the meta-analysis by Wilson et al., 2013; and $r = -0.41$, one of the strongest effects in the meta-analysis by Bierwiaczonek, 2018) have an impact on cross-cultural adaptation, and our expectation is that this impact is partly reflected in social cognitions, that is, in negative outgroup representations. We understand these representations as the visual encoding of an overall negative stereotype (cf., Dotsch et al., 2008).

Theoretically speaking, there are several reasons why psychological and socio-cultural adaptation should be reflected at the social-cognitive level. First, negative stereotypes go in line with negative expectations concerning the behavior of the local people, which generates intergroup threat and intergroup anxiety; these, in turn, translate into negative emotions and stress (Stephan and Stephan, 1996; Riek et al., 2006), that is, undermine psychological and socio-cultural adaptation (Bierwiaczonek et al., 2017). Second, low levels of socio-cultural adaptation are characterized by uncertainty how to behave and unawareness of cultural constraints of local people's behaviors. Uncertainty contributes to intergroup anxiety and to feelings of threat (Stephan and Stephan, 1996; Riek et al., 2006). Unawareness increases the likelihood of attributing behaviors of locals to their alleged negative characteristics (Gilbert and Malone, 1995; Gawronski, 2004). Such correspondence bias may then be generalized to the entire host-national group, contributing to a negative representation (Mackie et al., 1996).

Finally, there is evidence to suggest that poor psychological and socio-cultural adaptation and negative cognitions may be products of the same relevant context conditions, such as low quality of intergroup relations. Negative contact experiences may both undermine psychological and socio-cultural adaptation (Bierwiaczonek, 2018) and contribute to negative attitudes toward locals (Barlow et al., 2012), possibly translating into a negative representation. At the same time, holding negative representations of and expectations toward locals can be considered appropriate if an intergroup relation is perceived as hostile, abusive, or conflictual (Jasinskaja-Lahti et al., 2009).

Conversely, the better the adaptation, the higher the awareness of the local culture and sojourners' capacity to cope with it (Ward et al., 2001). Higher awareness may add complexity to preexisting representations of locals; reduce uncertainty, intergroup anxiety, and threat (Stephan and Stephan, 1996; Riek et al., 2006); and decrease the probability of attributing negative traits through correspondence bias (Gilbert and Malone, 1995; Gawronski, 2004). All of these should result in more positive representations of locals.

In sum, there are several plausible reasons to predict a link between sojourners' adaptation and their representations of locals, yet this relation has not been studied so far in an unobtrusive way. Since the Affective, Behavioral, and Cognitive levels of adaptation are hypothesized to be interrelated, we expect that psychological and socio-cultural adaptation correlates positively with the valence of visual representations of locals held by sojourners (*H1*).

The Current Studies

In a set of three studies, we examined sojourner representations of locals by means of the Reverse Correlation Task (RCT; Dotsch et al., 2008; Dotsch and Todorov, 2012). This task was considered optimal for our purposes because it allows for tapping into visual representations of any social group of interest while avoiding social desirability. Specifically, participants are requested to reproduce a prototype of a social group by repeatedly choosing between stimuli consisting of face images. Since the stimuli do not carry any explicit valence, by doing so, participants do not need to voice any feelings or opinions that could potentially go against social desirability. Individual responses to one trial are not interpretable, and it is only by combining

a number of trials into one image that researchers can obtain the approximate visual representation of the outgroup at stake. The attributes of this representation are then explored using diverse techniques. RCT was previously used to grasp visual representations of ethno-cultural minority outgroups such as immigrants, as well as intergroup phenomena such as prejudice, showing that intergroup attitudes are reflected in the valence of outgroup representations (Dotsch et al., 2008; Imhoff et al., 2011). In our studies, we applied a two-phase variant of the RCT (Dotsch et al., 2008). In Phase I, three groups of participants with low, moderate, and high adaptation created one image per group, partly translating their representations of the local people. In Phase II, those images were evaluated both objectively, by means of pixel correlations, and intersubjectively, by independent raters, to find to what extent they differ in their valence accordingly to *H1*. In the below sections, we report all measures, manipulations, and exclusions in our studies.

STUDY 1

Methods in Phase I: Creation of Classification Images

Sample and Procedure

Emails requesting assistance with the recruitment of participants were sent to the International Offices of seven Portuguese universities who forwarded a link to our online survey to international students. Out of 160 started surveys, 122 were completed, resulting in a dropout rate of 24%, which is relatively low for online studies (Galesic, 2006). Four other participants were dropped because their adaptation scores were missing. The final sample consisted of 118 international students residing in Portugal (31.4% male, mean age: 25.6 years, 89% sojourning in Portugal for 12 months or less; most represented home countries: 13.6% Brazil, 11.9% Italy, 9.3% Poland, 32 other countries, each of them accounting for <5% of the sample).

Reverse Correlation Task

We followed the RCT procedure developed by Dotsch et al. (2008). However, while in a regular RCT participants usually perform 300–770 trials (cf. Dotsch et al., 2008; Imhoff et al., 2011; Dotsch and Todorov, 2012), in our study this number was reduced to minimize non-compliance with task instructions due to the repetitive and demanding features of the task, which may be problematic in online RCT studies given the absence of participant monitoring. Other reasons to reduce the number of trials may include resource constraints in terms of experimental time and/or costs of implementation.

Each participant was presented a randomized set of 50 trials out of a pool of 300 trials. All stimuli consisted of face images that were built of the same base face with random noise superposed. The base face was a morph of photographs of male faces taken in Lisbon as part of the artistic project the Face of Tomorrow (Mike, 2003). Morphs from this project were previously used in RCT studies (see Imhoff et al., 2011; Imhoff and Dotsch, 2013). Each trial consisted of a pair of face images with noise patterns consisting of pixels with opposite luminance values. The two face images were presented side by side, and participants were instructed to choose the one that looked more like a typical Portuguese person. One stimulus face consisted of the base face superimposed with a random noise pattern. The other was the base face superimposed with the negative of the same noise pattern (for technical details, see Dotsch et al., 2008; Dotsch and Todorov, 2012). The RCT was followed by adaptation measures and sociodemographic questions.

Cross-Cultural Adaptation

Cross-cultural adaptation was measured by the Brief Psychological Adaptation Scale (BPAS; Demes and Geeraert, 2014) and the Socio-cultural Adaptation Scale (SCAS; Ward and Kennedy, 1999), using five-point Likert scales for both instruments.

BPAS (8-items) is a measure of psychological outcomes specific for the cross-cultural context. It has been validated on a large sample of sojourners ($N = 1{,}929$) and shown to correlate in expected directions with constructs typically used in adaptation research to operationalize psychological adaptation (stress, anxiety, self-esteem, and satisfaction with life; see Demes and Geeraert, 2014). Sample items are as follows: "In the last 2 weeks, how often have you felt excited about being in your host country?" (+) and "In the last 2 weeks, how often have you felt out of place, like you don't fit into the host country's culture?" (−). Cronbach's alphas were 0.80 in the current study, 0.84 in Study 2, and 0.62 in Study 3[1].

SCAS (17 items in this study) has been widely used in adaptation research and validated in various sojourner samples (see Wilson et al., 2013, for a review). Participants were asked how difficult it was for them to deal with everyday matters in the host country (e.g., "Making friends," "Getting used to the pace of life"). Reversed coding was used so that higher scores indicated better adaptation. Cronbach's alphas were 0.86 in the current study, 0.78 in Study 2, and 0.71 in Study 3.

In line with the ABC model (Ward et al., 2001), the two scales were strongly correlated in all three studies (0.48, 0.58, 0.59; all $ps < 0.01$). To obtain participants' overall cultural adaptation scores, we averaged scores on both scales to ensure that both scales have equal weight. Afterward, the sample was split on the 33rd and 66th percentiles into three groups: low adaptation ($N = 39$, $M = 3.00$, $SD = 0.34$), moderate adaptation ($N = 39$, $M = 3.69$, $SD = 0.13$), and high adaptation ($N = 40$, $M = 4.21$, $SD = 0.19$). We computed three Classification Images (CIs) by averaging all images chosen by all participants within each of these three groups (see **Figure 1**) using the R package *rcicr* 0.3.0 (Dotsch, 2015; in Studies 2 and 3, *rcicr* v. 3.4.1 was used). The three CIs were evaluated in Phase II.

Sociodemographic Variables

The survey included questions about participants' age, gender, home country, host university, length of stay in Portugal, and

[1]We assume that the drop in Cronbach's alpha in Study 3 had to do with alpha's sensitivity to sample size. Recent simulations show that about 31 participants are needed to reach an alpha of 0.70 with a 12-item measure (Bujang et al., 2018), which could explain why the standard thresholds for alpha were not achieved in Study 3 ($N = 22$).

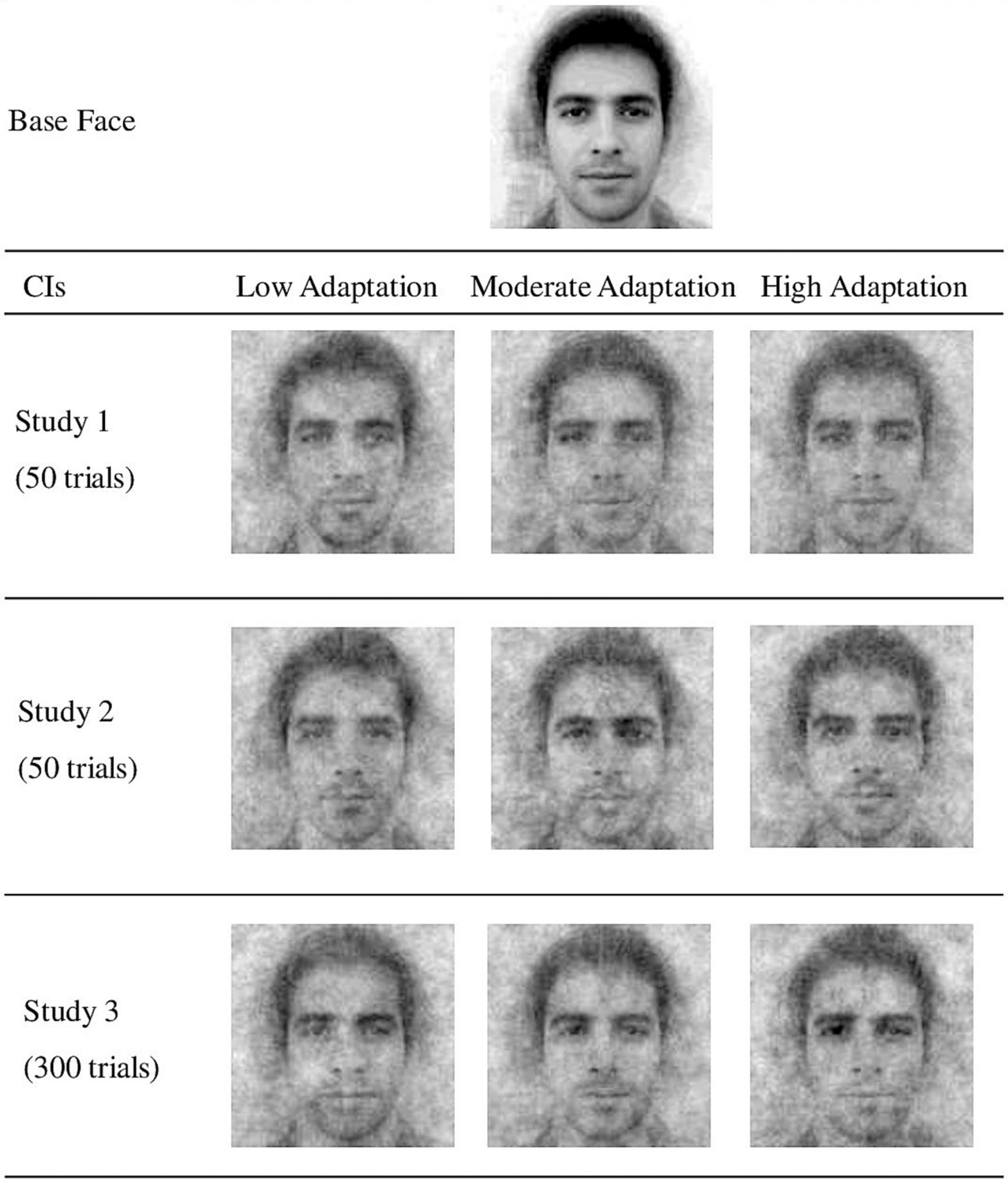

FIGURE 1 | Classification images per adaptation level obtained in Studies 1–3.

the amount of contact with local people inside and outside of the university.

Methods in Phase II: CI Evaluation

Objective Evaluation

The CIs obtained in Phase I were evaluated in two ways: objectively, by assessing physical similarities between each pair of CIs, and intersubjectively, by submitting the CIs to the evaluation by three independent samples of raters. For the objective evaluation, we adapted the R code from Oliveira et al. (2019) to calculate the correlations between pixel luminance values of each pair of CIs: low with moderate-adaptation CI, low with high-adaptation CI, and moderate with high-adaptation CI[2]. Positive correlations indicate that two CIs are physically similar (i.e., the darker the pixels in a specific face region in one image, the darker the pixels in the same face region in the other image). Negative correlations indicate that two CIs are opposite (i.e., the darker the pixels in one image, the lighter on the other image). Null correlations indicate that the images share no similarities. Because the participants were instructed to recreate the prototype of the same ethnic group (the Portuguese), we expected some similarities (i.e., positive correlations) between all CIs. However, if the level of adaptation indeed differentiated these CIs, the correlations between the low-adaptation CI and the high-adaptation CI should be substantially smaller than between the remaining pairs of images.

Intersubjective Evaluation

While the procedure developed by Dotsch et al. (2008) only includes one evaluation, in our case the first evaluation gave unexpected results which, we assumed, had to do with the fact that raters were members of the RCT target population (Portuguese). Therefore, we recurred to two other independent rater samples: American raters (unrelated to the RCT target population) and Portuguese raters (to test whether the unexpected results were indeed due to nationality; see Appendix C in the **Supplementary Materials**, for the full rationale). None of the rater samples was informed that the CIs represented "typical Portuguese" faces as seen by sojourners. Raters were simply informed that they were participating in a study that examines "people's representations of others" and that they would be requested to evaluate images of human faces, with no further explanations. The CIs were presented to each rater in randomized order.

Power analysis was conducted in G*Power 3.1 (Faul et al., 2007) for a repeated-measures ANOVA with the following parameters: power 0.90, small effect size ($f = 0.20$, corresponding with $\eta^2_{partial} = 0.04$), and moderate correlation between repeated measures ($r = 0.50$), establishing the optimal sample size of 55. First, 50 Portuguese students (28% male, mean age: 26.22 years, mostly students of psychology-−64%) evaluated the CIs in an online survey in Portuguese.

In a within-subject design, participants were requested to rate each CI on 1–10 continuous scales (sliders) on a set of 12 theoretically derived adjectives which tapped into the two hypothetical dimensions of stereotype content, that is, warmth (Trustworthy, Helpful, Friendly, Sociable) and competence (Intelligent, Competent; cf. Cuddy et al., 2008), as well as adjectives considered relevant for sojourner adaptation either as translating the pull toward the host national outgroup (Interesting, Attractive) or as related to potential intergroup tensions (Tolerant, Closed-Minded, Aggressive, Dangerous). Exploratory factor analyses with principal axis factoring and oblimin rotation conducted separately for ratings of each CI tended to extract, in seven analyses out of nine, two different factors: positive adjectives and negative adjectives (for details, see Appendix A in the **Supplementary Materials**). In Studies 1–3, correlations between these factors (calculated separately for the low, moderate, and high-adaptation CIs and for each rater sample) ranged from 0.03 to −0.49. We calculated composite scores for these two factors by averaging, separately, scores on positive (Cronbach's α range for low, moderate, and high-adaptation CIs across the three studies reported in this paper: 0.92–0.96) and on the negative adjectives (α range: 0.78–0.94).

Additionally, raters were shown the three CIs side by side and responded to three forced-choice questions: "If you had to choose one of these three people, who would you choose to…" (a) "…share your room in campus or a student flat with," (b) "…carry out some university work with," and (c) "…go to the cinema or a party with." Raters also responded to questions about their age, gender, study domain, and whether they were of Portuguese nationality.

Second, the CIs obtained in Phase I were reevaluated by 50 American raters recruited via Amazon's Mechanical Turk (62% male, mean age: 31.5 years) in an online survey. We employed English versions of the items used in the first evaluation, adapted to a non-academic context whenever necessary (e.g., "Who would you choose to be your neighbor" instead of "share your room in campus"). We also included an additional forced-choice question related to intergroup threat: "Which person you would never want to meet in a dark empty street at night?"

Third, the CIs were reevaluated by a different, independent sample of 50 Portuguese students (46.3% male, mean age: 20.6 years, most represented study domains: psychology 31.5%, management 24.2%). We used the same online survey as in the first evaluation, but we added two more dimensions to grasp identity-related aspects ("Similar to yourself"; "Similar to a typical Portuguese"; see Appendix C in the **Supplementary Materials** for the rationale), and the forced-choice question related to intergroup threat: "Which person you would never want to meet in a dark empty street at night?"

Results

Objective Evaluation

As expected, the low-adaptation CI showed a close to zero correlation with the high adaptation CI ($r = 0.03$, 95% CI [0.024, 0.031]), as well as with the moderate-adaptation CI ($r = -0.05$, 95% CI [−0.055, −0.047]), suggesting that there was no physical similarity between the low-adaptation CI and the remaining two

[2]Oliveira et al. (2019) proposed masking the irrelevant parts of the image before calculating the correlations. However, in our case the impact of masking the images on the results was negligible across all studies; therefore, all results refer to unmasked images.

images. In contrast to that, the moderate-adaptation CI was weakly positively correlated with high-adaptation CI ($r = 0.24$, 95% CI [0.236, 0.243]). Please note that, since the pixel was the unit of analysis here ($N = 262{,}143$), the p-values are not informative (all $ps < 0.001$).

Intersubjective Evaluation

To analyze the intersubjective evaluation data, we conducted repeated-measures ANOVAs separately for the two composites of positive adjectives and negative adjectives, as well as for each individual adjective on which the CIs were rated. The results for composite measures are reported in **Table 1**. The results for individual adjectives can be found in the Appendix B (**Supplementary Materials**). Moreover, we used the chi-squared test to check for differences in frequencies of choosing each CI in the forced-choice questions. The results of these analyses are reported in **Table 2**.

In the first evaluation, we found significant differences on positive adjectives. As expected, Portuguese raters evaluated the low-adaptation CI lower on positive characteristics than the remaining CIs. Pairwise comparisons showed that the only significant mean difference resided between the low-adaptation CI and the moderate-adaptation CI ($p = 0.02$). However, the moderate-adaptation CI was evaluated more positively than the high-adaptation CI. This unpredicted quadratic effect was significant, while the linear effect was not. The results on the composite for negative adjectives and on all forced-choice questions (all $ps > 0.20$) were not significant.

In the second CI evaluation by American raters, we found a significant linear effect on negative adjectives, with the low-adaptation CI evaluated most negatively and the high-adaptation CI evaluated least negatively. A similar linear pattern was found for the forced-choice question "Which person you would never want to meet in a dark empty street at night?" The results on the composite for positive adjectives and on the remaining forced-choice questions (all $ps > 0.07$) were not significant.

The third evaluation by a different sample of Portuguese students replicated the pattern found in the first evaluation. This time, significant quadratic effects were found for both positive adjectives and negative adjectives, with a significant mean difference residing in both cases between the low-adaptation CI and the moderate-adaptation CI ($ps < 0.003$). A similar quadratic pattern was found for one forced-choice question ("Who would you choose to… go to the cinema or a party with"). The remaining forced-choice questions showed significant results with a linear pattern, with the low-adaptation CI chosen least frequently as the person to share a room with or to do university work with, and most frequently as the person not to meet in a dark street [$\chi^2_{(2)} = 38.11$, $p < 0.001$]. Differences in evaluations on the two dimensions added in this evaluation ("Similar to yourself," "Similar to a typical Portuguese") were non-significant (all $ps > 0.20$).

