

The Role of Social Media Behaviors and Structural Intergroup Relations on Immigrant Stereotypes

VIVIAN HSUEH HUA CHEN¹

SAIFUDDIN AHMED

ARUL CHIB

Nanyang Technological University, Singapore

This article studies the stereotypes of co-ethnic versus other-ethnic foreign immigrant groups based on the stereotype content model. An online survey ($N = 424$) was conducted to examine Singaporean citizens' perceptions of two prominent migrant groups (co-ethnic Chinese nationals and other-ethnic Caucasians) and the influence of social media on stereotype formation. Results showed that status is associated with competence for both groups, while competition was related to warmth only for Chinese nationals. The cross-constructs of status warmth were found for co-ethnic immigrants only, and a competition–competence correlation was found for other-ethnic. Chinese nationals were perceived as moderate regarding competence and warmth, indicating that being co-ethnic immigrants may not result in in-group inclusivity. Caucasians were viewed as an in-group with high competence and warmth. Social media consumption and heterogeneous discussion were significantly associated with stereotypes for co-ethnic immigrants. For other-ethnic immigrants, social media consumption was associated with competence. Implications for theory and policy are discussed.

Keywords: stereotype content model, immigration, intergroup relations, Facebook, social media, Whiteness

The COVID-19 pandemic has exacerbated nativist tendencies. Globally, there is emerging evidence of the marginalization of temporary migrants, refugee populations, and immigrants, with national policies and sentiments that actively discriminate against foreigners (Devakumar, Shannon, Bhopal, & Abubakar, 2020). Historically, immigrants have been viewed less favorably, perceived as competing with citizens for jobs, housing, and benefits (Esses, Dovidio, Jackson, & Armstrong, 2001). Discriminatory remarks toward immigrant groups in public discourse populate social media worldwide.

Vivian Hsueh Hua Chen: chenhh@ntu.edu.sg

Saifuddin Ahmed: sahmed@ntu.edu.sg

Arul Chib: arulchib@ntu.edu.sg

Date submitted: 2021-01-29

¹This research is supported by the Ministry of Education, Singapore, under its Academic Research Fund Tier 2 Grant (MOE2017-T2-2-145).

Copyright © 2021 (Vivian Hsueh Hua Chen, Saifuddin Ahmed, and Arul Chib). Licensed under the Creative Commons Attribution Non-commercial No Derivatives (by-nc-nd). Available at <http://ijoc.org>.

One plausible reason for this unfavorable evaluation of immigrants is due to stereotypes. Stereotypic expectancies can bias the interpretation of ambiguous behavioral information (Darley & Gross, 1983). Predictive of whether members of the host country behave positively (i.e., support and help) or negatively (i.e., discriminate and exclude) toward immigrant groups, detailed knowledge of stereotypes about various immigrant groups is both relevant and vital for social cohesion.

One critical distinction among immigrant groups is co-ethnicity. Host societies often appraise various immigrant groups differently (Hainmueller & Hopkins, 2014; Tartakovsky & Walsh, 2020). Singaporean society provides a unique context due to an immigrant-based history and the copresence of multiple immigrant groups. Foreigners constitute nearly 29% of the 5.69-million population. Among the foreign population, about 18% are Chinese nationals who share co-ethnicity with the dominant Singaporean Chinese ethnic group (75.9% of total citizen population; Singapore Department of Statistics, 2020). However, negative perceptions against Chinese immigrants (Ortiga, 2015; Ramsay & Pang, 2017), finding them “culturally alien and as economic competitors” (Liu, 2014, p. 1235), were observed. The current study investigates the relative positioning of two different immigrant groups in Singapore: those who share the same ethnicity as the majority group (Chinese nationals) versus those of other ethnicities (Caucasians). We question whether co-ethnic immigrant groups and other-ethnic immigrant groups are perceived differently, and in what way. This study uses the Stereotype Content Model (SCM; Fiske, Cuddy, Glick, & Xu, 2002) to understand intergroup depictions of social groups (Grigoryan et al., 2019; Stanciu, Cohrs, Hanke, & Gavreliuc, 2017).

SCM argues that relative social status and intergroup competition are fundamental sociostructural factors that lead to dual stereotypes (competence and warmth) toward out-group members (Fiske et al., 2002). Research has established a positive relationship between status and competence and a negative relationship between competition and warmth across countries (Caprariello, Cuddy, & Fiske, 2009; Cuddy et al., 2007; Cuddy et al., 2009; Russell & Fiske, 2008). Subsequent studies have found both significant cross-links between status–warmth and/or competition–competence (Durante et al., 2013; Kil, Noels, Vargas Lascano, & Schweickart, 2019; López-Rodríguez, Cuadrado, & Navas, 2013) and that the two stereotypes (competence and warmth) are related to each other (Binggeli, Krings, & Sczesny, 2014; Grigoryev, Fiske, & Batkhina, 2019). The complex pattern of relations among the two predictors and the two stereotypes warrants further investigation. Moreover, Fiske (2017) contends cultural variability in stereotypes, attributing this to the historical backgrounds and contemporary immigration contexts. Singapore’s multiracial and immigrant-rich population, juxtaposed against a colonial history, provides a unique context to examine whether stereotypes toward different groups differ from the model prediction. Our first objective is to interrogate the validity of SCM in explaining stereotype perceptions toward co-ethnic Chinese versus other-ethnic Caucasian immigrant groups in Singapore.

People acquire their attitudes toward minority groups through their exposure to the attitudes of their social environment (Duckitt, 2003), including via media consumption. The prevalence of user-generated online comments on social media has increased negative sentiments about diverse social groups (Duggan, 2017). Research about online expression and interaction has consequently extended to examine stereotypes and immigration-relevant information on social media (Carr, Varney, & Blesse, 2016). However, the understanding of how social media may influence attitudes toward immigrants is

scarce (Nortio, Niska, Renvik, & Jasinskaja-Lahti, 2020), particularly how specific social media behaviors such as reading, commenting, and discussing contribute to formation of stereotypes. Therefore, our second objective is to understand how social media use relates to stereotype content about immigrants and whether the relationship differs for co-ethnic versus other-ethnic groups.