Discussion of Study 1

Study 1 partially supported our hypothesis. The results of the objective evaluation showed that the low-adaptation image shared no similarities with the moderate and high-adaptation CIs, indicating that representation of locals held by poorly adapted participants indeed differed from those at higher adaptation levels. Consistently with that, while not all differences were significant, the overall pattern of the intersubjective evaluation showed that across the three evaluations, the low-adaptation CI was consistently rated less positively than the moderate and high-adaptation CIs. However, instead of the expected linear effect, we found a quadratic pattern for Portuguese raters: it was the moderate-adaptation CI that had the most positive evaluations, not the high-adaptation CI. This pattern was replicated with a second independent sample of Portuguese raters, ruling out the possibility of the result being spurious.

As this quadratic pattern was limited to raters from the target population (i.e., Portuguese), we hypothesized that high adaptation increases ingroup projection (Wenzel et al., 2007), rendering the CI produced by highly adapted sojourners more similar to the self-stereotype of their home country population than to the self-stereotype of the host country population. However, because this pattern of results was only found in this study and did not reoccur in its replications, we abstain from developing on this hypothesis here. An interested reader may refer to Appendix C in the **Supplementary Materials**, for more details.

STUDY 2

Methods

Study 2 was designed as a conceptual and direct replication of Study 1 and followed a similar procedure. It was conducted in the following academic year to ensure sample independence.

In Phase I, participating universities were requested to disseminate the online survey only among new international students. To ensure sufficient sample size, we also reached out to expatriate academics from these universities using their public contact details from university websites. A mixed sample of 154 international students (80.5%) and expatriate academics (i.e., post-docs, 19.5%) (41.6% male; 52.6% aged 21–25 years, 22% aged 26–35 years, 10.3% aged over 36 years, and 9.7% aged below 20 years; 78% sojourning in Portugal for 12 months or less; most represented countries: Brazil, 14.9%; Italy, 12.3%; Germany, 9%; 39 other countries with $\leq$5%) completed an online survey consisting of the same assessment instruments as in Study 1 (direct replication). The dropout rate was 58.4%, which is high but not unusual in online studies (Galesic, 2006).

Similarly as in Study 1, the survey consisted of the 50-trial RCT, measures of cross-cultural adaptation (BPAS, Demes and Geeraert, 2014; SCAS, Ward and Kennedy, 1999) and sociodemographic measures. Additionally, right after the RCT, participants were shown, side by side, the low-, moderate-, and high-adaptation CIs from Study 1 and they were instructed, identically as in the RCT, to choose the CI that looked most like a typical Portuguese person. We assumed that, if the CIs truly corresponded with sojourner representations of locals at different levels of adaptation, participants should choose the CI corresponding with their own adaptation level

TABLE 1 | Evaluations of classification images on positive and negative adjectives across studies 1–3.

	Positive adjectives						Negative adjectives					
	M_{low}	SE_{low}	M_{mod}	SE_{mod}	M_{high}	SE_{high}	M_{low}	SE_{low}	M_{mod}	SE_{mod}	M_{high}	SE_{high}
STUDY 1												
Evaluation 1 (PT)	4.37	0.25	4.95	0.24	4.67	0.26	3.08	0.31	2.54	0.27	2.98	0.28
	$F_{(2,96)} = 4.01$, $p = 0.02$, $\eta_p^2 = 0.08$, $\eta^2 = 0.02$						$F_{(2,96)} = 2.40$, $p = 0.10$, $\eta_p^2 = 0.05$, $\eta^2 = 0.01$					
	Quadratic contrast: $F_{(1,48)} = 7.96$, $p = 0.01$, $\eta_p^2 = 0.14$						Quadratic contrast: $F_{(1,48)} = 4.20$, $p = 0.05$, $\eta_p^2 = 0.08$					
	Linear contrast: $F_{(1,48)} = 1.74$, $p = 0.19$, $\eta_p^2 = 0.04$						Linear contrast: $F_{(1,48)} = 0.17$, $p = 0.68$, $\eta_p^2 = 0.00$					
Evaluation 2 (US)	5.74	0.21	5.92	0.21	5.87	0.23	3.55	0.27	3.05	0.29	3.03	0.27
	$F_{(2,98)} = 0.52$, $p = 0.60$, $\eta_p^2 = 0.01$, $\eta^2 = 0.00$						$F_{(2,98)} = 3.55$, $p = 0.03$, $\eta_p^2 = 0.06$, $\eta^2 = 0.07$					
	Quadratic contrast: $F_{(1,49)} = 0.68$, $p = 0.41$, $\eta_p^2 = 0.01$						Quadratic contrast: $F_{(1,49)} = 1.75$, $p = 0.19$, $\eta_p^2 = 0.03$					
	Linear contrast: $F_{(1,49)} = 0.41$, $p = 0.53$, $\eta_p^2 = 0.01$						Linear contrast: $F_{(1,49)} = 5.02$, $p = 0.03$, $\eta_p^2 = 0.09$					
Evaluation 3 (PT)	4.03	0.25	4.73	0.29	4.43	0.27	3.07	0.26	2.44	0.28	2.80	0.26
	$F_{(2,102)} = 7.35$, $p = 0.00$, $\eta_p^2 = 0.13$, $\eta^2 = 0.02$						Greenhouse–Geisser $F_{(1.56,78.14)} = 4.35$, $p = 0.02$, $\eta_p^2 = 0.08$, $\eta^2 = 0.02$					
	Quadratic contrast: $F_{(1,51)} = 9.90$, $p < 0.001$, $\eta_p^2 = 0.16$						Quadratic contrast: $F_{(1,50)} = 5.84$, $p = 0.02$, $\eta_p^2 = 0.11$					
	Linear contrast: $F_{(1,51)} = 4.81$, $p = 0.03$, $\eta_p^2 = 0.09$						Linear contrast: $F_{(1,50)} = 1.99$, $p = 0.16$, $\eta_p^2 = 0.04$					
STUDY 2												
Evaluation 1 (PT)	4.08	0.25	4.10	0.22	4.58	0.27	3.04	0.29	3.37	0.33	2.26	0.24
	$F_{(2,88)} = 5.01$, $p = 0.01$, $\eta_p^2 = 0.10$, $\eta^2 = 0.02$						$F_{(2,86)} = 2.63$, $p = 0.08$, $\eta_p^2 = 0.06$, $\eta^2 = 0.02$					
	Quadratic contrast: $F_{(1,44)} = 1.88$, $p = 0.18$, $\eta_p^2 = 0.04$						Quadratic contrast: $F_{(1,43)} = 3.33$, $p = 0.07$, $\eta_p^2 = 0.07$					
	Linear contrast: $F_{(1,44)} = 9.31$, $p < 0.001$, $\eta_p^2 = 0.18$						Linear contrast: $F_{(1,43)} = 1.75$, $p = 0.19$, $\eta_p^2 = 0.04$					
Evaluation 2 (US)	5.19	0.22	5.09	0.22	5.79	0.20	3.87	0.26	4.15	0.29	3.24	0.22
	$F_{(2,108)} = 5.64$, $p = 0.005$, $\eta_p^2 = 0.10$, $\eta^2 = 0.04$						Greenhouse-Geisser $F_{(1.75,94.71)} = 4.31$, $p = 0.02$, $\eta_p^2 = 0.07$, $\eta^2 = 0.04$					
	Quadratic contrast: $F_{(1,54)} = 3.54$, $p = 0.06$, $\eta_p^2 = 0.06$						Quadratic contrast: $F_{(1,54)} = 3.38$, $p = 0.07$, $\eta_p^2 = 0.06$					
	Linear contrast: $F_{(1,54)} = 8.70$, $p = 0.01$, $\eta_p^2 = 0.14$						Linear contrast: $F_{(1,54)} = 6.34$, $p = 0.02$, $\eta_p^2 = 0.11$					
STUDY 3												
Evaluation 1 (PT)	3.56	0.24	4.03	0.23	4.48	0.23	3.67	0.27	3.35	0.25	2.89	0.29
	$F_{(2,90)} = 9.36$, $p < 0.001$, $\eta_p^2 = 0.17$, $\eta^2 = 0.06$						$F_{(2,84)} = 3.79$, $p = 0.03$, $\eta_p^2 = 0.08$, $\eta^2 = 0.03$					
	Quadratic contrast: $F_{(1,45)} = 0.01$, $p = 0.93$, $\eta_p^2 = 0.00$						Quadratic contrast: $F_{(1,42)} = 0.07$, $p = 0.79$, $\eta_p^2 = 0.00$					
	Linear contrast: $F_{(1,45)} = 15.71$, $p < 0.001$, $\eta_p^2 = 0.26$						Linear contrast: $F_{(1,42)} = 7.20$, $p = 0.01$, $\eta_p^2 = 0.15$					
Evaluation 2 (US)	4.67	0.22	5.21	0.22	5.45	0.22	4.24	0.24	3.83	0.25	3.40	0.23
	$F_{(2,106)} = 9.52$, $p < 0.001$, $\eta^2 = 0.04$						$F_{(2,106)} = 6.01$, $p = 0.00$, $\eta_p^2 = 0.10$, $\eta^2 = 0.04$					
	Quadratic contrast: $F_{(1,53)} = 0.97$, $p = 0.33$, $\eta_p^2 = 0.02$						Quadratic contrast: $F_{(1,53)} = 5.01$, $p = 0.97$, $\eta_p^2 = 0.00$					
	Linear contrast: $F_{(1,53)} = 16.65$, $p < 0.001$, $\eta_p^2 = 0.24$						Linear contrast: $F_{(1,53)} = 0.00$, $p < 0.001$, $\eta_p^2 = 0.17$					

Mean evaluations and standard errors of Classification Images (CIs) obtained in the three studies are reported. Indexes $_{low,mod,high}$ refer to mean evaluations of the low-adaptation CI, moderate-adaptation CI, and high-adaptation CI, respectively.

(conceptual replication). After calculating overall adaptation scores, the sample was split on the 33rd and 66th percentiles into three groups: low adaptation ($N = 51$, $M = 3.09$, $SD = 0.35$), moderate adaptation ($N = 55$, $M = 3.80$, $SD = 0.16$), and high adaptation ($N = 48$, $M = 4.31$, $SD = 0.20$).

In Phase II, the CIs obtained using the procedure of Dotsch et al. (2008; see Study 1) were evaluated objectively, using the same procedure as in Study 1, and intersubjectively, by two rater samples: 46 Portuguese students (48.9% male, mean age: 20.4 years, most represented study domains: management 48.9%, psychology 29.8%) and 53 American raters recruited via MTurk (62.3% male, mean age: 34.3 years). We used an identical survey as employed previously in the third evaluation in Study 1 (i.e., positive and negative adjectives, forced-choice questions).

Results

Conceptual Replication

As expected, the degree of cross-cultural adaptation of participants in Study 2, Phase I was positively correlated with the level of adaptation (1—low, 2—moderate, 3—high) of the CI from Study 1 these participants indicated as most typically Portuguese (Spearman's $\rho = 0.18$, $p = 0.03$; **Figure 2**). For an additional analysis, we split the Study 2 sample on the 33rd and the 66th percentile into three adaptation groups to match the three levels of adaptation CIs from Study 1 (low, moderate, high). A chi-squared test conducted with this split sample confirmed that participants chose the CIs corresponding with their own level of adaptation more frequently than the remaining CIs [$\chi^2_{(4)} = 11.68$, $p = 0.02$]. That is, poorly adapted participants of Study 2 tended to choose the low-adaptation CI from Study 1, moderately adapted participants—the moderate-adaptation CI from Study 1,

TABLE 2 | Frequencies of choosing Classification Images (CIs) in forced-choice questions across studies 1–3.

	Cinema			Work			Neighbor/roommate			Dark street		
	Low	**Mod**	**High**	**Low**	**Mod**	**High**	**Low**	**Mod**	**High**	**Low**	**Mod**	**High**
STUDY 1												
Evaluation 1 (PT)	15	17	17	13	15	21	11	17	21	–	–	–
	$X^2_{(2)} = 0.16, p = 0.92$			$X^2_{(2)} = 2.12, p = 0.35$			$X^2_{(2)} = 3.10, p = 0.21$					
Evaluation 2 (US)	9	20	21	10	19	21	10	18	22	29	15	6
	$X^2_{(2)} = 5.32, p = 0.07$			$X^2_{(2)} = 4.12, p = 0.13$			$X^2_{(2)} = 4.48, p = 0.11$			$X^2_{(2)} = 16.12, p < 0.001$		
Evaluation 3 (PT)	10	25	19	6	23	25	6	21	27	39	11	4
	$X^2_{(2)} = 6.33, p = 0.04$			$X^2_{(2)} = 12.11, p = 0.002$			$X^2_{(2)} = 13.00, p = 0.002$			$X^2_{(2)} = 38.11, p < 0.001$		
STUDY 2												
Evaluation 1 (PT)	9	9	27	5	11	29	10	8	27	13	27	5
	$X^2_{(2)} = 14.40, p < 0.001$			$X^2_{(2)} = 20.80, p < 0.001$			$X^2_{(2)} = 14.53, p < 0.001$			$X^2_{(2)} = 16.53, p < 0.001$		
Evaluation 2 (US)	15	11	27	22	8	23	16	5	32	14	31	8
	$X^2_{(2)} = 7.85, p = 0.02$			$X^2_{(2)} = 7.96, p = 0.02$			$X^2_{(2)} = 20.87, p < 0.001$			$X^2_{(2)} = 16.11, p < 0.001$		
STUDY 3												
Evaluation 1 (PT)	5	16	25	3	17	26	5	15	26	28	9	7
	$X^2_{(2)} = 13.09, p = 0.001$			$X^2_{(2)} = 17.52, p < 0.001$			$X^2_{(2)} = 14.39, p = 0.001$			$X^2_{(2)} = 18.32, p < 0.001$		
Evaluation 2 (US)	7	25	22	4	26	24	10	22	22	32	12	10
	$X^2_{(2)} = 10.33, p = 0.006$			$X^2_{(2)} = 16.44, p < 0.001$			$X^2_{(2)} = 5.33, p = 0.07$			$X^2_{(2)} = 16.44, p < 0.001$		

Frequencies of choosing each of the Classification Images (CIs) in forced-choice questions in the three studies are reported. Low, mod, and high refer to the low-adaptation CI, moderate-adaptation CI, and high-adaptation CI, respectively.

and highly adapted participants—the high-adaptation CI from Study 1.

Direct Replication: Objective Evaluation

Based on the results of Study 1, we expected that the low-adaptation CI will share relatively little physical similarities with the moderate- and high-adaptation CIs. That is, pixel correlations should be weaker between the low-adaptation CI and the remaining CIs and stronger between the moderate- and high-adaptation CIs. In this study, however, the low-adaptation CI showed a weak positive correlation with the moderate-adaptation CI ($r = 0.09$, 95% CI [0.089, 0.097]) and the high-adaptation CI ($r = 0.17$, 95% CI [0.164, 0.171]). Similarly, the moderate-adaptation CI was weakly positively correlated with high-adaptation CI ($r = 0.17$, 95% CI [0.163, 0.171]). In other words, the low-adaptation CI was the least similar to the moderate-adaptation CI, while the degree of similarity between the remaining pairs of images was similar.

Direct Replication: Intersubjective Evaluation

The repeated-measures ANOVA testing the differences in the evaluation of the three CIs obtained in Phase I of this study found three significant linear effects (out of four tested; see **Table 1**): on positive adjectives for both rater samples and for negative adjectives for American raters. The effect on negative adjectives was non-significant for Portuguese raters. The pattern of means shows that Portuguese and American raters rated the high-adaptation CI the highest on positive adjectives and the lowest on negative adjectives, while differentiating less between the low-adaptation CI and moderate-adaptation CI. Pairwise comparisons revealed significant mean differences between the low-adaptation CI and the high-adaptation CI ($p = 0.01$ for both rater samples on positive adjectives, $p = 0.04$ for American raters on negative adjectives), and for American raters also between moderate-adaptation CI and high-adaptation CI ($p = 0.01$ for positive adjectives, $p = 0.03$ for negative adjectives). The unexpected quadratic effect found in Study 1 for Portuguese raters did not replicate.

Moreover, Portuguese raters evaluated the moderate-adaptation CI as the least similar to a typical Portuguese [Greenhouse–Geisser $F_{(1.59,\ 70.02)} = 16.00$, $p < 0.001$; $M_{low} = 5.67$, $SE_{low} = 0.40$, $M_{mod} = 3.96$, $SE_{mod} = 0.41$; $M_{high} = 5.56$, $SE_{high} = 0.38$; quadratic contrast: $F_{(1,44)} = 22.39$, $p < 0.001$; linear contrast: $p = 0.67$], while American raters considered this CI as the least similar to themselves [$F_{(2,\ 108)} = 5.94$, $p = 0.004$; $M_{low} = 3.85$, $SE_{low} = 0.28$, $M_{mod} = 3.65$, $SE_{mod} = 0.29$; $M_{high} = 4.54$, $SE_{high} = 0.29$; quadratic contrast: $F_{(1,\ 54)} = 5.57$, $p = 0.02$; linear contrast: $F_{(1,\ 54)} = 6.28$, $p = 0.02$].

Finally, significant differences were found on forced-choice questions (see **Table 2**). Overall, the high-adaptation CI was chosen most often for the positive activities and least often as the person they would not like to meet in a dark street. However, both American and Portuguese raters indicated the moderate-adaptation CI most often as the person they would not like to meet in a dark street and American raters least often as their coworker and their roommate. Raters differentiated less between the low-adaptation CI and the moderate-adaptation CI on the remaining items (all $ps > 0.05$).