Stereotype Content Model

The SCM (Fiske et al., 2002) posits that stereotypes result from structural intergroup relationships along two dimensions—perceived socioeconomic status (high–low) and perceived interdependence (cooperation–competition). Stereotype content consists of two dimensions: perceived competence and warmth. People differentiate each other by liking (warmth) or respecting (competence). Specifically, the model argues that status predicts competence, and interdependence predicts warmth. A high-status group is considered highly competent, whereas a low-status group is viewed as lacking competence. Groups regarded as cooperative, rather than competitive, will be perceived as warm, and therefore likable. Groups viewed as competitors will be perceived as lacking warmth (Russell & Fiske, 2008).

Combinations of high versus low warmth and competence judgments create four different emotional responses to targeted groups (see Table 1): contempt, admiration, pity, and envy (Fiske et al., 2002). Groups perceived as low on both warmth and competence, such as the poor, often elicit contempt (Harris & Fiske, 2006). Conversely, groups stereotyped as high on warmth and competence, typically referring to in-groups, are often admired. Ambivalent stereotyping occurs when groups are perceived as high on one dimension and low on the other. Based on downward social comparison, groups such as the elderly are stereotyped as low in competence but high in warmth, eliciting pity. Upward social comparison with groups that possess desirable qualities, such as the rich, results in stereotypes of being competent and cold, eliciting envy (Cuddy, Fiske, & Glick, 2008; Harris, Cikara, & Fiske, 2008).

Table 1. Stereotype Content Model.

Warmth	Competence	
	Low	High
High	Pity Low status, not competitive pity, sympathy (e.g., elderly and disabled people, housewives)	Admiration High status, not competitive pride, admiration (e.g., in-group, close allies)
Low	Contempt Low status, competitive contempt, disgust, anger, resentment (e.g., welfare recipients, poor people)	Envy High status, competitive envy, jealousy (e.g., rich people, feminists)

Note. Model is recreated from Fiske and associates (2002).

Initially applied in the United States, the SCM has been validated across diverse groups internationally (Bai, Ramos, & Fiske, 2020; Cuddy et al., 2009; Fiske, 2017; Guan, Deng, & Bond, 2010), with in-groups viewed more positively than out-groups. These earlier studies affirm that perceived competence and warmth differentiate stereotypes of out-groups, who generally receive ambivalent stereotypes. The hypothesized positive relationship between status and competence and the negative relationship between competition and warmth were supported in both cross-sectional (Guan et al., 2010; Kervyn, Fiske, & Yzerbyt, 2015; T. L. Lee & Fiske, 2006) and experimental studies (Caprariello et al., 2009; Russell & Fiske, 2008). Off-diagonal correlations between status and warmth, and competition and competence, were conceptualized as weak or nonexistent (Fiske et al., 2002), with subsequent studies not finding significant correlations (Caprariello et al., 2009; Guan et al., 2010; Kervyn et al., 2015; T. L. Lee & Fiske, 2006).

However, recent research in international and immigration contexts found that the relationship between the two sociostructural factors and the two stereotypes is far more complex. T. L. Lee and Fiske (2006) showed that different immigrant groups in the United States are distinguishable and receive ambivalent stereotypes corresponding to their nationality and social class. In contrast, both Kil and colleagues' (2019) study in Canada and Grigoryev and associates' (2019) study in Russia on perception toward minority and immigrant groups found that status predicts competence and warmth positively, competition predicts warmth and competence negatively, and that competence and warmth are positively correlated. In Malaysia, Janssens, Verkuyten, and Khan (2015) found support for diagonal correlations. Groups of higher economic status were perceived as more competent and warmer. There was a weak negative link between economic competition and out-group warmth for only a partial sample.

Some studies used the SCM partially to understand stereotyping of immigrants. In Spain, immigrant groups (Moroccan, Romanian, and Ecuadorian) perceived as more competitive were viewed as less competent, while status predicted competence, except for Ecuadorians (López-Rodríguez et al., 2013). With adolescent participants in Spain, Constantin and Cuadrado (2020) found a different pattern, with status positively correlated with competence, while competition negatively correlated with competence only for Moroccans, not Ecuadorians. On the contrary, Froehlich and Schulte (2019) found immigrant groups of higher status were perceived as more competent and warmer. These studies focused on immigrant groups who belong to ethnicities different from the host society.

Among the few SCM studies that examined co-ethnic immigrants, Guan and colleagues (2010) investigated how mainland Chinese stereotype Chinese from Hong Kong. They confirmed the original SCM prediction. Chinese from Hong Kong were perceived to be higher in status and more competent than mainland Chinese. There was no significant difference in competition and warmth between the co-ethnic groups. However, this study did not compare the difference between co-ethnic and other-ethnic groups. Ramsay and Pang's (2017) study in Singapore found that co-ethnic immigrants from China were perceived as less warm than three other-ethnic immigrant groups and less competent than Westerners, but more competent than Filipinos and South Asians. These scholars did not examine the role of intergroup sociostructural factors. A similar finding on warmth was drawn from Binggeli and colleagues' (2014) study in two linguistic regions of Switzerland. German immigrants were perceived as more competitive and subsequently less warm in German-speaking regions, and the same applied to French immigrants. Their study did not examine the competence stereotype.

These studies have shown that stereotypes vary for different immigrant groups, but none simultaneously compared perceptions toward co-ethnic versus other-ethnic groups with the full SCM predictions. Therefore, the current study examines SCM predictions for both co-ethnic and other-ethnic immigrant groups in a multiracial society, Singapore. Although Ramsay and Pang (2017) studied stereotypes of immigrant groups in Singapore, they only discussed the two stereotype dimensions. This study investigates the type of stereotypes Singaporeans assign to both co-ethnic Chinese and other-ethnic Caucasian immigrant groups, and how sociostructural factors predict the two forms of stereotypes across groups.

RQ1: How does co-ethnicity influence stereotyping of immigrant groups?

Based on the literature, H1 and H2 examine the applicability of SCM in Singapore.

H1: Status is positively associated with competence.

H2: Competition is negatively associated with warmth.

The inconsistent results from past studies on the relationships between competition-competence and status-warmth relationships warrant further investigation. Therefore, we propose the following research questions:

RQ2: How is competition associated with competence?

RQ3: How is status associated with warmth?

Social Media and Stereotypes

Individuals curate content on social media—gathering, aggregating, interpreting, publicizing, and endorsing content—from websites, newsfeeds, and YouTube videos (Villi, 2012). News content on the social media feed is now based on whom one interacts with regularly and the post popularity (Hutchinson, 2019), potentially exposing individuals to diverse viewpoints.

Despite the potential for diversity on social media, marginalization stereotypes on online discourse are still rampant, with the added effect of social media aiding transmission speed (Dobson & Knezevic, 2018). A Polish study found that user comments pertaining to online news articles about immigrants were often biased and perpetuated generalizations regardless of the article context (Domalewska, 2016). There is initial evidence that readers of such online comments can subsequently be influenced by biases present (Hsueh, Yogeewaran, & Malinen, 2015). Exposure to stereotypical content has been found to perpetuate stereotypes among individuals and has a reinforcing effect on individuals who already hold such views (Turetsky & Riddle, 2018). Nonetheless, the amount of influence and persuasion that a specific message has may be affected by the extent of reader identification with the message source (Hameleers & Schmuck, 2017).

Based on the SCM literature, it is plausible that social media use contributes to stereotypes of competence and warmth toward immigrants. What is unclear is how exactly specific types of social media

behaviors influence stereotypes toward immigrants. We are particularly interested in consumption and contribution practices and discussion on immigration-related topics on social media.

Media Consumption

The extent to which individuals are exposed to cross-cutting content depends on who their friends are, the type of content they share, and how newsfeed-ranking algorithms sort content (Bakshy, Messing, & Adamic, 2015). Individuals may have a higher tendency to encounter online content that violates social norms (e.g., alternative perspectives about immigrants) due to a greater willingness of others to share such content as a result of reduced social presence in online communication (Kiesler, Siegel, & McGuire, 1984). For instance, Messing and Westwood (2014) found exposure to counterattitudinal information on social network sites (SNS) to be substantially greater than interpersonal discussion or traditional media venues.

On SNS, individuals communicate with a more significant number and with diverse kinds of people, creating an environment where individuals are exposed to diverse information and novel perspectives (Y. Kim, Hsu, & Gil de Zúñiga, 2013). Exposure to conflicting views can promote greater awareness of opposing views because no single individual in isolation can foresee the myriad perspectives through which issues are perceived (Manin, 1987). It is argued that such exposure could contribute to tolerance (Mutz, 2002).

Conversely, selective exposure theory posits that individuals prefer sources that support their opinion over those that challenge their views (Garrett, 2009) and are more likely to seek information that advances their views (Colleoni, Rozza, & Arvidsson, 2014). Algorithms in search engines, social media, or news aggregators can place users in a filter bubble that only presents information that matches their previous consumption behavior (Pariser, 2011). Individuals may encounter an echo chamber when others share information that conforms to the opinions of their social circle (Schkade, Sunstein, & Hastie, 2007). As a result, people may look for and be exposed to content that aligns with general stereotypical perspectives. Given the two contrasting but possible ways people consume online media, we pose a research question:

RQ4: How is social media consumption related to perceived competence and warmth?

Media Contribution

Media contribution refers to the sharing of content and includes publishing comments on content (Singer, 2014). User-generated content encourages passive consumers (e.g., viewing only) of content to become active producers and interact with others. People share content when they deem it newsworthy and of personal relevance (Singer, 2014). Individuals who contribute content on social issues may be more aware of the different perspectives involved. Simultaneously, they may also share content to maintain and extend their online social networks and enhance their status by allowing others to access relevant content (C. S. Lee, Ma, & Goh, 2011).

However, shared content on social issues that confirms the beliefs of the person sharing it may introduce biases. Selective exposure conceptually suggests that people would mainly share content that confirms their biases (Morgan, Lampe, & Muhammad, 2013). Thus, while user-produced videos, such as those

that portray senior citizens positively (Oró-Piqueras & Marques, 2017), can help to counter the stereotypical image of out-groups, most videos supported stereotypes found in mainstream media (Guo & Harlow, 2014). Social media may play a role in the perpetuation and shift in stereotype content. More frequent engagement in social media contribution may provide greater opportunities for awareness (e.g., through discussions); yet may also restrict users within bounded ideological networks, thereby limiting their exposure. Thus, social media contribution behavior may impact stereotypical formation. Given the uncertainty of the kind of content being shared and produced, and their link to stereotypes, we pose a research question:

RQ5: How is social media contribution related to perceived competence and warmth?

Heterogeneous Discussion Online

A prominent feature of social media is the wide online social networks users engage with. An individual who frequently goes online at work and uses SNS has a social network that is more diverse than those who do not (Hampton, Lee, & Her, 2011). Social network composition, including network diversity, can affect people's desired social distance from out-groups (Farquhar & Davidson, 2015). Having a diverse social network online increases the chances of interacting with dissimilar groups, via heterogeneous discussions. The heterogeneity of discussions is understood as "how often individuals discuss and socially interact with other individuals from different ideological, political, gender, or racial backgrounds" (Scheufele, Hardy, Brossard, Waismel-Manor, & Nisbet, 2006, p. 735).

Engaging in a heterogeneous discussion online may motivate individuals to reconsider their viewpoints or perceptions (Keele & Wolak, 2008), leading to enhanced political tolerance, reduced prejudice (Ahmed, Chen, & Chib, 2021), and a better understanding of social issues (Mutz, 2002; Price, Cappella, & Nir, 2002). People may be susceptible to persuasion when confronted with a counterattitudinal message, paying particularly attention if their friends endorse it (Anspach, 2017).