Discussion of Study 2

In Study 2, the association between sojourner adaptation and sojourner representation of locals was found again in the

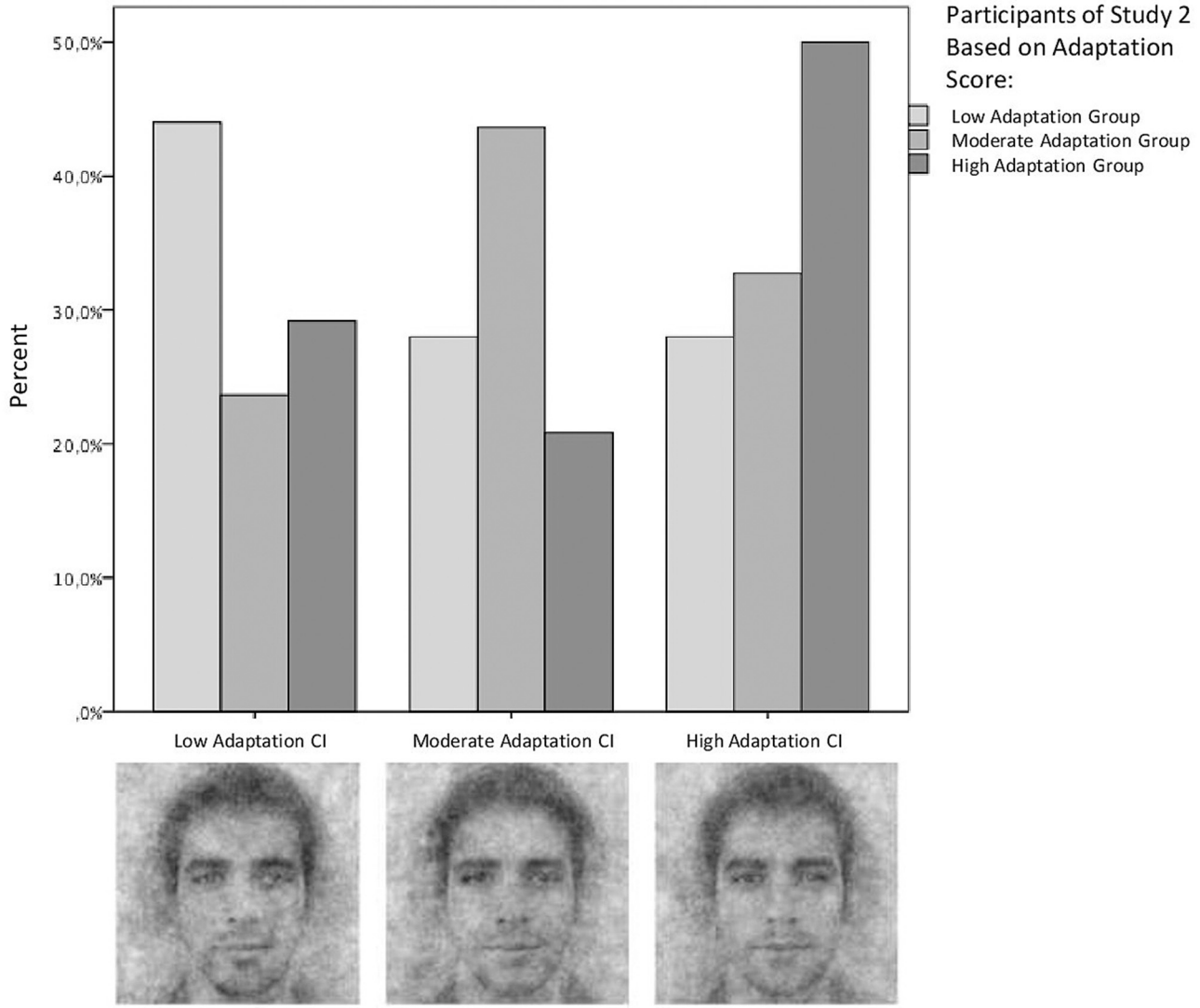

FIGURE 2 | Conceptual replication of Study 1. The bars represent frequencies of choosing the low-, moderate-, and high-adaptation CI (obtained in Study 1; x-axis) as the most prototypical Portuguese face by Study 2 participants with low- (white bars), moderate- (light gray bars), and high- (dark gray bars) adaptation level (sample split on the 33rd and the 66th percentiles).

conceptual replication. First, we confirmed that the CIs obtained in Study 1 accurately tap into outgroup representations at low, moderate, and high levels of sojourner adaptation. Although the sojourner sample in Study 2 consisted of different participants than those who created the CIs in Study 1, when requested to choose the most prototypical image, these participants still tended to indicate the CI created by a group with a degree of cross-cultural adaptation corresponding with their own. We therefore concluded that the online RCT with 50 randomized trials was sensitive enough to grasp some features of the representation of locals shared by sojourners with a specific level of adaptation but differing between adaptation levels.

The results of the direct replication were less clear. The objective evaluation showed that the low-adaptation CI was the least similar to the moderate-adaptation CI, but this pattern was not found in the intersubjective evaluation. Both Portuguese and American raters consistently attributed more positive traits to the high-adaptation CI, but the moderate-adaptation CI was evaluated similarly, and in some cases even more negatively than the low-adaptation CI. Therefore, we considered these results non-conclusive and we attempted another replication.

STUDY 3

Methods

Study 3 was designed as a direct replication of Study 1 with a more sensitive measure, that is, a long version of RCT with 300 trials produced by participants in the lab instead of online.

Besides this modification, the procedure and methods used in this study were identical as in Study 1. Again, we were interested to test if the low-adaptation CI, reflecting the representation of locals at the lowest levels of adaptation to the local culture, would carry significantly more negative valence than the moderate and high-adaptation CIs.

For Phase 1, a mixed sample of 22 international students and migrants was recruited both at the first author's university and using personal contacts (27.3% male, 54.5% aged below 30 years and another 31.8% 30–40 years, 50% sojourning in Portugal for 24 months or less, another 45% between 25 months and 10 years; most represented countries: Poland 31.8%, Brazil 22.7%, Germany 18.2%). The sample size was substantially smaller than in Studies 1 and 2, but because each participant performed the full set of 300 trials, the overall number of trials completed by this sample (∼6,600) was comparable to our previous studies (∼5,900 in Study 1 and ∼7,700 in Study 2). After calculating overall adaptation scores, the sample was split on the 33rd and 66th percentiles into three groups: low adaptation ($N = 7$, $M = 3.12$, $SD = 0.19$), moderate adaptation ($N = 8$, $M = 3.62$, $SD = 0.11$), and high adaptation ($N = 7$, $M = 4.02$, $SD = 0.19$).

In Phase II, CIs produced by the sojourner sample were again evaluated objectively, using the same pixel-wise correlation procedure as in Studies 1 and 2, and intersubjectively, by 46 Portuguese students (32.3% male, mean age: 19.8 years, most represented study areas: management 47.9%, psychology 30.5%) and 53 American raters recruited via MTurk (62.3% male, mean age: 34.3 years). We employed, respectively, the full Portuguese and English version of the survey used previously (third evaluation in Study 1, Study 2).

Results

Objective Evaluation

As expected, the low-adaptation CI showed the smallest correlation with the high-adaptation CI ($r = 0.26$, 95% CI [0.253, 0.260]), and a slightly higher correlation with the moderate-adaptation CI ($r = 0.30$, 95% CI [0.298, 0.305]). The moderate-adaptation CI was moderately positively correlated with high-adaptation CI ($r = 0.37$, 95% CI [0.364, 0.371]). This pattern suggested that the representation of locals held by poorly adapted sojourners is the least similar to that held by highly adapted sojourners and slightly more similar to that held by moderately adapted sojourners.

Intersubjective Evaluation

Consistent significant differences in CI evaluation were found across the two rater samples on both positive and negative adjectives. In all cases, means showed significant linear patterns in the expected directions, that is, the high-adaptation CI was evaluated the most positively and the low-adaptation CI the most negatively (see **Table 1**). The significant mean differences resided between the low-adaptation CI and the high-adaptation CI (all ps < 0.05 for both rater samples), with one significant effect between the moderate-adaptation CI and the high-adaptation CI on positive adjectives for Portuguese raters ($p = 0.04$), and one significant effect between the low-adaptation CI and the moderate-adaptation CI on positive adjectives for American raters ($p = 0.005$). Moreover, Portuguese raters evaluated the high-adaptation CI as the most similar to a typical Portuguese [$F_{(2, 86)} = 7.30$, $p = 0.001$; $M_{low} = 5.07$, $SE_{low} = 0.40$; $M_{mod} = 6.00$, $SE_{mod} = 0.37$; $M_{high} = 6.27$, $SE_{high} = 0.37$, linear contrast: $F_{(1, 43)} = 13.92$, $p = 0.001$; quadratic contrast: $p = 0.27$], and American raters as the most similar to themselves [$F_{(2, 106)} = 4.97$, $p = 0.01$; $M_{low} = 3.31$, $SE_{low} = 0.31$; $M_{mod} = 3.83$, $SE_{mod} = 0.32$; $M_{high} = 4.20$, $SE_{high} = 0.30$, linear contrast: $F_{(1, 53)} = 12.33$, $p < 0.001$; quadratic contrast: $p = 0.78$].

Finally, there were significant differences in frequencies of choosing the different CIs in forced-choice questions. Across both rater samples, the low-adaptation CI was the least often indicated as the preferred person to go to the cinema with, to work with, and to cohabitate with (this latter result was non-significant for the American raters) and the most often as the person whom they would not like to meet in a dark street (**Table 2**). Raters differentiated less between the moderate-adaptation CI and the high-adaptation CI.

Discussion of Study 3

Study 3 provided further evidence for the link between sojourner adaptation and sojourner representation of locals (*H1*). Both the objective and intersubjective CI evaluations converged in concluding that the low-adaptation CI was the most distinguishable from the high-adaptation CI. Further, the intersubjective evaluation of CIs obtained from the full set of 300 RCT trials was consistent with CI evaluation from Study 1 with 50 randomized trials in that the low-adaptation CI was rated the most negatively. This time, there was a neat linear effect across both composites and individual adjectives (see Appendix B in the **Supplementary Materials**), indicating that the better the adaptation, the more positively sojourners perceive the local people. This result was found regardless of rater nationality.

META-ANALYSIS

Methods

Because Studies 1–3 were not equivalent in regard to the shape of the effect of adaptation on sojourner representation of locals, we meta-analyzed the results of these studies to determine between which levels of adaptation the effect resides. First, we meta-analyzed the pixel correlations obtained in the objective evaluations. To do so, we pooled separately the correlations between low-adaptation CI and moderate-adaptation CI in the three studies; the correlations between low-adaptation CI and high-adaptation CI in the three studies; and the correlations between moderate-adaptation CI and high-adaptation CI in the three studies.

Second, we meta-analyzed the differences in the evaluation of each pair of CIs. For all seven evaluations by both Portuguese and American raters, we calculated separate standardized mean differences in CI evaluation (Cohen's d) between low and moderate adaptation, moderate and high adaptation, and low and high adaptation. This was done separately for positive adjectives and for negative adjectives. In all cases, the lower adaptation level was taken as the baseline for the calculation so that the effect sizes indicate whether the evaluation is lower (negative sign) or higher

(positive sign) at the higher adaptation level than on the lower adaptation level to which it is compared.

In both cases, the effect sizes were then meta-analyzed with the reverse variance weighting method (Lipsey and Wilson, 2001) using *metafor* 2.4-0 package for R (Viechtbauer, 2010). Primary effects were transformed to Fischer's *z* prior to analyses, and results were retransformed from *z* to the original metric (*r*, *d*). Because the operationalization was virtually identical across all evaluations in the three primary studies, we applied fixed-effects models to perform homogeneity analyses (Hedges and Vevea, 1998). For the intersubjective evaluation, we additionally conducted moderation analyses using rater nationality as a binary moderator.

Results

Results of both meta-analyses are reported in **Table 3**. In the pooled objective evaluations, the pixel correlation was non-significant between the low- and moderate-adaptation CIs, and significant but weak between the low- and high-adaptation CIs. Both effects were smaller in size than the significant pixel correlation between the moderate- and high-adaptation CI. This result suggested that across studies, the low-adaptation CIs shared no similarities with the moderate-adaptation CI, and relatively little similarities with the high-adaptation CIs. In all cases, the *Q* statistics were significant, indicating that the effects were heterogeneous. Since *Q* is related to sample size in primary studies, and our primary effects used pixels as the unit of analysis, the unusually large and significant *Q* values may be explained by large pixel *N*s.

In the pooled intersubjective evaluations, we found, for both positive and negative adjectives, significant mean differences between the ratings of low and high-adaptation CIs, as well as between the ratings of low and moderate-adaptation CIs. The former effect sizes (low vs. high) were larger than the latter (low vs. moderate) for both composites. The difference between evaluations of moderate- and high-adaptation CIs was not significant for either composite. In all cases, the *Q* statistics were not significant, indicating that the effects are homogenous. In line with our predictions, all effect sizes for positive adjectives had a positive sign, that is, the mean CI evaluation was more positive at higher levels of adaptation. All effect sizes for negative adjectives had negative signs, indicating that the mean CI evaluation less negative at higher levels of adaptation. No moderating effects of rater nationality were found (all between-groups *p*s > 0.20), indicating that differences in the evaluation of the different CIs do not differ between American and Portuguese raters.

TABLE 3 | Meta-analysis of effect sizes of CI evaluation across studies 1–3.

	ES	*p* (ES)	*Q*	*p*(Q)
OBJECTIVE EVALUATION				
Moderate vs. low	0.12	0.17	17407.70	<0.001
High vs. low	0.15	0.01	7344.31	<0.001
High vs. moderate	0.27	<0.001	6357.40	<0.001
INTERSUBJECTIVE EVALUATION				
Positive adjectives				
Moderate vs. low	0.26	<0.001	8.45	0.21
High vs. low	0.37	<0.001	5.22	0.52
High vs. moderate	0.12	0.26	12.14	0.26
Negative adjectives				
Moderate vs. low	−0.17	0.02	8.52	0.20
High vs. low	−0.28	<0.001	2.67	0.85
High vs. moderate	−0.10	0.28	8.58	0.20

ES—effect size. For objective evaluation, ES refers to pooled correlation coefficients (r) between pixel luminosity of CIs corresponding with different levels of adaptation, calculated as fixed effects models, all ks = 3. For intersubjective evaluation, ES refers to pooled standardized mean differences (d) between ratings of CIs corresponding with different levels of adaptation, calculated as fixed-effects models, all ks = 7.

Discussion

The meta-analysis consolidated and reinforced our findings by showing that, all CI evaluations taken together, the degree of sojourner adaptation and the valence of sojourner representations of locals are interrelated. Across the three studies, the objective and intersubjective evaluations showed the same pattern: it was the CI corresponding with the representation of locals at the lowest levels of adaptation that stood out. Independently of rater nationality, the significant difference resided between low adaptation level and the remaining levels, suggesting that poorly adapted sojourners hold a relatively negative representation of the host-national outgroup. However, because there was significant pixel similarity between moderate and high adaptation, and a small and statistically insignificant mean difference in intersubjective ratings, these results seem to indicate that the empirical link between adaptation and valence of the representation of locals is not equally strong at all adaptation levels.

GENERAL DISCUSSION

The three studies reported above show that sojourner adaptation is reflected in the valence of sojourner representations of the host national outgroup: poor adaptation at the Affect and Behavior level is correlated with negative visual representations of locals. We assume that these results indicate the hypothesized Cognition level of adaptation: cross-cultural adaptation does manifest itself not only in increased well-being and increased adequacy of behaviors within the host culture but also in the way we think of typical members of the majority host culture. In this regard, consistent results were obtained using three different methods (reduced RCT, full RCT, conceptual replication) with three independent samples of sojourners and seven samples of raters of two nationalities. These findings are in line both with the adaptation literature associating poor adaptation with high intergroup tension (Wilson et al., 2013) and with the intergroup literature associating high intergroup tension with negative representations of outgroups (Dotsch et al., 2008).

Interestingly, the difference in valence of outgroup representations seems to reside between poorly adapted

sojourner groups and the remaining sojourners. The low-adaptation CI tended to be evaluated more negatively than the moderate and high-adaptation CIs, and the statistical significance of this difference was supported by the final meta-analysis. The meta-analysis found no difference between the moderate and high-adaptation CIs, suggesting that representations of locals at these levels are similar in valence.

One possible reason could be that at low levels of adaptation, when host culture awareness is low and behaviors of locals seem incomprehensible, threat is at stake; at intermediate and high levels, when one has learned more about the host culture and it has partially lost its threatening features, it is more challenges about finding one's way around in the host society and making contacts (van der Zee and van Oudenhoven, 2013). It seems plausible, therefore, that it is at this very first culture shock level that the representations of locals are negative. An alternative explanation could be that the advancing adaptation might approach an optimal representation of locals, rather than mechanistically render it more and more positive. In this case, the differences between moderate- and high-adaptation level may not be captured by valence. Although determining what such an optimal representation should look like may be difficult or impossible, future research may test this hypothesis by using more sophisticated dependent variables to capture how adaptive sojourner representations are (e.g., flexibility or context sensitivity).

Lastly, future research may investigate the content of sojourner representations of locals in greater detail. Although we used a diverse set of adjectives derived from various theoretical sources, including warmth and competence, group attractiveness, and conflict-related aspects potentially relevant to adaptation, all items measuring these aspects showed very similar patterns at the different levels of adaptation, and the only feature that seemed to make a difference was their valence. However, this result does not necessarily mean that stereotype content remains stable as adaptation progresses. Since our studies were not preceded by a prototype analysis, there is some possibility that, in our attempts to diversify the adjectives to cover all adaptation-related aspects, we might have overlooked some relevant ones. Future studies may use prototype analysis to obtain new insights into links between stereotype content and adaptation.

Methodological Remarks

In the above studies, we adopted a well-known two-phase reverse correlation procedure (Dotsch et al., 2008). The drawback of this procedure is that it may lead to increased rates of Type I error because the transition from the CI creation phase to the CI rating phase does not take into account that the variation occurring in the group CIs is added to the variation occurring in the ratings task. As a result, test results may be significant even if differences between the CIs are random (Cone et al., 2020). While no empirical study can entirely rule out that its findings are due to random error, we consider that in our studies the probability that the differences between the CIs were random is very low as we addressed this issue in two ways. First, we computed pixel correlations (see Oliveira et al., 2019) to assess whether the degree of physical similarity between the different CIs was consistent with (a) our theoretical predictions, which would be unlikely if the physical differences between CIs were random, and (b) with the ratings, which would be unlikely if the raters' responses to these differences were random. Both (a) and (b) were met in Studies 1 and 3, but less so in Study 2. However, the final meta-analysis showed that all results taken together, even including the inconclusive effects from Study 2, the pattern of pixel correlations converged with both the predictions and CI ratings, suggesting that the physical differences between CIs were not random and the raters' responses to these physical differences were not random.

Second, we conducted four replications in which we obtained similar patterns of results, which would be unlikely if our results were indeed due to Type 1 error because significant findings due to such error should occur with equal probability in the hypothesized direction (low-adaptation CI as the most negatively rated) and in the opposite direction (low-adaptation CI as the most positively rated). Moreover, we included a conceptual replication (Study 2) where we reversed the process: we showed our participants CIs created by other sojourners and asked them to choose the most prototypically Portuguese one. If the differences between the CIs were random, participants would choose between them at random. This was most probably not the case; participants tended to choose the image that matched their own adaptation level, which again shows that the differences between the CIs were not random. Taken together, the convergence of pixel correlations with independent judges' ratings and the conceptual replication clearly indicate that the differences between the CIs were meaningful, which sharply reduces the probability of inflated Type I error in our studies.

CONCLUSION

The current set of studies offers evidence that the valence of sojourner perceptions of locals is associated with sojourner degree of adaptation to living among these locals. This association is unlikely to be an artifact coming from social desirability or experimenter effects; first, because our method tapped into implicit associations and only partially relied on sojourner self-reports, and second, because the raters had no indication where the CIs came from and what they represented. Therefore, we believe our findings reveal the social-cognitive component of adaptation, the neglected C of the ABC model of cross-cultural adaptation (Ward et al., 2001). They encourage further theoretical elaboration of the concept and open a new promising avenue in adaptation research.

Moreover, our results point to the inherent intergroup nature of cross-cultural adaptation, a perspective that, if applied in future research, may help in grasping the phenomenon of adaptation in its full complexity. This perspective is also crucial

from an applied point of view. If we aim at a harmonious coexistence of different cultural groups within diverse societies, the link between adaptation and intergroup relations has to be taken into account. It implies that immigration policies and intervention programs supporting cross-cultural adaptation of immigrants and sojourners are beneficial not only for their target groups but also for the society as a whole: they contribute to improved relations between these newcomers and the local people, to decreased intergroup tension and to a lowered risk of conflict. These benefits extend to any member of the host society and make investing in cross-cultural adaptation doubly worthwhile.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

KB, SW, and KZ designed the studies, drafted the paper, and provided critical revisions. KB collected the data and conducted the analyses. SW and KZ provided critical feedback. All authors contributed to the article and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2021.611630/full#supplementary-material

Data Sheet 1 | Appendix A and B.

Data Sheet 2 | Appendix C.