Importantly, heterogeneous discussions enable contact with dissimilar individuals and groups. Previous literature suggests that contact with members from dissimilar groups can translate into favorable attitudes toward that specific group and lead to secondary transfer effects by inducing favorable attitudes toward other groups (Hodson, Crisp, Meleady, & Earle, 2018; Schmid, Hewstone, Küpper, Zick, & Wagner, 2012), even when conducted online (Chib & Shi, 2018). Therefore, it can be expected that heterogeneous discussions online with dissimilar groups would influence the perceptions social media users have about other out-groups. Since the relationship has not been previously explored, we pose a research question:

RQ6: How is heterogeneous discussion online related to perceived competence and warmth?

Method

Participants

An online survey that had first been pilot tested was conducted with Singaporean undergraduate students in local universities. The final sample consisted of 424 participants above 21 years of age. Course credit was granted as an incentive for participation.

Measures

Two items measured perceived *warmth* and two items measured perceived *competence*, adapted from Fiske and associates (2002). Items for warmth included, "As viewed by society, how warm are . . .?" and "As viewed by society, how sincere are . . .?" Items for competence included, "As viewed by society, how competent are ...?" and "As viewed by society, how confident are . . .?" where the ellipses were replaced with the specific immigrant group. The items were rated on a 7-point Likert scale (1 = *not at all* to 7 = *extremely*).

Perceived status and *competition* were measured with two items, respectively, adapted from Fiske and colleagues (2002) on a 7-point Likert scale (1 = *not at all* to 7 = *extremely*). Items for status included "How economically successful have ... been?" and "How well educated are . . .?" Items for competition asked, "How much do you agree with this statement?" Those statements were "If . . . get special treatment (such as preference in hiring decisions), this is likely to make things more difficult for people like me." "Resources that go to Chinese nationals (PRCs) are likely to take away from the resources of people like me." Ellipses were replaced with the specific immigrant group.

The *social media consumption* scale, adapted from Leiner, Kobilke, Rueß, and Brosius (2018), consisted of three items. The respondents were asked how often (1 = *never* to 8 = *several times a day*) they (a) read their news feed (news/announcements) about social issues, (b) used the search bar for social issues, and (c) read the time lines/profiles of friends about social issues.

Social media contribution, adapted from Leiner and colleagues (2018), was measured with three items asking the respondents how often (1 = *never* to 8 = *several times a day*) they (a) posted in their time line about social issues, (b) shared posts about social issues, and (c) commented on posts about social issues.

Heterogeneous discussion was measured on an 8-point scale (1 = *never* to 8 = *several times a day*), using four items (e.g., "How often do you talk about social issues on social media with people from a different: 'race' and 'social class?'"), adapted from Diehl, Weeks, and Gil de Zúñiga (2016).

Sociodemographic variables included age ($M = 22.69$, $SD = 1.57$), gender (60.5% female), race (91% Chinese), religion (28.1% Christianity; majority), education (1 = *no formal education* to 11 = *doctoral degree*; median = diploma degree) and monthly income (1 = *less than \$1,000* to 11 = *more than \$20,000*; median = \$7,000 to \$8,999). Religion included eight options and an open-ended "others" option. Christianity was the baseline group with dummy variables of Buddhism, Freethinker, and others.

The reliabilities (measured by Cronbach's alpha) for warmth, competence, status, and competition were derived for each immigrant group separately. Note that the reliability for competence for Chinese nationals was found to be low; but the two subitems were moderately correlated ($r = .31$). All other measures (across both immigrant groups) were found to be satisfactorily reliable. Descriptive statistics and reliabilities can be found in Table 2.

Table 2. Descriptive Statistics.

	Mean	SD	α
Chinese national			
Status	4.80	1.25	.800
Competition	4.41	1.63	.799
Warmth	3.17	1.36	.836
Caucasian			
Status	6.05	.85	.759
Competition	5.16	1.41	.748
Warmth	4.44	1.21	.735
Media use			
Media consumption	4.52	1.73	.713
Media contribution	2.14	1.26	.796
Heterogeneous discussion	2.13	1.31	.901

Correlations among variables can be found in Table 3.

Table 3. Correlation Matrix.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
Chinese national											
1. Status	-										
2. Competition	.236**	-									
3. Warmth	.310**	-.062	-								
4. Competence	.657**	.216**	.247**	-							
Caucasian											
5. Status	.077	.115*	-.058	.119*	-						
6. Competition	-.026	.589*	-.095*	.034	.246**	-					
7. Warmth	.152**	.066	.281**	.204**	.077	-.036	-				
8. Competence	.027	.123*	-.025	.143*	.599**	.276**	.14**	-			
Media use											
9. Consumption	.023	-.063	.037	.106*	.072	-.032	-.004	.146*	-		
10. Contribution	-.031	-.016	.026	.018	.057	-.008	-.028	.032	.323*	-	
11. Heterogenous discussion	.036	.003	.122*	-.009	-.004	.057	.032	-.004	.289**	.478**	-

* $p < .05$, ** $p < .01$.

Results

A paired-samples t test was conducted to explore how co-ethnicity influences stereotyping of immigrant groups (*RQ1*). Singaporeans' perceptions of Caucasians and Chinese nationals significantly differed across all four dimensions: status, $t(423) = 17.70, p < .001$, Cohen's $d = 1.17$; competition, $t(423) = 11.05, p < .001$, Cohen's $d = .49$; competence, $t(423) = 18.82, p < .001$, Cohen's $d = 1.20$; and warmth, $t(423) = 17.02, p < .001$, Cohen's $d = .99$. Caucasians were perceived to have higher status ($M_{diff} = 1.25, p < .001$), be more competitive ($M_{diff} = .75$), more competent ($M_{diff} = 1.09$), and warmer ($M_{diff} = 1.28$) than Chinese nationals. Figure 1 illustrates the means across groups.

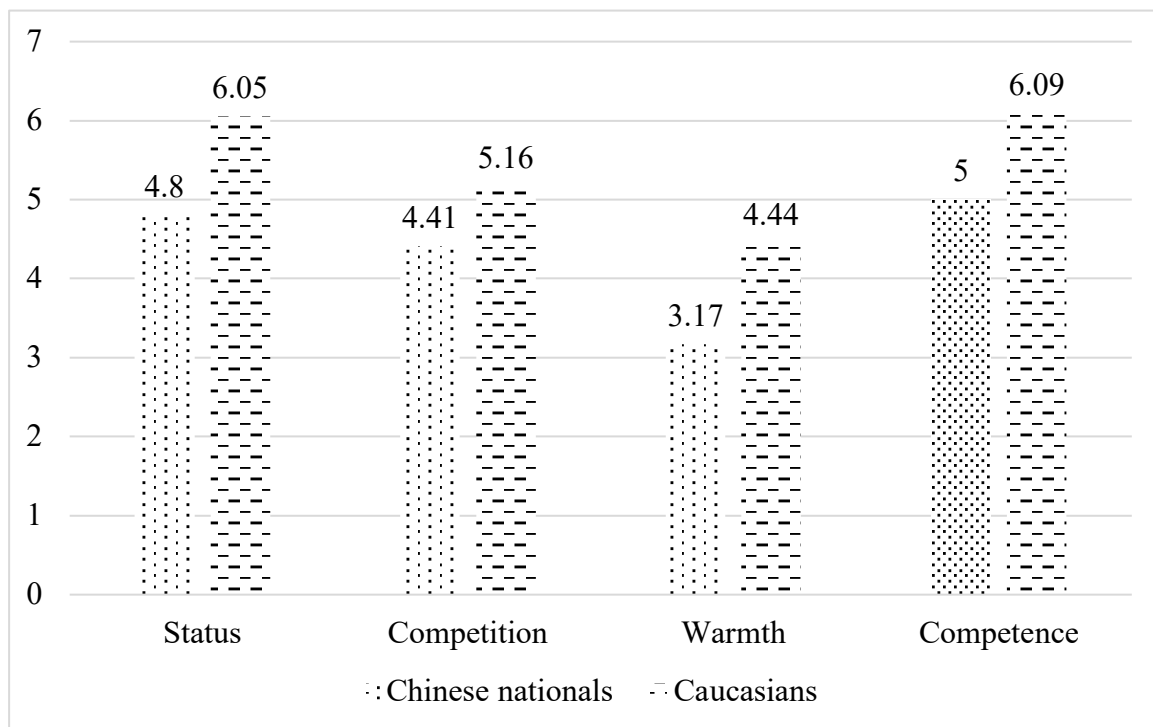


Figure 1. Comparison of social structures and stereotypes across immigrant groups.

Next, we employed ordinary least squares regression models to investigate the remaining hypotheses (*H1* and *H2*) and research questions (*RQ2* to *RQ6*). Separate regression analyses were conducted for the two immigrant groups, with competence and warmth as the dependent variables, and status, competition, social media consumption, contribution, and heterogeneous discussion as the independent variables. Demographic variables of age, gender, education, religion, and family income were the control variables. The final models are presented in Table 4. The VIF values (range: 1.047–1.464) were below the threshold for multicollinearity (J. H. Kim, 2019).

Table 4. Regression Analyses of Competence and Warmth of Chinese Nationals and Caucasians.

	Chinese nationals		Caucasian	
	Competence	Warmth	Competence	Warmth
	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)
Controls				
Age	-0.047 (.028)	0.023 (.047)	-0.008 (.023)	0.021 (.045)
Gender	-0.084 (.091)	0.147 (.153)	-0.036 (.074)	0.120 (.143)
Income	0.000 (.014)	-0.029 (.023)	-0.001 (.011)	0.050 (.022)*
Education	0.030 (.031)	0.009 (.051)	-0.048 (.025)	-0.007 (.049)
Race (others)	0.067 (.134)	-0.144 (.226)	-0.014 (.111)	0.094 (.213)
Religion				
Buddhism	0.058 (.102)	0.344 (.172)*	0.150 (.085)	0.215 (.163)
Freethinker	0.009 (.101)	-0.055 (.171)	0.125 (.084)	0.101 (.161)
Others	-0.014 (.107)	0.086 (.180)	0.079 (.089)	0.239 (.171)
Independent variables				
Status	0.510 (.031)***	0.373 (.052)***	0.508 (.037)***	0.129 (.072)
Competition	0.043 (.023)	-0.121 (.040)**	0.086 (.023)***	-0.045 (.044)
Consumption	0.060 (.023) *	-0.001 (.039)	0.057 (.019) **	-0.015 (.037)
Contribution	0.039 (.034)	-0.034 (.058)	-0.012 (.028)	-0.052 (.055)
Heterogeneous discussion	-0.066 (.033)*	0.123 (.055)*	-0.022 (.027)	0.065 (.052)
Total <i>R</i> ²	0.462***	.151***	.402***	.035

Note. *B* = Unstandardized beta; *SE* = Standard Error; *N* = 424. * $p < .05$, ** $p < .01$, *** $p < .001$.

Chinese Nationals

Results indicate that status was positively related to competence ($B = 0.510$, $SE = 0.031$, $p < .001$), supporting *H1*. Competition ($B = -0.121$, $SE = 0.040$, $p < .01$) demonstrated a negative relationship with warmth, showing support for *H2*. Competition was not significantly associated with competence ($B = 0.043$, $SE = 0.023$, $p = .068$; *RQ2*), while status was positively related to warmth ($B = 0.373$, $SE = 0.052$, $p < .001$; *RQ3*).

Investigation for *RQ4* suggested that consumption of social media was positively related to competence ($B = 0.060$, $SE = 0.023$, $p < .01$), but not warmth ($B = -0.001$, $SE = 0.039$, $p = .973$). Social media contribution was an insignificant predictor of both competence and warmth (*RQ5*). Heterogeneous discussion was negatively associated with competence ($B = -0.066$, $SE = 0.033$, $p < .05$) and positively associated with warmth ($B = 0.123$, $SE = 0.055$, $p < .05$; *RQ6*).