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Social–Structural Antecedents Come Forward to Elicit Envy to Distant Out-Groups

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This study utilizing correlation, regression, confirmatory factor analyses (CFAs), ANOVA, moderation and mediation analysis investigated connections of stereotypes, emotions, and sociocultural variables in a single-sample/single-group design. Prior to data processing, Georgian versions of the Stereotype Content Model (SCM) questionnaires were validated through CFA. The study looked at Georgian students' attitudes to: (a) representatives of German-speaking countries (87 participants) and (b) representatives of English-speaking countries (244 participants). Emotions predicted to these groups by social–structural antecedents—vitality and fear of assimilation—and stereotypes were admiration, pride, and sympathy. In addition, envy was predicted for the English-speaking group. The prediction of envy is explained by moderation analysis according to which it is elicited by the interplay of warmth and competence, as well as fear of assimilation and competence. The former interaction mediates the link between social–structural antecedents to emotions. Thus, distant out-groups elicit envy as a result of their perceived vitality, fear of assimilation, warmth, and competence. Social–structural antecedents come forward to elicit emotions of envy independently as well as in interaction with stereotypes when small country representatives evaluate representatives of the influential group of English-speaking people.

Keywords: socio–structural antecedents, stereotypes, emotions, single group design, mediation and moderation

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INTRODUCTION

The Stereotype Content Model (SCM) has been proven to work panculturally (Cuddy et al., 2009; Durante et al., 2013; Fiske, 2015). It was developed and tested first in the United States and then in Western Europe, Asia, Eastern Europe, and the post-Soviet space. The latter showed some cultural differences that were explained by the context, namely, the socialist arrangement of societies studied (Grigoryan et al., 2019).

The wide international usage of the SCM speaks of the strength and robustness of the theory, which is supported cross-culturally by rich data from multiple in-groups and out-groups assessed. The initial focus of the model, hence, the title, is on two basic stereotypes of competence and warmth, which in combination with each other forms four possible quadrants or clusters. If a group and its representatives are perceived as highly competent and warm, they belong to the HC-HW cluster, which, according to numerous data, are mostly in-groups; if a group is perceived as deserving low competence and low warmth, it belongs to the LC-LW cluster with mostly avoided out-groups, such as the homeless. These two clusters are univalent, but the other two are ambivalent, with either competence or warmth being substantially higher than the other. The

ambivalent cluster of HC-LW is usually rich people, while the LC-HW cluster is usually the elderly (Cuddy et al., 2008; Fiske, 2018).

In a relatively later development of the model, stereotypes are combined to elicit the corresponding emotions: the combination of warmth and competence elicits admiration and pride if both are high, disgust, and contempt if both are low, pity, and sympathy if warmth is high but competence is low, and envy and jealousy if competence is high but warmth is low (Fiske et al., 2002; Cuddy et al., 2007; Fiske, 2018). Usually, scholars group the pairs of emotions and use average scores in the analysis. Thus, admiration and pride go under admiration; disgust, contempt, resentment, and anger go under disgust; pity and sympathy go under sympathy, while envy and jealousy go under envy (Fiske et al., 2002; Cuddy et al., 2007).

Later, the authors of the SCM have investigated mediational chains starting with the stereotypes through emotional prejudice to the corresponding behaviors. These are called Behaviors from Intergroup Affect and Stereotypes—the BIAS map, e.g., from competence to the corresponding behavior of passive facilitation (cooperation and association) through the corresponding emotions of admiration and envy and from lack of warmth to the corresponding behavior of active harm (fight, attack) through the corresponding emotion of contempt and envy (Cuddy et al., 2007; Becker and Asbrock, 2012; Ufkes et al., 2012). Later, these findings were replicated in the Norwegian sample but with only one emotion mediating the links between stereotypes and corresponding behaviors (e.g., the path between competence to passive facilitation is mediated by envy; Bye and Herrebrøden, 2018). Paths from stereotypes to harmful behaviors through emotions of anger and fear were found in the study of prejudice toward the mentally ill (Sadler et al., 2015). Not exactly the BIAS map but a similar chain was demonstrated by the British psychologists *via* path analysis from competence to help through pity or through admiration (study 2) (Sweetman et al., 2013).

Structural antecedents of stereotypes—competitiveness and status of the groups in a society—represent the initial focus of the SCM. If groups are perceived as having a high status, they are stereotyped as competent, and if groups are perceived as competitive, they are perceived as cold. According to SCM, in its classical understanding, perceived status is rather linked with competence than with warmth, and perceived competition is rather linked with warmth than competence (Fiske et al., 1999; Glick et al., 2006; Caprariello et al., 2009). Some of the further studies, however, detected the diagonal links as well: status is also linked with warmth, and competition is also linked with competence (Fiske et al., 2002; Durante, 2008; Tsukamoto and Fiske, 2018; Froehlich and Schulte, 2019). As for the path from the structural antecedents to emotions, Glick et al. (2006) found correlations among social structural variables, stereotypes, and emotions. In the 2015 study of Singaporeans, the authors, using regression analysis, found that both realistic and symbolic threats considered as competitiveness predicted prejudiced emotions to four out-groups, while competence and warmth scores did not (Ramsay and Pang, 2017). Caprariello et al. (2009) demonstrated such links, including interaction of social–structural variables to elicit emotions.

Stereotypes and their antecedents have been studied about various groups residing within a country listed by the sample of the country representatives, such as the elderly, Christians, Muslims, students, the homeless, etc. As in many other studies of prejudice, distant groups not residing in the same country were not of much interest to the SCM. However, considering globalization, thanks to which people from all over the world interact either in person or virtually, using the World Wide Web, and communicate with tourists or business partners from very distant parts of the world, the need to study prejudice to the representatives of "distant out-groups" may also become a focus of the SCM. Indeed, in 2006, Glick et al. (2006) studied attitudes of Latin Americans, Europeans, Asians, and Australians to the North Americans and found that the social–structural antecedents correlate with corresponding stereotypes and emotions. In 1997, in the frames of a different theory, which is compatible with the SCM (Kervyn et al., 2010), Phalet and Poppe (1997) studied stereotypes and their antecedents in six Eastern European samples (two of them being from the former Soviet Union) to Germans, English, and Italians. As more than 20 years have passed since then and relations on the international arena have changed, the current study aims to present the most recent picture of how small country representatives (like Georgians) view English and German language speakers, including not only western Europeans but also Americans and other large country representatives from different continents.

This article presents findings from one of the former Soviet Union republics from the South Caucasus, Georgia, studies from which are underrepresented among the international community of professionals worldwide. Investigation of this space might bring interesting findings that will enrich already accumulated knowledge on the SCM.

Georgia is a still young independent state with an underdeveloped economy and a hybrid democratic regime. The majority of the population of this former Soviet republic has long aspired toward the West. Soon after the country regained independence, this wish turned into an officially declared aim of the country to join the European Union (Gvalia et al., 2013; Georgian Center for Security Development, 2017). Thus, attitudes of Georgians to out-groups from the EU as well as the USA, a major supporter of Georgia's democracy and economy, came into focus of public opinion polls and social research (Mestvirishvili and Mestvirishvili, 2014; Caucasus Research Resource Centers, 2017, 2019; International Republican Institute, 2018). These studies unequivocally show that attitudes toward Europeans are positive. Some of them used a widespread prejudice measure of social distance, which is considered a behavioral aspect of prejudice (Javakhishvili et al., 2012, 2018; Caucasus Research Resource Centers, 2017, 2019; National Democratic Institute, 2019). Initially, the scale was used to measure social distances to immigrants living in the USA; however, other studies included out-groups residing outside of the country investigated (Thyne and Lawson, 2004; Sinkovics and Penz, 2009). Such interests were fostered by emerging globalization, new business relations, and the development of the tourism industry. This is especially true about Georgian students who, unlike their parents and grandparents, travel

abroad and host international tourists as well as communicate over the Internet.

A Soviet republic for 70 years (1921–1991), Georgia was behind the iron curtain for the entire period, with Russian being the only foreign language for the vast majority of its population. Russian gradually expanded as the main language of communication over the extensive area of the USSR, resulting in mass bilingualism by the 1990s. It has to be noted that Georgian language is totally different from Russian as well as from European languages. It belongs to the group of Caucasian languages but is spoken and understood only by Georgians. It also has a unique alphabet, with the earliest surviving inscription dating from the 4th century BC. In the Soviet times, Russian was taught at schools from the first years of study, while European languages, mostly French, English, and German, were taught from the fifth year of study. The quality of learning European languages was much lower than that of native, Georgian, and Russian, as the former were not used in either daily or professional communication. At the same time, from the 1970s, many Georgians became interested in the West, and after the Soviet Union breakup, many young people went to Germany, UK, and USA to receive higher education. Currently, Russian is spoken by the older generation, while young people speak English or German or other European languages. Now that Georgia has declared its willingness to join the European Union, learning respective languages has become even more relevant.

Starting from 1996, three studies measured students' social distances to 22 out-groups where the data obtained from the modified Bogardus social distance scale showed that representatives of Western European countries and the USA were placed on the top of the list in all cases (Javakhishvili, 2005; Javakhishvili et al., 2012). The authors explained such results by soft and hard power of these societies in the eyes of Georgian students, who characterized them as having democratic values, good education, and strong economies (Javakhishvili et al., 2018).

This time, we aimed to demonstrate that the SCM approach and measure could yield more precise and concise information as to why these groups are held so close by Georgian students. Specifically, in the current study, we aimed to show how Georgian students perceive the representatives of these out-groups based on their characteristics on the international arena and what they feel toward them.

THE PRESENT STUDY

In the present study, we examined the new context and used the different methodological approaches to show what happens when small country representatives evaluate representatives of large countries. The umbrella question of the current paper is: do vitality and fear of assimilation produce the stereotypes of competence and warmth, which, in turn, produce emotional consequences? And how?

To address this question, we used a single-sample/single-group design; therefore, we utilized some methodological approaches rarely applied in the studies of SCM. Some scholars who investigate SCM and related variables proposed a number of approaches to data processing, such as using regression to find more precise links between structural antecedents and stereotypes (Durante et al., 2013; Kervyn et al., 2015; Grigoryan et al., 2019; Grigoryev et al., 2019). Some authors went farther to use path analysis as a more comprehensive way to analyze predictions (Froehlich and Schulte, 2019), while others propose to process data on a latent, rather than observed, level—for example, calculate latent means (Kotzur et al., 2018, 2019). These new approaches will, inevitably, be used more and more frequently, while in the present study, we use some components of path analysis—regression analysis to check moderations and mediations using the PROCESS macro developed by Andrew Hayes (Process macro version 3.5 developed for SPSS by Hayes, 2017), which simplifies our work, as it produces outputs of conditional effects and their graphic display, as well as standardized coefficients of predictors, and enables mean centering variables in interaction.

First of all, we have analyzed emotions separately, not to "mask variability" and to bring more information to the analysis of emotions and their relation with stereotypes. Separately considered emotions would enable us to better comprehend the "textured nature of intergroup relations" (Matthews and Levin, 2012, p. 2). We will proceed farther to examine if warmth and competence elicit corresponding emotions not only in combination but in interaction *via* moderation analysis. This approach has been tested in two studies (Sweetman et al., 2013; Kotzur et al., 2018), resulting positively in the first but negatively in the second case. As a result of such inconsistent findings, Tsukamoto and Fiske (2018) advise to investigate the interaction of warmth and competence in future studies. Indeed, moderation analysis will help us better understand which emotions are elicited by stereotypes.

Secondly, we investigated mediational chains, similar to BIAS map, but from social–structural indicators through the corresponding stereotypes to the corresponding emotions. To put this aim in the SCM terminology: how structural antecedents status and competitiveness of English- and German-speaking groups trigger perceived stereotypes—warmth and competence—which, in turn, trigger corresponding emotions. This alignment of antecedents, stereotypes, and emotions in a mediational chain as proposed by Cuddy et al. (2007) has not been tested yet and will bring an added value to the SCM theory. At the same time, with such an approach, we demonstrate the role of the SCM framework beyond the traditional measures of prejudice.

Thirdly, we measured status and competition by other variables, such as vitality and fear of assimilation. The latter is closely connected to threat, which coincides with competition (Fiske et al., 1999; Caprariello et al., 2009); it also speaks about the respondents' group, in our case, representatives of Georgia, who might be afraid to lose their own culture and language as a result of globalization. Indeed, the questions on realistic and symbolic threat were entered into the SCM survey (Kervyn et al., 2015). Some questions about status and competition would not be compatible with the groups we studied, so vitality and fear of assimilation were deemed more appropriate. For example, a question on status, "how prestigious are the jobs of

the representatives of this group—are," is feasible when assessing groups that reside in a country, not outside, as it was in our case. The fear of assimilation questionnaire contains the term "threat" in two questions out of the total three, which, according to the Integrated Threat Theory (ITT), can be understood as tapping into symbolic threat. However, our survey does not measure realistic threat, which is also covered by ITT (Stephan et al., 2009). Vitality can be considered a proxy of status to the extent that we asked our participants how developed German- and English-speaking cultures are and if they play an important role in the world.

Thus, in the present study, we address the issue by investigating English- and German-speaking groups. We examined direct links from antecedents to stereotypes and emotions; also, we went one step further to examine interactions of status/competition with warmth/competence scores to predict emotions. Such interactions, which to the best of our knowledge have not been studied so far, enable us to see deeper into certain emotions elicited.

Considering the roles of the English- and German-speaking countries on the international arena and for Georgia, we assumed that in the eyes of our participants, German- and English-speaking group representatives appear as vital but posing relatively less symbolic threat. Respectively, their perceived competence and warmth would be high. These combinations end up in the respective emotions as provided in the SCM. Accordingly, we hypothesized that:

1. Vitality scores would be higher than fear of assimilation scores for both English- and German-speaking groups;
2. Competence scores would be higher than warmth scores for both English- and German-speaking groups;
3. The German- and English-speaking groups will produce higher scores on the emotions of admiration and pride than for the rest of them.

As this is a correlational study, we applied regression analysis as noted above to study links among the three components of the SCM. Hence, we had the following hypotheses:

4. Vitality and fear of assimilation predict corresponding stereotypes independently as well as in interaction with each other;
5. Vitality, fear of assimilation, warmth, and competence predict corresponding emotions independently as well as in interaction with each other;
6. Warmth and competence mediate links between vitality and fear of assimilation and corresponding emotions;
7. Interaction of warmth and competence mediate the link between vitality and fear of assimilation and corresponding emotions.

The study investigates attitudes of Georgian undergraduate students toward the representatives of German- and English-speaking people. Study a. examines attitudes toward German language speakers and study b. toward English language speakers. The criterion for participation was learning of English and/or German. Since English as a second language is compulsory at Georgian universities, any undergraduate student would meet our criteria, which is not the case with German—we had to find out if any of the students was a German language learner as well. Using these two groups would help us understand what Georgians think about geographically distant but still very familiar groups, as many Georgians, especially the younger generation, are interested in their culture (as mentioned above).

We used a single-sample/single-group design, thus providing individual-level analysis of data. For this reason, we compared mean scores of the nine emotions as well as conducted regression analysis to see which of these emotions are predicted by competence and warmth scores as well as their interaction. In addition, we regressed emotions on status and competition scores to investigate their role in predicting emotions, as well as the role of their interaction with each other and stereotypes. Prior to these, we had to define whether the original scale of stereotypes maintains the same two-factorial structure of competence and warmth in its Georgian version.

METHODS

Participants and Procedure

We recruited two samples: study a.—87 participants who were studying German as their second language, while Georgian is their native tongue. Their age varied between 18 and 34 (mean age 21.54, $SD = 2.78$). Most of the participants were females, 76.2%; and study b.—240 respondents who were studying English as their second language, while Georgian is their native tongue. Age range was 18–36 (mean age 20.62, $SD = 2.49$). Most of the participants were females, 76.6%. All of the participants were students from various universities in Tbilisi, the capital of Georgia.

The participants filled out a self-administered survey after providing informed consent. The survey was conducted partially online and partially in a paper-pencil mode. We contacted English and German language teachers and asked them to inform their students about our research. This questionnaire did not include personal identification data, and the ethical standards were closely followed. The respondents' anonymity was guaranteed, and all of them were informed that they could stop participating any time, without submitting answers.

Measures

Stereotypes

To measure stereotypes, we used a modified questionnaire from the study of Cuddy et al. (2007). The questionnaire was translated into Georgian for another international study (the data file can be accessed at https://osf.io/w2mbz/; see also Grigoryan et al., 2019). The scale contained eight questions of stereotypes—three of warmth, five of competence. The questions were answered on a 5-point Likert-type scale.

The respondents answered questions on what "Most Georgians" or "People" think about English and German speakers, as provided in the original scale of Cuddy et al. (2007). For example, "To what extent do most Georgians view English speakers as warm?" We used a 5-point Likert scale, where "1" meant "not at all"; "5" meant "extremely."

Emotions

To measure emotions felt toward German- and English-speaking groups, we used the same questionnaire. The scale assessed nine emotions: admiration, pride, sympathy, pity, envy, anger, resentment, contempt, and disgust. The English version of the scale contained 10 items, but "jealousy" was removed from the Georgian questionnaire due to the translation problem—no appropriate word in the Georgian language was found to cover its meaning.

As above, the respondents answered questions on how "Most Georgians" or "People" feel toward English and German speakers. A sample item is "To what extent do people tend to feel pity toward English speakers?

Fear of Assimilation

We used the Fear of assimilation scale to study the respondents' attitude toward globalization and its effect on the local culture. Globalization can be considered a symbolic threat toward one's own beliefs and traditions, making the mainstream culture as a competitor. The scale contained three items and was modified from the original version in the study by Ryan (2008). An example of the items is "As globalization advances, there is a danger of losing the Georgian language and culture."

Vitality

A four-item Vitality scale (Ryan, 2008) was used to measure the participants' estimation of the importance of English- or German-speaking countries. A questions sample is "Do you think that English-speaking countries have an important role in the world?" For all questions, we used the five-point Likert scale, where "1" meant "not at all" and "5" meant "extremely."

RESULTS

Confirmatory Factor Analysis/Validation

Before proceeding with testing the hypotheses, we first examined the factorial structure of the competence/warmth scale. The competence/warmth scale was translated into Georgian and then back-translated. These translations were additionally analyzed by a team of experts (psychologists and linguists). The Georgian version of the competence/warmth scale was validated *via* confirmatory factor analysis (CFA) in MPlus, version 6.12. Data from both a. and b. studies were merged into one file to increase data size. We checked the model for two factors: competence and warmth. The model fit indices were all good: $\chi^2 = 57.04$, $p < 0.001$, root mean square error of approximation (RMSEA) $= 0.08$, comparative fit index (CFI) $= 0.94$, Tucker–Lewis index (TLI) $= 0.91$, standardized root mean square residual (SRMR) $= 0.05$, as were factor loadings of items on competence and warmth subscales. The rest of the analysis was conducted on 2a and 2b data separately. After finding that the Georgian version of the SCM scale provides the same two factorial structures of stereotypes as in the original version, we proceeded with answering questions of the present study. To address multiple comparison problems, we applied false discovery rate (FDR) technique to correlation, regression, moderation, and mediation analyses. This technique adjusts p-values *via* applying $q = 0.01$ threshold, so that, for example, former p-value of 0.02 might become 0.04 or higher than 0.05 (McDonald, 2014). As a result, only the adjusted p-values are reported below.

Hypothesis Testing

The first three hypotheses are addressed below separately for the German- and English-speaking groups.

German-Speaking Group

To answer hypothesis 1, we calculated mean scores of the German-speaking group for vitality and fear of assimilation and compared them by paired samples t-test, which showed a significant difference: $M = 4.42$, $SD = 0.53$ for vitality and $M = 2.42$, $SD = 1.03$ for fear of assimilation; $t_{(86)} = 15.98$, $p < 0.001$. There was a non-significant correlation between these two variables.

To answer hypothesis 2, we calculated mean scores of the German-speaking group for competence and warmth and compared these with each other. The within subjects/paired samples t-test showed that competence scores were higher than those of warmth: $M = 4.26$, $SD = 0.61$ for competence and $M = 3.40$, $SD = 0.06$ for warmth; $t_{(86)} = 8.93$, $p < 0.001$. These two stereotypes are moderately correlated: $r = 0.37$; $p < 0.001$.