Caucasian Expatriates

Status ($B = 0.508$, $SE = 0.037$, $p < .001$) was positively associated with competence, supporting *H1*. We did not find support for *H2*, as competition was not significantly associated with warmth ($B = -0.045$, $SE = 0.044$, $p = .302$). Competition ($B = 0.086$, $SE = 0.023$, $p < .001$) was positively related to competence

(RQ2), while status was not a significant predictor of warmth ($B = 0.129$, $SE = 0.072$, $p = .073$; RQ3). However, people with higher incomes tend to perceive Caucasians as warm ($B = 0.050$, $SE = 0.022$, $p < .05$).

Social media contribution and heterogeneous discussion were not found to be significant predictors of both competence and warmth (RQ4 and RQ5). Also, social media consumption was not found to be a significant predictor of warmth (RQ6) but was positively associated with competence ($B = 0.057$, $SE = 0.019$, $p < .01$). A summary of the results can be found in Table 5.

Table 5. Summary of Results.

		Competence	Hypotheses	Warmth	Hypotheses
Chinese nationals	Status	Sig, +ve	<i>H1</i> supported	Sig, +ve	
	Competition	n.s.		Sig, -ve	<i>H2</i> supported
	Consumption	Sig, +ve		n.s.	
	Contribution	n.s.		n.s.	
	Heterogeneous discussion	Sig, -ve		Sig, +ve	
Caucasians	Status	Sig, +ve	<i>H1</i> supported	n.s.	
	Competition	Sig, +ve		n.s.	<i>H2</i> not supported
	Consumption	Sig, +ve		n.s.	
	Contribution	n.s.		n.s.	
	Heterogeneous discussion	n.s.		n.s.	

Note. Sig = significant; n.s. = not significant; +ve = positive; -ve = negative; *H1* = Hypothesis 1; *H2* = Hypothesis 2.

Discussion

This study applied the SCM to a unique context where the majority citizen population shares an ethnic background with a prominent minority immigrant group (RQ1). The co-ethnic immigrant group of Chinese nationals was perceived as moderate in competence and moderately low in warmth, which corresponds to T. L. Lee and Fiske's (2006) description of a group that lacks a clear stereotype. This result may be explained by Liu's (2014) research, which argues that instead of co-ethnicity, political pragmatism and identity politics are key factors that influence Chinese Singaporeans' attitudes toward Chinese immigrants (Liu, 2014).

Implications for SCM

Relevant to SCM discussions, both immigrant groups were perceived as high on competence, but slightly varied on warmth. Bai and associates (2020) concluded that in more diverse societies, people may perceive social groups with overlapping stereotypes. It might be that the high diversification of ethnic and immigrant groups that coexist in Singapore leads citizens to perceive Chinese nationals and Caucasian

immigrants as similarly competent. Likewise, Abele, Ellemers, Fiske, Koch, and Yzerbyt (2021) point out that when people acclimatize to social diversity, they tend to differentiate out-groups less. It is possible that Singaporeans are in a process of social transformation (i.e., shifting out-group members toward the in-group quadrant). This shifting might explain the lack of clarity whether Chinese nationals are perceived as an in-group or out-group. If Chinese nationals are perceived as in-group based on shared ethnicity, their lack of benefiting from in-group favoritism may be due to Singapore's collectivist culture. Cuddy and colleagues (2009) found that more collectivist cultures, such as East Asian countries, do not rate reference groups in the most positive quadrant (high in both competence and warmth), in contrast to seven European countries.

However, there is a greater likelihood that co-ethnic Chinese nationals were perceived as an out-group because their score for warmth was moderately low. There are observable social tensions between Chinese immigrants and Singaporean citizens (Liu, 2014; Yang, 2018). The co-ethnicity of being Chinese may itself be a source of conflict due to a similarity in identity and linguistic background. Binggeli and associates (2014) found that out-groups that are (too) similar to the in-group are likely to be ridiculed because of the threat they pose to the uniqueness of the in-group's social identity. Such negative attitudes toward similar out-groups have been documented in the literature (Matser et al., 2010; Oudenhoven, Askevis-Leherpeux, Hannover, Jaarsma, & Dardenne, 2002).

On the other hand, the other-ethnic Caucasian group was perceived as the in-group and thus benefited from in-group favoritism. Caucasians in this study were viewed similarly to Europeans and Americans documented by T. L. Lee and Fiske (2006) but were more competent and less warm than Westerners in Singapore observed by Ramsay and Pang (2017). These findings echo past studies that favorable stereotypes reflect the effects of a colonial past and colorism (Hunter, 2007). As a former British colony, notions of the superior White person linger in Singapore (Chew, Young, & Tan, 2019). Singaporeans might have developed a colonial mentality and colorism, leading them to feel inferior, or embarrassed about their ethnicity, language, or physical characteristics in comparison with Europeans (David & Nadal, 2013).

The SCM tenets were mostly supported in the Singapore context. Status was associated with competence positively (*H1*) in both groups. However, the negative competition-warmth link was only found for Chinese nationals. These results are consistent with previous studies that showed the stable link of status-competence and the unstable relationship between competition and warmth. This disparity could be due to the distinct types of competition citizens perceive from various groups. Although competition for resources usually leads to negative morality (warmth) attributions (Sherif & Sherif, 1969), it does not always result in derogation. It can lead to an unwillingness to favor out-groups (Brewer, 1999), which explains the nonsignificant result.

Another contribution of this study was to clarify the cross-relations between competition and competence (*RQ2*) and status and warmth (*RQ3*) beyond the conventional competition-warmth and status-competence relationships. Our results reveal that the cross-diagonal relationship between sociostructural perceptions and stereotypes differs for each immigrant group. Status had a significant positive association with warmth for co-ethnic Chinese nationals but not for other-ethnic Caucasians. This difference can be understood in terms of status characteristics theory (Berger, Ridgeway, & Zelditch, 2002). Status leads to an inferential process about the abilities of the target group by its social position in society. Expectations of

performance and competence are inferred based on the status characteristics of a group relative to other groups. Being a co-ethnic group, Chinese nationals with high social status are therefore expected to be competent in what they do. However, it is also likely that the nonsignificance of the relationship between status and warmth for the other-ethnic group may be due to ceiling effects—that is, Caucasians being rated highly on status (with a low variance; $M = 6.05$, $SD = 0.85$).