To address hypothesis 3, we calculated German-speaking group emotion scores separately for each and used ANOVA to compare these. **Table 1** below provides the data obtained.

Besides emotions of admiration and pride, sympathy also deserved a high score. ANOVA shows that the mean score for admiration significantly differs from all other scores, $F_{(8,616)} = 30.31$, $p < 0.001$, while, according to pairwise comparisons, pride and sympathy are not significantly different from each other, $p > 0.05$, and in all cases, even envy is not significantly different from pride.

To sum up, for the German-speaking group, hypotheses 1 and 2 are confirmed, while hypothesis 3 was partially confirmed, as sympathy gained high scores in addition to admiration and pride.

English-Speaking Group

To answer hypothesis 1, we calculated mean scores for vitality and fear of assimilation and compared them by paired samples t-test: $M = 4.20$, $SD = 0.54$ for vitality and $M = 2.46$, $SD = 0.91$ for fear of assimilation; $t_{(239)} = 24.71$, $p < 0.001$, showing a significant difference. These two variables did not significantly correlate.

Thus, hypothesis 1 is confirmed.

To answer hypothesis 2, we calculated mean scores for competence and warmth and compared these with each other. The within subjects/paired samples t-test showed that competence scores were higher than those of warmth: $M = 3.84$, $SD = 0.61$ for competence and $M = 3.48$, $SD = 0.66$ for warmth; $t_{(239)} = 9.38$, $p < 0.001$. These two stereotypes are moderately correlated: $r = 0.56$, $p < 0.001$.

Hypothesis 2 is confirmed.

To address hypothesis 3, we calculated the English-speaking group's mean scores for nine emotions and ANOVA to compare them, see **Table 2**:

TABLE 1 | Mean score of emotions for the German-speaking group.

	Admiration	Sympathy	Pride	Envy	Anger	Pity	Resentment	Contempt	Disgust
German-speaking group	**3.56 (1.18)**	**3.05 (0.99)**	**3.01 (0.99)**	2.99 (1.23)	2.15 (1.03)	2.14 (1.13)	2.09 (1.08)	1.96 (1.12)	1.82 (0.94)

Standard deviations are shown in parentheses.
Scores that significantly differ from the other scores are provided in bold.

TABLE 2 | Mean scores of emotions for the English-speaking group.

	Admiration	Sympathy	Envy	Pride	Anger	Resentment	Pity	Contempt	Disgust
English-speaking group	**3.32 (0.95)**	**3.24 (0.93)**	**3.07 (1.20)**	**2.97 (0.92)**	2.60 (1.03)	2.51 (1.11)	2.45 (1.13)	2.37 (1.04)	2.26 (1.04)

Standard deviations are shown in parentheses.
Scores that significantly differ from the other scores are provided in bold.

As in the case of the German-speaking group, four emotions can be regarded as having high scores, which sets them apart from all other emotions, $F_{(8,\ 1{,}784)} = 37.06, p < 0.001$. At the same time, according to pairwise comparisons, envy is not different from pride, sympathy, and admiration.

To sum up, for the English-speaking group, hypotheses 1 and 2 are confirmed, while hypothesis 3 was partially confirmed, as sympathy and envy gained high scores in addition to admiration and pride.

Next, prior to testing hypotheses 4 and 5, we proceeded with testing the correlations of vitality and fear of assimilation with warmth, competence, and nine emotions for the German- and English-speaking groups. The correlation coefficients and significance levels are provided in **Table 3**. The results below are presented separately for the German- and English-speaking groups.

German-Speaking Group

To test hypothesis 4 that vitality and fear of assimilation predict corresponding stereotypes independently as well as in interaction with each other, we ran regression analysis through entering gender and age in the first model and vitality and fear of assimilation in the second model and then moved to PROCESS MACRO to examine interaction terms. In the case of the German-speaking group, vitality predicted competence, $\beta = 0.33$, $p < 0.05$. No significant interaction was found.

To examine whether stereotypes and social–structural antecedents predict the corresponding emotions independently, as well as in interaction with one other (hypothesis 5), we regressed each of the nine emotions on vitality, fear of assimilation, competence, and warmth scores in a two-model way (with vitality, fear of assimilation, warmth, and competence scores included in the second model) and moved to the PROCESS MACRO to examine interaction terms. For the German-speaking group, out of nine emotions, six were predicted by some of the four variables. Either competence or warmth predicted pride, admiration, and sympathy. In addition, competence was a negative predictor of anger and resentment, and age was a negative predictor of sympathy. Also, vitality predicted contempt (negatively), while fear of assimilation predicted sympathy and resentment (**Table 4**). No interaction term was significant in moderation analysis (PROCESS MACRO).

Next, mediation analysis was conducted to address hypotheses 6 and 7 but did not yield any significant results. Thus, hypotheses 6 and 7 were rejected for the German-speaking group.

To sum up, for the German-speaking group, hypotheses 4, 6, and 7 were rejected, while hypothesis 5 was supported partially.

English-Speaking Group

To test hypothesis 4, we ran a similar regression analysis as mentioned above. Vitality predicted competence positively, $\beta = 0.25$, $p < 0.01$, explaining 8% of variance in competence scores. Vitality and fear of assimilation did not interact.

Then, we tested hypothesis 5 for the English-speaking group in a similar way to the German-speaking group. For the English-speaking group, admiration and envy were predicted by warmth and competence; also, vitality was a positive predictor of envy; anger was predicted by vitality and warmth. Pity was not predicted at all, and the rest of the emotions were predicted by one of the predictors only—contempt by competence (negatively), pride and sympathy by warmth, resentment and disgust by warmth (negatively) (**Table 5**).

The moderation analysis in PROCESS MACRO yielded significant interaction of competence and warmth in the case of envy: $F_{(1,\ 177)} = 4.13, p < 0.05, \Delta R^2 = 0.02$. **Figure 1** below shows that competence has an effect on envy, namely, increases it when warmth is low (1 SD below the mean) and moderate (the mean), while the effect disappears (is not significant) when warmth is high (1 SD above the mean).

Another moderation analysis detected an interaction of fear of assimilation and competence in case of envy. The interaction model is significant, $F_{(1,\ 177)} = 10.35$, $p < 0.01$, $\Delta R^2 = 0.05$. As we can see in **Figure 2**, fear of assimilation has an effect on envy when competence is high, while it does not have an effect on envy (it is not statistically significant) when competence is moderate or low. In other words, we can say that the emotion of envy is predicted not only because of competence ascribed to the English-speaking group but also because of fear of assimilation.

Next, mediation analysis was conducted to address hypotheses 6 and 7 for the English-speaking group. For the English-speaking group, regression analysis showed that vitality directly predicted both competence and envy. Thus, we were able to test

TABLE 3 | Correlations.

	1	2	3	4	5	6	7	8	9	10	11	12	13
Competence	1	0.40***	0.28	0.00	−0.19	−0.17	−0.25	−0.39***	−0.23	0.24	0.20	0.17	−0.24
Warmth	0.56***	1	0.15	−0.10	0.16	−0.17	−0.19	−0.27	−0.23	0.42***	0.17	0.24	−0.11
Vitality	0.27***	0.11	1	0.00	−0.08	0.10	−0.29*	0.03	−0.19	0.24	0.16	0.15	0.06
Fear of assimilation	−0.07	−0.08	−0.08	1	−0.10	0.03	0.21	0.14	0.30*	0.07	0.10	−0.02	0.17
Pity	0.05	0.14	−0.00	−0.01	1	0.00	0.09	0.15	0.11	0.22	0.23	0.09	0.28
Envy	0.09	−0.11	0.24***	0.10	−0.00	1	0.19	0.41***	0.10	0.02	−0.08	0.25	0.24
Contempt	−0.15	−0.14	0.10	0.07	0.11	0.23***	1	0.34*	0.29*	−0.19	−0.17	−0.07	0.25
Anger	−0.19*	−0.35***	0.13	0.08	0.04	0.22**	0.41***	1	0.52***	−0.03	0.12	0.07	0.67***
Resentment	−0.26**	−0.36***	0.02	0.09	−0.06	0.26***	0.39***	0.65***	1	−0.13	0.09	−0.24	0.52***
Pride	0.28***	0.37***	0.09	0.05	0.09	0.01	−0.09	−0.15	−0.19*	1	0.22	0.49***	0.02
Sympathy	0.26***	0.46***	−0.02	0.05	0.24***	−0.05	−0.13	−0.20**	−0.22**	0.41***	1	0.33*	0.19
Admiration	0.33***	0.36***	0.14	0.01	0.07	0.13	−0.25***	−0.18*	−0.23***	0.47***	0.41***	1	0.10
Disgust	−0.24***	−0.30***	−0.05	0.08	−0.04	0.19**	0.36***	0.48***	0.49***	−0.04	−0.24***	−0.19**	1

****p < 0.001; **p < 0.01; *p < 0.05. Correlations for the German-speaking group are provided in the upper diagonal, while correlations for the English-speaking group are represented in the lower diagonal.*

TABLE 4 | Regression analysis: predictors of emotions for the German-speaking group.

	Model			Coefficients	
	ΔR^2	Sig. *F* change	β	*t*	Sig.
Predictors for pride	0.22	0.006			
Warmth			0.36	3.01	0.014
Predictors for admiration	0.29	0.000			
Competence			0.47	4.10	0.000
Predictors for sympathy	0.16	0.014			
Competence			0.24	2.00	0.050
Fear of assimilation			0.29	2.68	0.014
Age			−0.31	−2.80	0.014
Predictors for anger	0.19	0.014			
Competence			−0.29	−2.20	0.035
Predictors for resentment	0.23	0.006			
Competence			−0.31	−2.38	0.027
Predictor for Contempt	0.19	0.014			
Vitality			−0.34	−2.68	0.014

TABLE 5 | Regression analysis: predictors of emotions for the English-speaking group.

	Model			Coefficients	
	ΔR^2	Sig. *F* change	β	*t*	Sig.
Predictors for pride	0.13	0.000			
Warmth			0.29	3.47	0.003
Predictors for admiration	0.16	0.000			
Competence			0.18	2.16	0.035
Warmth			0.26	3.18	0.004
Predictors for sympathy	0.27	0.000			
Warmth			0.50	6.44	0.000
Predictors for anger	0.19	0.000			
Warmth			−0.39	−4.79	0.000
Vitality			0.25	3.53	0.024
Predictors for resentment	0.15	0.000			
Warmth			−0.32	−3.81	0.000
Predictors for disgust	0.08	0.003			
Warmth			−0.21	−2.44	0.024
Predictors for contempt	0.080	0.004			
Competence			−0.20	−2.26	0.030
Predictors for envy	0.08	0.003			
Competence			0.18	2.01	0.046
Warmth			−0.20	−2.29	0.030
Vitality			0.19	2.56	0.018

the mediation model, where vitality predicted envy mediated by competence, but it was not significant. However, a more refined mediation model of vitality predicting envy through the interaction of warmth and competence (described above) as a mediator was significant (see **Figure 3**). The indirect effect of vitality on envy is: $b = 0.09$, lower level confidence interval (LLCI) = 0.01–upper level confidence interval (ULCI) = 0.20. The total effect of vitality on envy is 0.45, which consists of the direct effect 0.36 and indirect effect through the mediator 0.09.

To sum up, for the English-speaking group, hypothesis 4 was partially supported, hypothesis 5 was supported, hypothesis 6 was rejected, while hypothesis 7 was partially supported.

DISCUSSION

We examined the role of the two social–structural antecedents in eliciting stereotypes and emotions independently as well as in interaction with each other and the role of the two stereotypes in eliciting emotions independently as well as in interaction with each other. The design of our study enabled us to address more

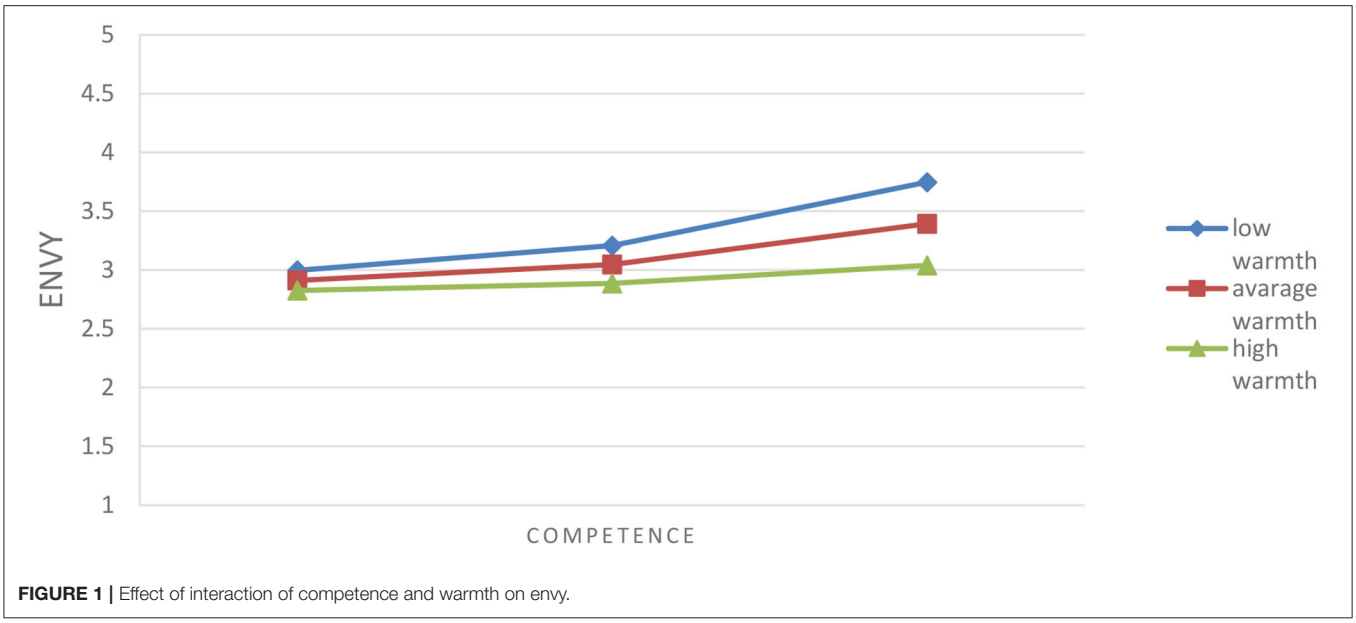

FIGURE 1 | Effect of interaction of competence and warmth on envy.

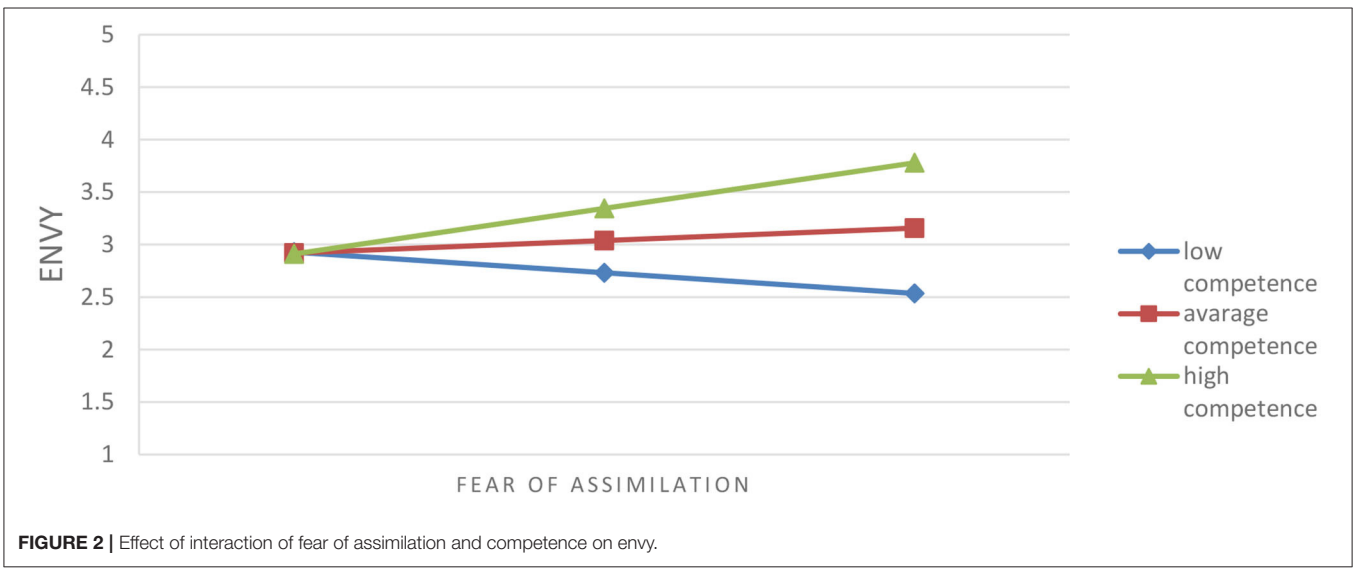

FIGURE 2 | Effect of interaction of fear of assimilation and competence on envy.

closely each member of this chain. The multiple findings of the study speak to the SCM and beyond it, to the theory of prejudice as well as touch upon understanding of emotions.

The Intergroup Emotions

The finding that the perceived stereotypes elicit emotions of admiration and pride, but, also, they elicit sympathy toward German- and English-speaking group representatives, deviates from the SCM, according to which sympathy should not be paired either with admiration and pride or with anger and envy. This finding can be explained by the Georgian respondents' understanding of its meaning. The translation of emotion-defining adjectives was a rather difficult process, and we had to check and double-check their meanings with one of the authors of the model, Susan Fiske. The term "sympathy" was translated effortlessly, as it has an equivalent in Georgian. However, after this unexpected finding, we conducted a small expert-type study with our linguist and psychologist colleagues and found out that the Georgian equivalent of "sympathy" can rather be understood as "empathy," which means that, in our case, the out-groups' perspective and emotions are understood. Indeed, when measuring "sympathy," one of the studies also employed emotions of "empathy" and "compassion" (Sweetman et al., 2013). We demonstrated the two factorial structures of stereotype scale *via* CFA, an approach that can be rarely seen in other original versions of the SCM scale (Durante, 2008; Stanciu et al., 2017; Kotzur et al., 2018, 2019), thus validating the Georgian version of the instrument; however, the translation proved to be a challenge because we had to drop the 10th emotion, "jealousy."

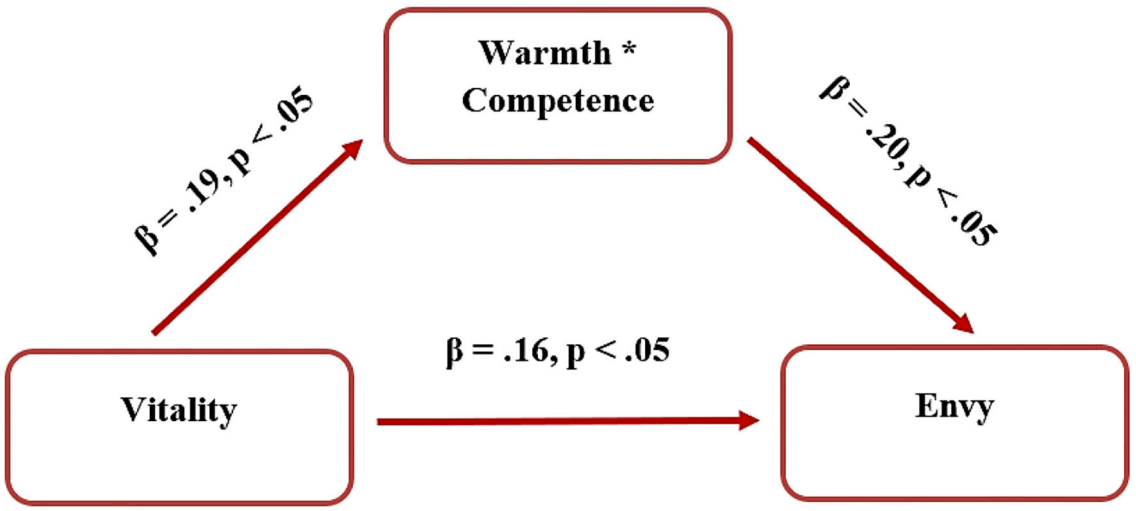

FIGURE 3 | Vitality as a predictor of envy, mediated by the interaction of warmth and competence.

Also, interestingly enough, admiration was predicted by competence only in the case of the German-speaking group and by both competence and warmth in the case of the English-speaking group. The former finding coincides with that of the 2013 study (Sweetman et al., 2013) and the latter with those of Fiske et al. (2002) and Cuddy et al. (2008). Emotional theorists consider admiration as containing both competence and moral aspects, which is connected to warmth in the SCM. Thus, admiration is connected with both warmth and competence. Indeed, in one of the studies (Sweetman et al., 2013), admiration was measured by such items as "respect" as well (study 4), pointing to its moral component. One of the possible explanations of why the groups in question deserved such positive emotions can be entitativity, which characterizes homogeneous, organized groups with shared goals. The authors found that entitativity affects warmth stereotype perception through increasing it (Dang et al., 2018). Thus, it could be argued that our participants perceived the German- and English-speaking groups as entitative.

These findings were possible because of two reasons: firstly, we studied single emotions and did not group them as it is usually done (Fiske et al., 2002; Cuddy et al., 2007; Bye and Herrebrøden, 2018); and secondly, we regressed these emotions on competence and warmth to see which of them are positively predicted by stereotypes. Analyzing single emotions separately enabled us to look deeper into the nature of emotions on the one hand and into the links between stereotypes and emotions on the other. We assigned emotions to stereotypes *via* regression analysis that can also be used in addition to calculating means and comparing them, especially if we analyze single emotions. Means tell us which emotions are felt the most, while regression tells us which emotions are linked with stereotypes. The regression analysis has been used in a number of studies using status and competition as predictors of warmth and competence (Durante, 2008; Kervyn et al., 2015; Grigoryev et al., 2019), while we have applied this approach to better investigate the links with emotions. Although in essence, regression and ANOVA are the same analyses, they make us look at the data and interpret them from different perspectives. Thus, we can conclude that single-sample/single-group design findings concerning emotions conducted on an individual-level analysis enriched our understanding of how they are elicited.

Stereotype Content Model and Social–Structural Antecedents

Below we will analyze our findings starting from the social–structural antecedents ending with the elicited emotions *via* stereotypes, following the SCM logic. In terms of the social–structural antecedents, fear of assimilation does not predict warmth, while vitality predicts competence (hypothesis 4). The study of different immigrant groups in the Unites States found the same connections: while group-level analysis revealed both links, individual-level analysis, as in our case, could only confirm the status/competence link (Lee and Fiske, 2006). Also, vitality predicts envy, while fear of assimilation does not and neither does their interaction. Study of nine post-socialist bloc societies found that the link between competition and warmth is higher in these societies than in the capitalist countries (Grigoryan et al., 2019). The possible explanation for our case is that our proxy measure of competition, fear of assimilation, contained questions on symbolic threat but not on realistic threat. Also, Durante (2008) proposed to consider cooperation as a better predictor of warmth.

The effect of competence on envy is conditioned by warmth and *vice versa* (hypothesis 5). The combination of competence and warmth is needed to elicit envy, but if one of these stereotypes is high enough, the second one is not needed. Only in two studies (Sweetman et al., 2013; Kotzur et al., 2018) could we find a similar idea of checking the warmth and competence interaction to predict emotions. No interaction of warmth and competence was found to be significantly linked with admiration, pity, and contempt in the 2013 study, while pity, contempt, and

envy were predicted by interaction of warmth and competence scores in the 2018 study. We found that envy is elicited not only by competence and warmth but also by the interaction of competence with fear of assimilation (hypothesis 5). The increase of fear of assimilation is linked with an increase in envy, but only when the level of perceived competence is moderate or high. This finding, on the one hand, corresponds to the SCM postulate that stereotypes and their antecedents predict emotions but, on the other hand, deviates from the SCM logic that competition interacts with competence and not warmth. The study of stereotypes and their antecedents in Russia has also found that perception of economic threat is linked with competence (Grigoryev et al., 2019). Fear of assimilation is the same as perceived symbolic threat. Indeed, the ITT posits that threat, a situational variable, is needed to increase prejudice (Stephan et al., 2009). Previous studies conducted in Georgia found the same (Makashvili, 2018; Makashvili et al., 2018).

In addition, vitality is also connected to envy directly as well as *via* the mediation of warmth and competence product term (hypothesis 7). According to the SCM framework, perceived social–structural antecedents elicit stereotypes, which in turn elicit emotions. This chain from antecedents to stereotypes and emotions has not been demonstrated in the literature so far, and our mediational chain enables us to clearly show how the emotion of envy is elicited. The envy predicted toward the representatives of the English-speaking group might also be explained by the nature of envy itself: as the authors of the BIAS map note, envy is an ambivalent emotion, involving respect and resentment at the same time, while an "ambivalent type of respect is [. . .] a begrudging admiration for the other" (Cuddy et al., 2007, p. 634). Furthermore, Norwegian authors distinguish between two types of envy: malicious and non-malicious. The former is close to the feelings of anger and resentment, while the latter is close to the feeling of admiration, which is also felt toward the English-speaking group in our study. With this nature of envy, they explain the finding of only envy mediating relation between competence and the corresponding behavior, assuming that their participants experienced non-malicious envy (Bye and Herrebrøden, 2018). In the study of the mental illness stigma, admiration and envy loaded on one factor (Sadler et al., 2015). Following this reasoning, and considering that our respondents make an upward social comparison with the representatives of the English-speaking group, we may also assume that our participants envy the representatives of English-speaking countries in a non-malicious way. Thus, applying moderation models enabled us to demonstrate that interaction of stereotypes, as well as perceived status and competition predict emotions.

Application of Stereotype Content Model in Georgia

Finally, our findings provide a deeper insight into how Georgian students view representatives of the German- and English-speaking countries. They confirm findings of our previous studies where these groups are held close to Georgian students in terms of social distance (Javakhishvili, 2005; Javakhishvili et al., 2018). Indeed, representatives of both groups are perceived as having high status and being less competitive, also, competent and warm, deserving emotions of pride, admiration, and sympathy, which propose explanation to why they are held so close. English- and German-speaking countries—the USA, UK, Germany, etc.—are highly developed, powerful nations that play an important role in the international arena. English is the main foreign language in Georgia as well as elsewhere; the knowledge of the English language is required to get a good job. Germany is also a powerful country supporting Georgia; however, less Georgians speak German than English. For Georgians, the USA and the European Union are especially important, as they support the country's democratic development and its unstable economy.

Envy is also felt toward the English-speaking group representatives, as demonstrated by different data processing techniques, including mediational chain from vitality through warmth and competence interaction. Georgians consider English-speaking people as highly competent and warm, but, at the same time, as a threat to the Georgian language and traditions—in other words, as a source of symbolic threat, as defined by the ITT (Stephan et al., 2009). Symbolic threat is represented by fear of assimilation in our study, which in interaction with competence elicited envy. The prediction of envy is explained by moderation analysis, according to which it is elicited by the interplay of warmth and competence, as well as fear of assimilation and competence. Envy itself can be understood 2-fold: as non-malicious or malicious, the former, in our view, being the participants' emotion to the English-speaking group. Thus, such emotion does not prevent our participants from holding this out-group close. In sum, distant out-groups elicit envy as a result of their perceived vitality, fear of assimilation, warmth, and competence.

LIMITATIONS AND FUTURE RESEARCH

One of the limitations of this study is a single-group design, which does not allow for cluster solution of data and variability. Divergence in measures is also to be seen as the study limitation: one such divergence was related to the corresponding set of emotions, as mentioned, we had to drop one (jealousy) and the other (sympathy) was understood differently from the original version. Another divergence was related to social–structural antecedents: we used substitute variables instead of applying the original questions of competition and status. This substitution, nevertheless, was justified by the specifics of the out-group studied and enabled us to detect certain links. However, lack of items tapping into realistic threat indeed created an obstacle. The study of group threat perceptions and emotions points that symbolic and realistic threats might elicit different emotions because of the different nature of the threats as well as emotions (Matthews and Levin, 2012). Therefore, having realistic threat items at hand would have given us more important information about these links. Further research might be envisaged with more out-groups to add variability to the data. Indeed, we have already planned a new study, where we will use a more precise translation of emotions as well as eight out-groups to

be assessed, which in our view will provide enough variability to gain four stereotype clusters. Also, the future study will incorporate an expanded measure of the scale of competition and status by Fiske et al., so that cooperation is also included in investigating links between social–structural antecedents and stereotypes.

CONCLUSIONS

The added value of this research should be considered in two directions: firstly, it contributes to the SCM theory, which works differently when small country representatives evaluate representatives of large and powerful countries. When analyzing emotions separately, and *via* regression analysis, more than two emotions are elicited. We have demonstrated that the link from perceived vitality to envy is mediated by interaction of warmth and competence. Such mediation has not been examined until now. Also, we were able to demonstrate for the first time that perceived competitiveness/fear of assimilation interacts with competence to predict envy. Secondly, this research contributes to the general theory of prejudice measured by social distance to geographically distant out-groups—findings of our previous studies that English- and German-speaking people have consistently been held close can be explained by the SCM. German-speaking group representatives are considered competent and warm, thus eliciting admiration and pride, which apparently can explain short social distance. English-speaking group representatives, in addition, elicit the emotion of envy, as demonstrated by mediational chain from vitality through warmth and competence interaction. Social–structural antecedents come forward to elicit emotion of envy independently as well as in interaction with stereotypes when small country representatives evaluate representatives of the influential group of English-speaking people.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ilia State University Ethics Committee. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

NJ was the principal investigator of the project, coordinated all the processes starting from the inception phase of formulating research questions through data collection, processing and analyses, and ending with writing up the research. NB contributed to organizing the database, participated in data processing, and wrote the Methods section of the paper. IV participated in the data processing and analysis and writing up the research. AG proposed the overall idea of the study and collected the corresponding data. All authors have contributed to manuscript revision, read, and approved the submitted version.

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Identifying Racial Minorities' Nationality: Non-verbal Accent as a Cue to Cultural Group Membership

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Historically, racial appearance has been a common source of information upon which we categorize others, as have verbal accents. Enculturated *non-verbal* accents which are detected in facial expressions of emotion, hairstyle, and everyday behaviors, have also been found to exist. We investigated the effects of non-verbal accent on categorization and stereotyping when people are exposed to thin slices of behavior. The effects of racial essentialism, which inclines people to categorize and assess others by race, were also tested. In three studies, Australian participants were shown short, muted videos of target individuals performing everyday behaviors. The targets were of a minority (Asian) racial appearance, but half had been interracially adopted as babies and grew up in the Australian mainstream. The other half were foreign nationals who grew up in Asia. In Studies 1 and 2, Australian participants rated each target as Australian or foreign. In both studies, they correctly identified the targets at above chance levels. In Study 3, participants rated the targets on Australian and Asian stereotype traits. They were not told that some targets were Australian and some were foreign, but they nonetheless rated the congruent stereotypes more strongly. Lay theory of race moderated the effect of non-verbal accent, with a weaker effect among participants who endorsed racial essentialism. These preliminary findings reveal subtle effects of non-verbal accent as a cue to cultural group membership and invite further work into the effects of non-verbal accent on person perception and categorization processes.

Keywords: non-verbal accent, stereotypes, enculturation, thin slices of behavior, impression formation

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INTRODUCTION

Majority populations in multicultural societies generally consider it desirable that immigrants integrate, which involves interacting with and adopting aspects of the host culture while maintaining their culture of origin (Berry, 2006). They hold a more positive perception of individuals and immigrant groups who integrate, and this outcome seems to be regardless of whether the racial appearance of an immigrant is the same or different to the host majority (Van Oudenhoven et al., 1998; Maisonneuve and Teste, 2007; Alcott and Watt, 2017).

The concept of "race" is contentious. Historically it has referred to the division of humanity into groups that reflect an inherited biological foundation and is manifested in physical phenotypes, such as skin color, eye shape, hair texture, and bone structure. While these physical phenotypes are used as markers for categorization, the extent of racial essentialism regarding abilities, character, or behavior has been debunked on scientific and evolutionary grounds

(Fishbein, 1996; Kurzban et al., 2001). Despite this, people all over the world categorize themselves and each other according to "race," and it continues to be a salient factor in the organization of people's social worlds (Gossett, 1997; Celious and Oyserman, 2001). In the current research, we conceptualize "race" as "racial appearance," referring to the physical phenotypes mentioned. Social perception is essentially categorical (Spears and Haslam, 1997), and for immigrants of minority racial appearance around the world, racial categorization can have substantial effects on social and national belonging. Racial appearance has often been relied upon as a cue to nationality. For example, studies conducted in the United States of America (USA) have shown that Americans of Asian descent are often labeled as "foreigners" rather than as Americans (Tuan, 1998; Devos and Banaji, 2005), and issues around identity and belongingness are frequent.

Racial appearance, or at least visible minority status, can be an obstacle to full participation in the majority culture for a variety of reasons and can create sensitivity to exclusion (Tafarodi et al., 2002). Research performed in Canada by Tafarodi et al. found that priming subjects of a racial minority (Chinese) for self-awareness of their physical appearance and racial minority status produced a "compensatory conformity" effect in the subjects. The compensatory conformity effect was expressed as a stronger alignment with majority group attitudes compared to those who did not have an awareness of their physical appearance heightened. Tafarodi et al. interpreted this as an effort to ensure inclusion and belonging with the majority population by individuals who did not want to be "ethnified" by the majority group members based on physical appearance. However, this is difficult if one of the conditions of being included in the majority population depends on being of the same racial appearance. For instance, France does not officially acknowledge race or ethnicity, as just being French is seen to be the most important identification (Beaman, 2018). However, it seems that having a white racial appearance is unofficially synonymous with being included as French by the majority population (Beaman, 2018). Many individuals (particularly North African second-generation immigrants) do not feel accepted as French, even though they were born there, because they are not seen to "look French" (Simon, 2012). In Australia, research has also demonstrated that being white is more readily associated with the concept of being Australian than is being Indigenous Australian (Sibley and Barlow, 2009).

Minority Racial Appearance and Majority Enculturation

The current research investigated the attitudes and perceptions of an Australian majority population toward individuals who have a minority racial appearance but who are fully enculturated into the dominant mainstream culture. One example of this is generations "deep" immigrants who may no longer identify with the culture of their ancestors' country of origin, such as fifth or sixth generation Chinese Australians. Another example is people who are interracially adopted. Usually, people who are adopted into Australia from other countries are adopted and raised in white-Anglo homes. They may have little exposure to the culture from their country of birth and become fully enculturated into Australia's dominant mainstream culture. However, does their racial appearance preclude them from being included by the national majority members as a cultural ingroup? Are they destined to be perceived by the dominant majority as "not quite Australian?" It is important to investigate this question as the answer has ramifications not only for the lives of individuals who are interracially adopted and are in this situation but also for long-term immigrants who identify with the mainstream or dominant culture. The perceptions and attitudes of the dominant majority population toward minority racial groups influence the groups' inclusion and sense of belonging in the broader society.

Non-verbal Accent as a Cue for Categorization

Understanding the effects of categorization on people who have a minority racial appearance and investigating how they are perceived and included by their compatriots is an interesting question to ask in light of the continuum model of categorization (Fiske and Neuberg, 1990). Among other things, this model proposes that sex, age, and race are "privileged" categories that mark social group membership. They are privileged because they are prominent, visual, and can be easily and immediately applied to most people we encounter. We, therefore, can instantaneously categorize others according to these three cues. There is evidence that racial categories are processed early in person perception. For example, American participants have been found to give preferential attention to race over the other two salient categories of sex and age (Ito and Urland, 2003), and studies have shown that race, as a social category, is processed in under 200 ms (Kubota and Ito, 2017). There is also the work by Greenwald and Banaji (1995) and the development of the Implicit Association Test (Greenwald et al., 1998), which demonstrates that people will react implicitly to racial stereotypes.

However, accents are also strong cues for social categorization (Ladegaard, 1998). While the usual understanding of accent is that it is an aspect of spoken language, research has also demonstrated the existence of non-verbal accents (Marsh et al., 2003, 2007). For example, emotional expression, a non-verbal behavior, is well-supported as being an effective channel of communicating meaning and has been characterized as being a universal language (Ekman, 1972, 1977), albeit a language that carries accents. Marsh et al. (2003) defined this non-verbal phenomenon as "non-verbal accent." Like verbal accents, non-verbal accents arise in enculturation and signal one's cultural background, and it has been demonstrated that they reveal enough information that observers can identify the expresser's nationality. Research by Marsh et al. (2003) had American participants judge the nationality of people who were racially Japanese but had grown up either in Japan or the USA after looking at photographs that showed them expressing discrete emotions (e.g., sadness or anger). Participants correctly identified at above chance levels and with a large effect size, the nationality of the targets displaying these emotional expressions. They also found that the effect was much larger in photographs where emotions were being expressed rather than when targets

had a neutral face. These findings indicate that expression of emotion conveys a non-verbal accent that can identify nationality or culture and that cultural differences are intensified when expressing emotions.

Recent research by Matsumoto and Hwang (2018) replicated Marsh et al.'s (2003) study to further investigate non-verbal accent, with a view to isolate cues that participants use to detect nationality. They used the same stimulus photos as Marsh et al. but manipulated the stimuli by switching hairstyles. While Marsh et al. concluded that facial expression of emotion was responsible for the results, Matsumoto et al. concluded that hairstyle differences contributed to differences in detecting nationality, especially in the judgment of Japanese nationals. However, in another study conducted by Marsh et al. (2007) using different stimulus photos (of white Americans and Australians), even after removing the targets' hairline and hair, participants could still correctly judge nationality at above chance levels, and more so when the targets expressed emotion on their faces.

Hamamura and Wai Li (2012) found that Hong Kong participants could detect whether or not a Hong Kong target identified with Western culture (as is commonly the case in Hong Kong) by observing muted 60-s videos of seated targets as they responded to questions asked by an off-camera interviewer. Targets were asked about their stress levels, how they managed their stress, and what things they hated or disliked. Questions like these with affective content may elicit emotional responses, and the detection of cultural influence may be due to non-verbal accents in facial emotional expression. The researchers recognized this and, to isolate cues, removed emotional expression in a subsequent study by using neutral photos of the target's head. They then took it a step further, removing the targets' hair, showing just the face with the hair removed. After removing the hair, the targets' cultural identification was no longer perceived. The authors concluded that hairstyles play a role in conveying cues regarding Western cultural identification among Hong Kongers. Thus, there is evidence for both hairstyles and facial expressions of emotion contributing to non-verbal accent.

Physical behaviors such as walking and waving have also been found to convey detectable cultural influences and can be considered to be part of non-verbal accent. Marsh et al. (2007) showed American participants static photographs of American and Australian targets either with their arm raised, waving, or walking mid-stride. The targets wore hairnets to minimize differences in hairstyle. They found that participants correctly identified at above chance level which targets were Australian, and which were American, with a medium to large effect size. Furthermore, participants assigned a dominant (congruent) stereotype to the Americans and a likable (congruent) stereotype to the Australian targets, demonstrating that manner of behavior played a role in determining cultural group membership.