The other-ethnic Caucasians are perceived as warm, independent of status (and competition), and competent because they are viewed as competitive and with high social status. This could reflect White privilege in Asia. The migration of Caucasians from developed regions and their history of dominance over South East Asia's developing region involve geopolitical legacies of colonial influence and structural privilege (Benson, 2013). Chew and colleagues (2019) found that Chinese undergraduate participants in Singapore discriminated in favor of White job applicants and against Malay (darker skinned minority) job applicants in Singapore. Similar observations are found in Tzeng's (2019) study on how White privilege automatically granted Westerners high status and success in the restaurant business in Taiwan. The results are not entirely consistent with past studies that examine the predictions of the two sociostructural traits on the two stereotypes in both linear and diagonal relations in immigration contexts (Grigoryev et al., 2019; Kil et al., 2019). These studies found a positive status–competence, status–warmth, competence–warmth link, and a negative competition–warmth link for all groups in Grigoryev and colleagues' (2019) and some groups in Kil and associates' (2019) study. Coupled with the current study results, it seems that status is the relatively more stable predictor for the two types of stereotype content, serving as a critical component of stereotype formation. The negative link between competition and warmth remains unstable, as shown in previous studies. The link between competition and competence was not found in Kil and colleagues' (2019) study, but is negative among groups with moderate or low warmth only in Grigoryev and associates' (2019) study. This is contradictory to the positive link for the other-ethnic group (high warmth) found in the current study. It is possible that for groups who are likable (warm), their competitiveness toward resources in society is viewed as competent, but this view does not hold true for less likable groups. Future research can investigate this relationship among immigrant groups that fall within the in-group cluster for associated patterns between trait and predictors, as well as their diagonals. Another reason for the unstable link between competition and other SCM variables could relate to the operationalization. While this study used the validated SCM measure for competition, Kervyn, Fiske, and Yzerbyt (2015) proposed new items to incorporate the concept of threat felt by individuals to measure competition. Future SCM studies can explore how different operationalizations of competition may play a role.

Beyond SCM predictions, the study results demonstrate that social media, specifically consumption (RQ4) and the heterogeneous discussion (RQ6) generated, can influence stereotypical perceptions of competence and warmth.

Social Media Behaviors and SCM

We examined the role of social media in stereotype perceptions. Differences in the effects of social media consumption and contribution toward stereotype formation were observed. Social media consumption was positively associated with the perceived competence of both the Chinese and Caucasian out-groups. In contrast, social media contribution did not influence either competence or warmth toward either out-group.

These differences can be contextually explained through the fact that most Singaporeans are politically ambivalent and limit expression online. Zhang (2016) coins this apolitical behavior as the “silence of the majority” (p. 227), arguing that Singaporeans hesitate to engage in online political activities due to a lack of trust in the anonymity of the online setting. Therefore, it is not surprising to find the null effects of social media contribution.

Approached conceptually, however, it would be worthwhile to comparatively measure the effects of different aspects of social media contribution (e.g., posting versus political discussion) to see if subdimensions have a varying impact on the stereotype formation of out-groups. Another explanation lies in the fact that social media contribution mainly entails curating, repackaging, or commenting on content that is removed from the actual source. Contribution requires little real source-information gathering, nor do contributors come into contact with different immigrant groups online.

Interestingly, heterogeneous discussion (*RQ6*) influenced competence and warmth only for co-ethnic Chinese nationals. Heterogeneous discussion on social media seems to be mitigating negative stereotypes by increasing warmth, but it also reduces competence perceptions. The significance of heterogeneous discussion being limited to the Chinese out-group highlights that the demographic composition of online networks can potentially affect how individuals are exposed to sociopolitical content, which influences stereotype formation. As the current study did not measure the composition of participants’ online social networks, we cannot be certain of these conclusions. The findings on heterogeneous discussion suggest that future research should pay closer attention to network characteristics while evaluating the role of social media on stereotype formation.

Though not hypothesized, we conducted a supplementary analysis to contrast how social media factors versus social structural factors influence stereotype content. We found that status and competition are more robust in explaining stereotypes than social media. The supplementary result is included in Table 6.

Table 6. Summary of Results.

Model (controlling for demographics)	Chinese		Caucasian	
	Competence (R^2)	Warmth (R^2)	Competence (R^2)	Warmth (R^2)
Only Status + Competition	.448***	.140***	.389***	.035
Only Social media factors	.065***	.041***	.051***	.030
Both set of factors	.462***	.151***	.402***	.026

*** $p < .001$.

Study Limitations

While the current study investigated stereotypes of two immigrant out-groups to understand how sociostructural positions and social media behaviors influence formation of stereotypes, it can be beneficial to include a reference in-group for comparison. Future studies can include more in-groups and out-groups based on other identity markers. On a related note, the majority of study participants were ethnic Chinese Singaporean citizens. Despite the homogeneity in participants’ identity markers, their identification toward

the ethnic and national identity may be dissimilar, influenced by family immigration history, social status, or upbringing. Future research should consider how the level of identification with ethnic and national identity may moderate perceptions of immigrant groups. To a certain extent, the confluence of socioeconomic status (SES) and ethnicity in the immigrant groups, despite being generated by respondents, could be a source of confounding relationships. Only the Chinese national group comprised individuals of both high and low SES. Caucasians typically take on executive or managerial positions of high SES, so one would be hard-pressed to find any low SES Caucasians in Singapore. Using high and low SES for the various immigrant groups in future studies would allow for more nuanced findings.