While non-verbal accent was originally conceptualized as the subtle cultural differences evident in facial expressions of emotion (Marsh et al., 2003), the research described above extended this to include hairstyle and physical postures. We suggest that there are likely to be many more such cues, such as subtleties in the way one wears clothes, the way one walks, or how animated a person is during speech. Under controlled conditions, a single cue has been found to be sufficient to indicate one's enculturation. In the current research, we examined the effect of a combination of cues under naturalistic conditions. To capture the notion that non-verbal accent may be expressed by many features, the current research defined non-verbal accent as *the sum total of a person's enculturated, physical cues to their cultural background*. An important aspect of this definition is that non-verbal accent, just like verbal accent, arises through enculturation, that is, it naturally arises through a person's immersion in a particular culture.

The Current Research

Most of the research into non-verbal accents has used highly controlled stimuli in laboratory settings. Marsh et al. (2003) suggested it would be worthwhile for future work to explore how people use the information from non-verbal accents in naturalistic settings. The present research aimed to extend our understanding of non-verbal accent to the cues conveyed in brief observations of everyday behaviors, like seeing others walking or running along a street, or having a conversation which can be observed but not heard, such as when in a café and observing a stranger across the room. The technique of *thin slices of behavior* offers an ideal method for mimicking naturalistic encounters. "Thin slices of behavior" refers to short glimpses of dynamic behavior, typically presented in short videos, that provide enough information for observers to form impressions of the targets being viewed (Ambady and Rosenthal, 1992).

Previous studies have been conducted on detecting the national identification of people with a minority racial appearance in the United States of America (e.g., Marsh et al., 2003) and in Canada (Bjornsdottir and Rule, 2020). However, those studies used photographs and focused on non-verbal accents in the facial display of emotion. The current research expanded from faces to thin slices of behavior, which incorporate everyday movement and behaviors in a naturalistic setting, and tested the impression formed by seeing the whole person, as is more commonly observed in everyday situations. Another goal, using these stimuli, was to investigate non-verbal accent as a cue to national categorization and stereotyping when the target person is of a minority racial appearance, using thin slices of behavior in a naturalistic setting. We wanted to know if people who have a minority racial appearance but local enculturation would be categorized and stereotyped by Australian citizens as fellow nationals. People who are interracially adopted and who have a minority racial appearance are a strong exemplar of this situation and were the focus of this research. Conversely, we also asked if people who have a minority racial appearance, but foreign enculturation, would be categorized and stereotyped as foreign, at above chance levels.

Three studies were conducted in Australia, a country built on immigration, with 28% of its current population born overseas. While Australia is a multicultural and multiracial nation, the dominant majority population is racially white with an Anglo/European ethnic heritage. Australia has a small number of interracially adopted people (just over 4,500 in the last two decades; Australian Institute of Health Welfare, 2018).

Nevertheless, intercountry adoption is intricately connected with society's ideas about race, culture, ethnicity, kinship, and belonging to family and nation (Volkman, 2005). Australia provides a natural context for examining if and how people who have been interracially adopted, and how people of racial minorities generally, are identified as members of the larger mainstream national/cultural group.

Lay Theory of Race

Individual differences in attitudes toward race are likely to affect social categorizations (No et al., 2008). This paper uses the lay theory of race to explain how people understand the concept of race and how it may affect their judgments of others. According to the lay theory of race, people endorse either "racial essentialism" or "social constructionism" lay theories. People who endorse social constructionism view race and its effects as a social construction that is malleable and context-driven (No et al., 2008). Therefore, based on non-verbal accent, people who endorse social constructionism might easily categorize someone with a minority racial appearance as having majority enculturation. On the other hand, people who endorse racial essentialism believe racial groups have inherent natures that are biologically based, innate and immutable (Haslam et al., 2000; Prentice and Miller, 2007). They also perceive well-defined boundaries that are both social and physical to delineate members of different racial groups (Chen and Hamilton, 2012), and believe that "race" is highly informative of a person's physical and psychological characteristics (Rothbart and Taylor, 1992). Furthermore, research has found that people who endorse racial essentialism are more likely to categorize based on race (Chao et al., 2013). Therefore, an effect of non-verbal accent might not be present when people endorse racial essentialism, because they may not see past a minority racial appearance and not be sensitive to the non-verbal manifestations of mainstream enculturation.

The present studies aimed to put some well-known effects from the impression formation literature to the test in a dynamic environment, more akin to many real-world impression formation situations. Non-verbal accent was operationalized by developing a 60-s, silent video of each target person as they performed a set of everyday behaviors. The targets were people of the same minority East Asian racial appearance who had been adopted as babies and raised in Australia, or foreign nationals who had grown up in Asia and had been in Australia for <2 years. This time frame was used as a precaution in case non-verbal accent changes upon immersion in a new culture.

Non-verbal accent has been shown in previous studies to reflect one's enculturation or cultural identification (in the case of Hamamura and Wai Li, 2012). We, therefore, expected that targets who were raised in Australia would present an Australian non-verbal accent, and those raised in Asia would present a foreign non-verbal accent. This was tested in Study 1, which investigated whether participants would correctly identify people who had been adopted interracially into Australia and were fully enculturated Australians as being Australian, and those who were foreign nationals as not Australian. We predicted that they would be able to do this at above chance levels through the influence of non-verbal accent. We also probed the reasons why participants decided a target was Australian, asking them a free response question after they had made their choice, to discover whether participants were aware of any aspect of non-verbal accent that influenced their decision. A second study explored the effect of lay theory of race. We predicted that participants who scored high in racial essentialism would be less accurate when identifying nationality than participants who scored high in social constructionism. A final study investigated the influence of non-verbal accents by asking participants to rate each target against a mixed set of Australian and Asian stereotype traits. We predicted that the targets who were interracially adopted would be allocated higher scores than foreign targets on Australian stereotypes than Asian stereotypes. We further predicted that the effect would be moderated by lay theory of race as people who endorsed racial essentialism would be more influenced by racial appearance (and less influenced by non-verbal accents) in their stereotyping than those who endorsed social constructionism.

STUDY 1

Method

Participants

Two hundred and five participants aged between 18 and 83 years ($M = 47$, $SD = 17.2$) were recruited from Qualtrics online panels. Forty-eight percent were males, and all participants were Australian citizens, with 78% born in Australia. Those not born in Australia had lived in Australia for an average of 33 years (minimum = 3 years, maximum = 70 years). Two participants did not complete the study and were removed from the dataset. The University's Human Research Ethics Committee did not permit us to ask about participants' racial background. However, an earlier study using the same recruitment method and on a similar topic (Alcott and Watt, 2017) produced a sample with 90% Caucasian/Anglo/European ancestry and 6% Asian ancestry. The remaining 4% had ancestry from other parts of the world.

Design

A single factor experimental design was used, where targets' enculturation (Australian, foreign) and, therefore, non-verbal accent, was a within-subjects factor. The dependent variable was the identification of the target's nationality. The stimuli comprised six standardized 60-s silent videos, with one target person shown in each video as they performed several everyday behaviors. The targets were three interracial adoptees and three foreign nationals. All targets were male and were matched for age (1 × early 20's, 1 × late 20's—early 30's, 1 × 40's), general appearance, and the wearing of glasses (1 × glasses in each group). The targets are shown in **Table 1** below. Locating male interracial adoptees from East Asia who were willing to be filmed and then matching them with recent arrivals in Australia according to the criteria of age, general appearance and glasses-wearing was not an easy task, and within the constraints of this project, it was not possible to conduct further filming. Viewing six stimuli was a number that seemed acceptable in terms of participant concentration and fatigue on watching and rating the six videos and providing an open-ended response for each.

Previous research by Marsh et al. (2003) and Marsh et al. (2007), which used unbiased hit rates, found effects of non-verbal accent with a medium effect size, and research by Hamamura and Wai Li (2012) using silent videos of people talking about an emotional topic revealed medium to large effect sizes. However, as thin slices of behavior had not previously been used in this way for non-verbal accents research, we computed the sample size on an expected small effect size ($f = 0.10$) and power of 0.90. A G*Power (Faul et al., 2007) analysis revealed that 179 participants were required for the 2-way within-subjects analysis required to compare hit rates with chance responding for foreign and Australian targets (see "Data analysis").

Stimuli—Films of Targets Displaying Non-verbal Accents

We created six videos that each showed an individual of Asian racial appearance. Three were interracial adoptees (two from South Korea and one from Vietnam) who had grown up in Australia and were Australian nationals. They were located *via* adoption websites and through contacts of the authors and were aged between 20 and 45 years (see **Table 1**). The other three were foreign nationals who were temporarily visiting Australia. They were recruited from English as a Second Language Schools in Sydney, were between 20 and 45 years of age, and were from China and Mongolia (see **Table 1**). They had been in Australia for < 2 years. Using a cut-off of 2 years was a precautionary decision. No evidence was available stating when non-verbal accents begin to change on moving countries, and so a conservative estimate of 2 years was used in case people who had been in-country for longer would be poor exemplars of the foreign non-verbal accent. One target who had been in Australia for 5 years was accidentally included in the stimulus set. Data relating to that target were not included in the final analyses.

All targets were paid for their time and consented to their images being used for research purposes. Before the filming, the targets were not given information about the research objectives, except that it was investigating race relations in Australian society. They were fully debriefed afterward. Based on research by Eagly and Kite (1987) which found that men are perceived to resemble stereotypes of their nationalities more than women, and to reduce any effects of gender, only male targets were used in the scenarios.

All attempts were made to make the targets relaxed and at ease during filming. For example, they were given time to get acquainted with the researcher and assistants, were offered refreshments, and given time to get comfortable before filming began. The foreign nationals could speak English and were selected by their teacher for competence and ease while communicating in English. To ensure their ease during the filming, they were given the translated questions beforehand, so they could prepare and feel comfortable in the interview.

Video Content

Filming took place over six separate sessions (one session for each subject) and was in the same location each time. Each subject walked down the same suburban footpath, waited while using a mobile phone in the same spot each time, ran down the same stretch of the footpath, and finally was seated, having a conversation with an off-camera interviewer in the same chair/lighting, etc., of the same room as they answered simple non-affective questions about their lives (e.g., "Where do you live?" "Do you play any sports?" "What are your hobbies?").

The soundtrack of the conversation was entirely removed; only ambient sounds could be heard. The subjects were asked to wear their everyday casual clothes and were advised they were not required to "act" but just be themselves. Finally, the films were all edited in the same manner, with the cuts made at the same time points, so far as possible. The final length of each film was 60 seconds. The films were presented to participants in random order.

Measures

Identifying Nationality

Participants viewed six separate 60-s videos, where each video showed a target person performing several everyday behaviors. Following each video, they were asked, "*Please indicate if you agree with this statement: 'The man in the film is an Australian (has grown up in Australia)'* (Yes/No)."

Open Response

After identifying the nationality of each target, participants were offered the option of explaining their decision with an open response question: "Can you say what made you answer yes or no?" Several themes emerged from the responses, based on references to movement, demeanor, and attitude, clothing, and hair, or a more general description of the target. Three independent judges allocated the responses into the thematic categories, and Krippendorff's alpha was calculated to assess agreement between the judges, using the Kalpha macro (Hayes and Krippendorff, 2007).

Previous Knowledge Check

We checked whether participants knew any of the men in the videos. The question asked, *"Do you know any of the men in any of the videos?"* None of the participants knew any of the targets.

Procedure

The experiment was presented *via* an anonymous online survey. Participants were told that it was an investigation into how much information is needed to form first impressions. They first completed a demographics questionnaire (citizenship, age, gender, born in Australia, years lived in Australia). There was then a brief familiarization trial in which they were shown 20 s of the videos and were asked to rate, as a filler task and to support the cover story, the targets on the dimensions of warmth and competence (Fiske et al., 2002). This is commonly done in such judgment studies (e.g., Matsumoto, 1993; Marsh et al., 2003, 2007) so that participants are familiar with the format of the stimuli, allowing them to adapt to the situation, which can enhance the quality of data (Barley, 2011).

After the familiarization trial, they were told that some of the targets had grown up in Australia and were Australian nationals, while some were foreign nationals who had not been in Australia

TABLE 1 | Target stimuli.

Foreign nationals			
Target individual			
	Man A	Man B	Man C
Country of birth	China	Mongolia	China
Time in Australia	5 months	2 years	8 months
Interracially adopted Australian Nationals			
Target individual			
	Man D	Man E	Man F
Country of birth	South Korea	Vietnam	South Korea
Time in Australia	From a baby	From a baby	From a baby

for very long. This ensured participants understood that each target had a chance of being an Australian national or not, which limits test bias (Marsh et al., 2003). Participants then watched the full 60-s videos and judged the national identity of each target, stating who was Australian (has grown up in Australia) and who was not.

Data Analysis

No analyses were conducted before the data gathering was completed. Participants' judgments of the targets' national identities were classified as correct or incorrect, and then unbiased hit rates, *Hu*, were computed using the method developed by Wagner (1993). *Hu* takes into account whether participants or stimuli might be biased toward a particular response. It takes "simultaneous account of both stimulus and judge performance" (Wagner, 1993, p. 16) by combining the conditional probability of a stimulus being correctly identified and a response being correctly used (please see Wagner, 1993, p. 17). It is then compared with chance performance to determine if the unbiased hit rate is significantly different to chance. In this way, *Hu* accounts for whether stimuli in one category might produce bias toward one type of response over another, and whether some participants might be biased toward a particular response. It combines these into a measure of accuracy ranging from zero to +1. If a participant responded "Australian" to all targets, the *Hu* score for the foreign targets would be 0 as the participant was wrong on each occasion. Even though all ratings of Australians would be correct, the *Hu* score for the Australian stimuli would be 0.5, not 1, because the calculation of *Hu* takes into account the over-use of the Australian category. Perfect accuracy in categorizing the Australian and foreign targets would yield a *Hu* score of 1 for both categories, and perfect inaccuracy would yield a *Hu* score of 0 for both categories. Using Wagner's method, the *Hu* score can be compared with chance performance (*pc*) of each stimulus/judgment combination, which is also rated from 0 to +1. The comparison of *Hu* and *pc* is assessed *via* paired *t*-tests, or in a more complex design, repeated measures ANOVA or MANOVA. Because the current design had two types of targets, foreign and Australian, we conducted a 2 (hit rate: *Hu*, *pc*) x 2 (non-verbal accent: foreign, Australian) repeated measures ANOVA using SPSS version 26. The distributions of all variables were checked before analysis.

Results

Identifying Nationality

The repeated measures ANOVA revealed a significant effect of hit rate with a large effect size, $F_{(1,201)} = 58.56$, $p < 0.001$, partial $\eta^2 = 0.226$. Unbiased hit rate, *Hu* ($M = 0.37$, $SE = 0.015$, $CI_{lower} = 0.34$, $CI_{Upper} = 0.40$) was significantly higher than *pc* ($M = 0.25$, $SE = 0.000$, $CI_{lower} = 0.25$, $CI_{Upper} = 0.25$). There was no interaction between hit rate and target culture, $F_{(1,201)} = 0.49$, $p = 0.48$, partial $\eta^2 = 0.002$. Thus, participants performed at above chance accuracy when classifying both foreign and Australian targets.

Open Responses

The open responses were analyzed to shed light on how participants correctly identified the Australian targets as Australian. Participants were invited to explain their decision following each target. Out of 361 correct identifications of Australian targets, 299 open responses were provided. These were analyzed to identify if participants were aware of relying on any particular aspects of non-verbal accent when deciding that a target was Australian. Comments that made no sense or were irrelevant were removed ($N = 26$), leaving 273 responses for coding. Preliminary coding revealed five thematic categories (see **Table 2**). Three independent judges were then recruited to rate the comments against the thematic categories, and Krippendorff's alpha was computed to measure agreement between the judges. The result of $\alpha = 0.86$ indicates acceptable interrater reliability (Krippendorff, 2010). Only the comments with 100% inter-rater agreement were included in the percentages for each category, as presented in **Table 2**. Examples of the comments are included.

Discussion

This study tested if non-verbal accent is a discernible marker of enculturation and nationality when presented briefly in thin-slices of spontaneous behavior. We hypothesized that Australian participants would be able to identify people who had grown up in Australia as Australian by briefly observing thin slices of their behavior, which potentially conveyed non-verbal accents. The targets were people of a minority Asian racial appearance who had either been interracially adopted into Australia or were recent arrivals to Australia. Race commonly has a significant influence on categorization, but if race were the only influence, we would expect no difference between the two groups of targets because race was held constant across the conditions. The results supported the hypothesis because, on average, participants correctly identified the Australians at above chance levels. That participants could identify the targets' nationality based on their non-verbal accent builds upon previous research which has found that non-verbal accent in emotional expression, communicative behaviors such as waving, and instrumental behaviors such as walking is sufficient for participants to correctly infer cultural and national differences (Marsh et al., 2003, 2007). While the targets in the current study did not demonstrate specific, discrete emotional expressions (e.g., happiness, sadness, anger) or overt communicative behaviors like waving, they did display ordinary behaviors that one may observe another performing in everyday life. The effect sizes were small to medium, and the results indicate that people who have been adopted interracially into Australia and who have a minority racial appearance display non-verbal accents that signal their national belonging.

While the free responses supported that the participants based their decisions on various elements of non-verbal accent, the largest percentage tended to see the overall effect of nonverbal accent rather than the components. This reflects a comment of Marsh et al. (2007) that participants in their study responded to a gestalt impression—meaning they responded to the overall impression, rather than the individual components of the target.

TABLE 2 | Thematic categories, percentages, and examples.

Theme	Percent ($N = 273$)	Comment examples
Confident/comfortable	21%	*"He strikes me as quite confident…"; "Relaxed and easy confident manner"; "Comfortable confidence."*
Laid Back/easy going/casual	19.5%	*"His casual approach"; "He appeared laid back enough to be an Aussie"; "A very relaxed and laid back individual."*
Movement style	15%	*"He just ambled along..."; "How he walks and runs—very relaxed"; "Swaggering and relaxed walk"; "How he runs and his casual walk style."*
Dress & hair	10%	*"...the way he is dressed seems Australian"; "His hairstyle, outfit and movement"; "He wears Aussie clothes"*
Don't know/just an impression	34.5%	*"His demeanor"; "Seems to be a typical Aussie"; "Just a feeling"; "Looks that way is all I can say"; "Just a gut feeling"; "Very typical Australian"; "Just do."*

There are further questions about the moderators of the effect. Namely, is non-verbal accent a useful source of information if one endorses an essentialist lay theory of race? Racial essentialism purports that race is inevitably associated with a person's traits and abilities; that race is biologically based and genetically determines behavior, justifying endorsements of racial stereotypes (Jayaratne et al., 2006). Therefore, a person who endorses racial essentialism may have difficulty in identifying ingroup enculturation in someone whose racial appearance represents "outgroup." Because the two lay theories of race (essentialism and social constructionism) understand race differently, in Study 2, we predicted that participants who endorsed social constructionism would be open and sensitive to the non-verbal accents of the individuals who have been interracially adopted. They would, therefore, be able to identify them as Australian at above chance level. On the other hand, the perceptions of participants who endorsed racial essentialism would be dominated by the target individuals' racial appearance and would therefore not respond to the effect of the individual's non-verbal accent.

STUDY 2

Method

Participants

Two hundred and twelve participants were recruited from Qualtrics, an online participant panel. There were equal numbers of male and female participants, with a mean age of 47 years, $SD = 17.2$ (minimum = 18 years, maximum = 86 years). All were Australian citizens, and almost 80% were born in Australia. The remaining 20% who were not born in Australia had lived an average of 32 years in the country (ranging from 5 to 68 years).

Design

A single factor experimental design was used, where targets' culture (Australian, foreign) was a within-subjects factor. Lay theory of race was measured as a continuous moderator. The dependent variable was the identification of Australian nationality.

Study 1 revealed a strong effect of non-verbal accent, but we anticipated a small interaction effect of lay theory of race. A G*Power analysis computed on an expected small effect size ($f = 0.10$) with power of 0.90 indicated that 180 participants were required.

Stimuli

The stimuli were the videos that were used in Study 1. They were presented in random order.

Measures

The same identification of nationality was used as in Study 1. Study 2 also included a measure of lay theory of race.

Lay Theory of Race Scale

The Lay Theory of Race Scale (No et al., 2008) was presented to participants as investigating how people understand the notion of race. The scale consists of eight items that determine whether a respondent endorses racial essentialism or social constructionism. Four items measure racial essentialism (e.g., "*What a person is like (e.g., his or her abilities or traits) is deeply ingrained in his or her race. It cannot be changed much.")* and four items measure social constructionism (e.g., *"Racial groups do not have inherent biological bases, and thus can be changed.").* Participants were asked to rate each item on a scale from 1 (strongly disagree) to 6 (strongly agree). We reverse-scored the social constructionism items so that high scores reflected an endorsement of racial essentialism and low scores, social constructionism. This procedure, presentation, and scoring of the lay theory of race measure were consistent with previous research (No et al., 2008) and simultaneously measured participants' lay theory of race and primed whichever lay theory the participants endorsed before they completed the next task. Cronbach's alpha for the scale was 0.63, which was a little lower than No et al.'s (2008) alpha of 0.76.

Procedure

The procedure was the same as in Study 1, except participants also completed the lay theory of race scale before viewing the videos.

Data Analysis

No analyses were conducted before the data gathering was completed. Participants' judgments of the targets' national identities were classified as correct or incorrect, and then unbiased hit rates, *Hu*, and chance performance, *pc*, were

computed in the same way as in Study 1. To identify whether participants were able to identify nationality at above chance level, *Hu* was compared with *pc*. As the moderator, lay theory of race, was a continuous between-subjects variable, a linear mixed model was computed using the GAMLj module in Jamovi (Version 2.0.6.; Gallucci, 2019). Participant was added as a random effect, and the fixed effects were target culture (foreign, Australian), hit rate (*Hu*, *pc*), and lay theory of race. The interactions of target and lay theory of race with hit rate were assessed, as was the three-way interaction of target, lay theory of race, and hit rate. Jamovi computes degrees of freedom for *t*-tests and *F*-tests of the main model in linear mixed models using the Satterthwaite method. *F*-tests for simple effects use the Kenward-Roger method to compute degrees of freedom.

Results

Consistent with Study 1, the fixed effect omnibus tests revealed a significant effect of hit rate [$F_{(1,588)} = 85.51$, $p < 0.001$] such that *Hu* ($M = 0.37$, $SE = 0.01$, $CI_{lower} = 0.35$, $CI_{upper} = 0.39$) was significantly higher than *pc* ($M = 0.25$, $SE = 0.01$, $CI_{lower} = 0.23$, $CI_{upper} = 0.27$). There was no interaction of lay theory of race and hit rate, $F_{(1,588)} = 0.93$, $p = 0.337$. Therefore, participants were able to identify nationality at above chance levels, regardless of their lay theory of race. There was no interaction of target culture with hit rate [$F_{(1,588)} = 0.00001$, $p = 0.997$], nor was there a three-way interaction of target culture x hit rate x lay theory of race [$F_{(1,588)} = 0.00003$, $p = 0.996$).

Discussion

The hypothesis for this study predicted that participants who endorsed racial essentialism would not be able to discern who was Australian because they would assess the targets on racial appearance and not be sensitive to the non-verbal accent of the target individuals. This hypothesis was not supported. The results demonstrated no significant difference between participants who endorsed racial essentialism and social constructionism. Both groups were able to detect nationality at above chance levels based on non-verbal accent, and there was no significant difference in their accuracy.

In a country such as Australia, which has a population of people from diverse ancestries, racial appearance is not a barrier to formal national citizenship. Someone who endorses racial essentialism is just as likely as someone who endorses social constructionism to understand that a person can migrate from another country and be an Australian national while having an Asian racial appearance (or any racial appearance).

So, while Australian participants may attribute ingroup nationality to an individual who has a minority racial appearance, they may not attribute typical Australian traits to these individuals. That is, they may not include them in the "stereotypical cultural ingroup."

Hamamura and Wai Li (2012) and Marsh et al. (2007) proposed that the accuracy of nationality judgments based on non-verbal cues may depend on the stereotypes that observers hold about the members of the national group. In our first study (Study 1), when participants were asked why they deemed the target to be either Australian or a foreign national, we found their comments hinted at relying on commonly known Australian stereotypes (e.g., laid back, easy-going) to make their decision.

Study 3 investigated the role of stereotypes. It had two goals. The first goal was to remove the task of identifying nationality and instead test if participants could discern people who are enculturated Australians by asking them to attribute Australian or Asian stereotypes to the targets. The second goal was to see if participants who endorsed racial essentialism would attribute Australian stereotype traits to Australian people who have a minority Asian racial appearance (in this case, people who have been interracially adopted).

We hypothesized that non-verbal accent would be a cue upon which participants base social judgments. This would be demonstrated if participants attributed congruent (Australian) stereotypes to Australian targets who have an Asian racial appearance, rather than attributing incongruent (Asian) stereotypes to this group, and vice-versa. Therefore, an interaction between target culture and stereotype group was expected. We also hypothesized that participants who endorsed social constructionism would more readily apply congruent (Australian) stereotypes to the Australian targets than those who endorsed racial essentialism. Racial essentialism inclines people to categorize by race (Chao et al., 2013), so these participants would, therefore, allocate lower scores on Australian stereotypes to the Australian and foreign targets because of their Asian racial appearance. In this way, lay theory of race was expected to modify the interaction between target and stereotype, such that a three-way interaction would be present.

STUDY 3

Method

Participants

Two hundred and eight Australian citizens were recruited as participants *via* Qualtrics online panel (52% female, 48% male). The mean age was 47 years, $SD = 18.0$ (minimum = 18 years, maximum = 86 years). Seventy-nine percent were born in Australia. The remaining 21% who were not born in Australia had lived in Australia an average of 34 years (ranging from 2 to 68 years). In this respect, the sample was representative of Australia's population, where approximately 25% are born overseas (Australian Bureau of Statistics, 2016).

Design

A 2 (non-verbal accent: Australian, foreign) x 2 (stereotype: Australian, Asian) mixed experimental design was used, together with a continuous moderator, lay theory of race. The dependent variable was endorsement of Australian and Asian stereotype traits. Like Study 2, we estimated that 180 participants were needed to detect an effect size of $f = 0.1$ at power = 0.90.

Stimuli

The stimuli were the videos that were used in Study 1 and Study 2. They were presented in random order.

Measures

Lay Theory of Race Scale

The Lay Theory of Race Scale (No et al., 2008) was the same as used in Study 2. The items were presented in random order. Cronbach's alpha for this scale was 0.59.

Stereotypes

After each video, participants were shown a list of 10 traits and were asked to rate from 1 ("definitely not") to 5 ("definitely yes") how much each trait applied to the person in the video. The traits included five commonly held Australian stereotypes (down to earth, good sense of humor, friendly, laid back, outgoing) which were chosen from a preliminary study conducted by the authors (Alcott, 2019) as well from other studies examining Australian stereotypes (Haslam et al., 2000; Leeson, 2016). There were also five commonly held Asian stereotype traits (courteous, quiet, sincere, shy, traditional) which were chosen from various studies that examined consensual Australian stereotypes of Asian Australians as well as commonly held stereotypes of Asian Americans (Karlins et al., 1969; Borresen, 1982; Jackson et al., 1996; Johnson et al., 2005). The scores for the Australian stereotypes were calculated separately for the Australian and Asian targets. In this way, a total Australian stereotype endorsement and a total Asian stereotype endorsement was calculated for each group. The possible range of scores for Australian and Asian stereotypes for each group was 15–75.

Previous Knowledge Check

The same check as in Studies 1 and 2 was included at the end of the survey, in case participants knew any of the men in the videos.

Procedure

Participants completed an anonymous survey online. The study was presented as an investigation into how much information we need to form a first impression of others. Participants completed the demographic questions (Australian citizenship, gender, age, born in Australia, years lived in Australia) followed by the Lay Theory of Race scale (No et al., 2008). They then watched the 60-s videos of the targets and, after each one, scored the target on the list of descriptors provided. Due to the lengthy nature of the survey in this study, and to avoid participant fatigue, a familiarization task was not included.

Data Analysis

No analyses were conducted before the data gathering was completed. A linear mixed model was computed using the GAMLj module in Jamovi (Version 2.0.6.; Gallucci, 2019). Participant was added as a random effect, and the fixed effects were target (foreign, Australian), stereotype (Asian, Australian), and lay theory of race. The full factorial model was assessed.

Results

The first hypothesis predicted an effect of non-verbal accent, such that Australian targets would be rated higher on the congruent (Australian) stereotypes than on the incongruent (Asian) stereotypes, and foreign targets would be rated higher on the congruent (Asian) stereotypes than the incongruent (Australian) stereotypes. The results supported this hypothesis, with a significant interaction between target and stereotype, $F_{(1,613)} = 48.38$, $p < 0.001$. When the target was foreign, the congruent Asian stereotype ($M = 49.1$, $SE = 0.56$, $CI_{lower} = 48.0$, $CI_{upper} = 50.2$) was rated higher than the incongruent Australian stereotype ($M = 46.9$, $SE = 0.56$, $CI_{lower} = 45.8$, $CI_{upper} = 48.0$), and when the target was Australian, the congruent Australian stereotype ($M = 49.9$, $SE = 0.56$, $CI_{lower} = 48.8$, $CI_{upper} = 51.0$) was rated higher than the incongruent Asian stereotype ($M = 47.2$, $SE = 0.56$, $CI_{lower} = 46.1$, $CI_{upper} = 48.3$).

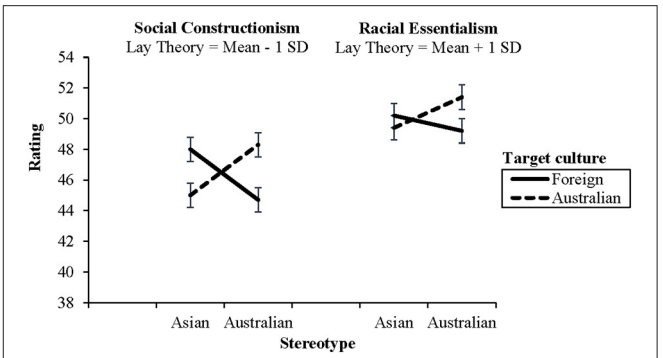

FIGURE 1 | Ratings of Asian and Australian stereotypes as an effect of lay theory of race when target culture was foreign or Australian, computed at 1 sd above and below the mean for lay theory of race. Error bars are standard error.

The second hypothesis concerned lay theory of race, predicting that participants who endorsed social constructionism (low scores on lay theory scale) would more readily apply (congruent) Australian stereotypes to the Australian targets than those who endorsed racial essentialism (high scores on lay theory scale), resulting in more effect of non-verbal accent among those who were high in social constructionism. The results revealed a significant main effect of lay theory of race on stereotyping, $F_{(1,205)} = 14.11$, $p < 0.001$, such that high lay theory predicted higher stereotyping scores overall, with a medium effect size ($b = 0.30$). A significant three-way interaction was found between lay theory of race, target culture, and stereotype, $F_{(1,613)} = 6.58$, $p = 0.01$. As shown in **Figure 1**, the congruent stereotype was rated higher for both Asian and Australian stimuli, but this was more pronounced when lay theory of race was low (social constructionism).

To explore the effect size of the interaction of target culture and stereotype at high and low levels of lay theory of race, we divided the participants into high, medium, and low groups on lay theory of race using a tripartite split of this continuous variable. A 2 (target culture: foreign, Australian) x 2 (stereotype: Asian, Australian) repeated measures ANOVA was computed for the high lay theory group, and another was conducted for the low lay theory group. Supporting the second hypothesis, when lay theory of race was low (social constructionism), the interaction of target culture (*via* non-verbal accent) and stereotype was significant and with a strong effect size, $F_{(1,69)} = 31.82$, $p < 0.001$, partial $\eta^2 = 0.316$, and when lay theory of race was high (racial essentialism), the interaction of target culture and

stereotype remained significant, but with a much weaker effect size, $F_{(1,64)} = 6.51$, $p = 0.013$, partial $\eta^2 = 0.092$.

Discussion

We predicted that non-verbal accent, observed in thin slices of everyday behavior, would influence the allocation of national and racial stereotypes. We specifically hypothesized that participants would attribute Australian stereotypes to Australian interracially adopted targets (with Asian racial appearance) rather than attributing Asian stereotypes to this group, and vice-versa. This hypothesis was supported. Importantly, the participants were blind to the real purpose of the experiment. They were not informed that the traits represented national stereotypes, and they did not know that they were observing members of different national and cultural groups. They also did not know they were identifying compatriots and foreigners. Despite these conditions, participants still allocated Australian stereotypes to fellow Australians and Asian stereotypes to Asian nationals.

We also predicted that lay theory of race would influence how national ingroup stereotypes were attributed. The results showed an effect of non-verbal accent on stereotype ratings regardless of lay theory of race. However, this was more pronounced among those who endorsed social constructionism.

GENERAL DISCUSSION

The current research asked whether non-verbal accent is a cue to national identification when it is viewed as thin slices of behavior. Previous research has examined non-verbal accent in highly controlled conditions, usually varying one feature at a time. In contrast, we presented naturalistic stimuli that showed a person's physical presence as a whole, to determine whether non-verbal accent would affect categorization and stereotyping when a person forms first impressions on observing another person. After viewing the thin slices of behavior videos, Australian participants correctly identified targets of a minority racial appearance as Australian or foreign at above chance levels (Studies 1 and 2) and rated congruent stereotypes more highly than incongruent stereotypes (Study 3), even though they did not know that the traits were stereotype traits or that the targets represented two different nationalities. This further extends research that has been conducted to investigate non-verbal accents (Marsh et al., 2007; Hamamura and Wai Li, 2012; Matsumoto and Hwang, 2018), all of which have pointed to a role of stereotypes *via* non-verbal accent in discerning the cultural identification or nationality of target individuals.

We also wanted to understand the effect an individual's lay theory of race had on being able to identify Australians and foreign visitors. In Study 2, we predicted that endorsing a racial essentialist view would hinder this process, however this prediction was not supported. Although, in Study 3, there was an effect of lay theory of race. Australia is an "immigrant nation" and as such it is easily and readily understood that a person from any racial or cultural background could be an Australian citizen. So, endorsing racial essentialism would not be a hindrance to identifying people with a minority racial appearance as Australian. However, including targets of minority racial appearance into the "stereotypical cultural ingroup" may not be as easily done by people who endorse racial essentialism. Participants who endorsed social constructionism were slightly more adept at allocating congruent stereotypes to the two target groups which supported our prediction in Study 3.

Previous research has sought to separate and discern non-verbal accent cues that are used when judging another's national cultural group. The results have been mixed. For example, is it emotional expression (Marsh et al., 2003)? Is it communicative movements such as waving (Marsh et al., 2007)? Is it hairstyle (Hamamura and Wai Li, 2012; Matsumoto and Hwang, 2018)? Participants' comments in Study 1 shed some light on this. Hair and dress style were seldom mentioned, even though the targets wore their usual hair and clothes as we reasoned that these might naturally form part of non-verbal accent. A confident demeanor, behavioral style (casual, relaxed), and movement style (swaggering walk, running style) were commonly mentioned as reasons why respondents decided the target was Australian.

A large percentage of the open responses showed that participants could not articulate why they made their decision. This adds support to (Marsh et al.'s (2003)) suggestion on finding that participants did not seek out particular physical disparities in judging nationality, that participants may have been more attuned to a gestalt of differences, meaning that the whole conveys more than the individual parts. As the open responses indicate, some decisions on who is Australian were based on a nebulous "looked Australian" and "seemed Australian."

One of our goals was to assess the influence of non-verbal accent in common everyday encounters, to add to the ecological validity of the research. That we obtained the current results from participants viewing such brief moments of non-verbal behavior is remarkable and begs the question, how far can we reduce the exposure to non-verbal accent before people can no longer perceive enculturation? Further research in this area would benefit from incrementally reducing the exposure time to discern this cut-off point.

Limitations

The studies in this research all used the same stimulus set. As noted above, we were only able to locate and then match three targets from each group. Our results are, therefore, preliminary, and follow-up studies using different stimuli are required to solidify the conclusions.

Previous research has consistently shown effects of racial essentialism on categorization (Chao et al., 2013). However, the current results showed that people who endorse racial essentialism allocated stereotypes based on targets' enculturation (*via* non-verbal accent) rather than their minority appearance. These findings are curious and consideration around methods must be included. Although the focus of this study was on targets of minority racial appearance in Australian society, future research might include targets of varying racial groups. This may affect judgments of national identity and might also heighten the effect of racial essentialism as race becomes more salient by comparison.

The Lay Theory of Race scale showed reasonably low internal reliability in both studies, which could indicate the number of

questions for each category was too low. In previous experiments on effects of lay theory of race, participants were primed for one theory or the other. No et al. (2008) argued that, depending on an individual's prior experience or social environment, lay theory of race might become more chronically accessible. They suggested it is also possible to increase the temporary accessibility of either social constructionism or racial essentialism by presenting participants with convincing evidence supporting that theory. This method has been shown to prime the corresponding theory in other research too, on implicit theories of morality (Hong et al., 2003) and gender (Coleman and Hong, 2008) and the propensity to categorize by race or theme (Chao et al., 2013). We did not prime our participants, nor did we embed the questions from the lay theory measure into a battery of other survey questions, as some previous research has done (Kung et al., 2018) to conceal the intention and minimize demand characteristics. To help ensure stronger endorsement of a lay theory of race, temporarily priming participants for either racial essentialism or social constructionism may be beneficial.

Conclusion

The present research suggests that ethnic minority members' non-verbal accent, viewed as a combination of enculturated features, provides cues to their nationality. These are significant findings, particularly in the context of modern plural societies where one's racial appearance may not mean anything beyond a distant heritage. Members of racial minorities who are enculturated within the mainstream culture can be recognized as such, even from the moment of first impressions. This result was found in multiracial, multicultural Australia, where it is increasingly common for people with minority racial appearance to belong to the mainstream culture. Whether the same effect occurs in other countries is a matter for future research.

We focused specifically on interracially adopted individuals of minority racial appearance. However, the results could also reasonably generalize to immigrants more broadly and other racial groups. How long an immigrant retains their enculturated non-verbal accent is unknown; non-verbal accent could change quite quickly upon immigration, and as a precaution, we only included targets who had been in Australia < 2 years. We found that ingroup non-verbal accent is a trigger for ingroup categorization and inclusion, but conversely, outgroup non-verbal accent could also trigger outgroup categorization, prejudice, and discrimination. Given the possibility that non-verbal accent is a barrier to intergroup acceptance, it would be useful to examine its duration upon migration.

Australian citizens accepted interracially adopted individuals as national ingroup members by identifying them as fellow Australian nationals and by applying Australian cultural stereotypes to them. This is a revelation to be pursued further for its implications on the inclusion of Australians of diverse racial backgrounds. There are many interracially adopted people and others who have immigrated to Australia, who "look Asian" (or whichever ancestry) but have grown up as one of the cultural majority and identify as such.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Human Research Ethics Committee, University of New England, Australia. The patients/participants provided their written informed consent to participate in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

AUTHOR CONTRIBUTIONS

The three studies reported in this paper were conducted as part of YA's doctoral studies under the supervision of SW. The studies were analyzed and written up by YA for her doctoral thesis. The current submission is a revision of a chapter presented in YA's (unpublished) thesis. The revision, which includes some new analyses, was conducted mostly by SW, but in collaboration with YA. All authors contributed to the article and approved the submitted version.

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