We noted that the competence variable for the Chinese national group suffered from low reliability. Findings relating to this variable should be validated in follow-up studies. Future research can also investigate how the gender of the target groups may influence findings. For example, how do people perceive men and women of the same target group and of different target groups? Finally, we operationalized social media variables with a focus on social issues. While this helps us to streamline the measure (as compared with generic use), it is possible that the respondents may differ in their understanding of social issues, which can vary based on levels of politicization (e.g., from charity work to unionizing). Future studies can include definitions of social issues to standardize their meaning.

Conclusion

This study examined how sociostructural and social media factors influence stereotypes toward co-ethnic versus other-ethnic immigrant groups. It provided evidence for SCM's application and explored how social media characteristics—namely, consumption, production, and heterogeneous networks, impact immigrant stereotypes. The overall findings suggest that there exists a variation in how citizens perceive different immigrant groups. SCM arguments are validated in this study, and the cross-construct relationships explored here advance previous theoretical propositions. Results also suggest that social media characteristics of consumption and heterogeneous discussion online play a role in citizens' perceptions of immigrants.

References

- Abele, A. E., Ellemers, N., Fiske, S. T., Koch, A., & Yzerbyt, V. (2021). Navigating the social world: Toward an integrated framework for evaluating self, individuals, and groups. *Psychological Review*, *128*(2), 290. doi:10.1037/rev0000262
- Ahmed, S., Chen, V. H., & Chib, A. I. (2021). Xenophobia in the time of a pandemic: Social media use, stereotypes, and prejudice against immigrants during the COVID-19 crisis. *International Journal of Public Opinion Research*. Advance online publication. doi:10.1093/ijpor/edab014
- Anspach, N. M. (2017). The new personal influence: How our Facebook friends influence the news we read. *Political Communication*, *34*(4), 590–606. doi:10.1080/10584609.2017.1316329

- Bai, X., Ramos, M. R., & Fiske, S. T. (2020). As diversity increases, people paradoxically perceive social groups as more similar. *Proceedings of the National Academy of Sciences of the United States of America*, *117*(23), 12741–12749. doi:10.1073/pnas.2000333117
- Bakshy, E., Messing, S., & Adamic, L. A. (2015). Exposure to ideologically diverse news and opinion on Facebook. *Science*, *348*(6239), 1130–1132. doi:10.1126/science.aaa1160
- Benson, M. (2013). Postcoloniality and privilege in new lifestyle flows: The case of North Americans in Panama. *Mobilities* *8*(3), 313–330. doi:10.1080/17450101.2013.810403
- Berger, J., Ridgeway, C. L., & Zelditch, M. (2002). Construction of status and referential structures. *Sociological Theory*, *20*(2), 157–179. doi:10.1111/1467-9558.00157
- Binggeli, S., Krings, F., & Sczesny, S. (2014). Perceived competition explains regional differences in the stereotype content of immigrant groups. *Social Psychology*, *55*(1), 62–70. doi:10.1027/1864-9335/a000160
- Brewer, M. B. (1999). The psychology of prejudice: In-group love and out-group hate? *Journal of Social Issues*, *55*(3), 429–444. doi:10.1.1.197.4614
- Caprariello, P. A., Cuddy, A. J. C., & Fiske, S. T. (2009). Social structure shapes cultural stereotypes and emotions: A causal test of the stereotype content model. *Group Processes & Intergroup Relations*, *12*(2), 147–155. doi:10.1177/1368430208101053
- Carr, C. T., Varney, E. J., & Blesse, J. R. (2016). Social media and intergroup communication: Expanding identification and collapsing contexts. In H. Giles & A. Maass (Eds.), *Advances in intergroup communication* (pp. 155–173). New York, NY: Peter Lang.
- Chew, P. K. H., Young, J. L., & Tan, G. P. K. (2019). Racism and the Pinkerton syndrome in Singapore: Effects of race on hiring decisions. *Journal of Pacific Rim Psychology*, *13*, e16. doi:10.1017/prp.2019.9
- Chib, A., & Shi, J. (2018). Structured imaginings: Social media as a tool to reduce intergroup prejudice. *Intercultural Communication Studies*, *27*(2), 17–43. Retrieved from <https://www-s3-live.kent.edu/s3fs-root/s3fs-public/file/3-CHIB-SHI.pdf>
- Colleoni, E., Rozza, A., & Arvidsson, A. (2014). Echo chamber or public sphere? Predicting political orientation and measuring political homophily in Twitter using big data. *Journal of Communication*, *64*(2), 317–332. doi:10.1111/jcom.12084
- Constantin, A. A., & Cuadrado, I. (2020). “We believe, we feel, we act”: Testing the BIAS Map predictions during adolescence. *Journal of Applied Social Psychology*, *50*(1), 22–32. doi:10.1111/jasp.12638

- Cuddy A. J. C., Fiske, S. T., & Glick, P. (2007). The BIAS map: Behaviors from intergroup affect and stereotypes. *Journal of Personality and Social Psychology, 92*(4), 631–648. doi:10.1037/0022-3514.92.4.631
- Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2008). Warmth and competence as universal dimensions of social perception: The stereotype content model and the BIAS map. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 60–149). New York, NY: Academic.
- Cuddy, A. J., Fiske, S. T., Kwan, V. S., Glick, P., Demoulin, S., Leyens, J. P., . . . & Ziegler, R. (2009). Stereotype content model across cultures: Towards universal similarities and some differences. *British Journal of Social Psychology, 48*(1), 1–33. doi:10.1348/014466608X314935
- Darley, J. M., & Gross, P. H. (1983). A hypothesis-confirming bias in labeling effects. *Journal of Personality and Social Psychology, 44*(1), 20–33. doi:10.1037/0022-3514.44.1.20
- David, E. J. R., & Nadal, K. L. (2013). The colonial context of Filipino American immigrants' psychological experiences. *Cultural Diversity and Ethnic Minority Psychology, 19*(3), 298–309. doi:10.1037/a0032903
- Devakumar, D., Shannon, G., Bhopal, S. S., & Abubakar, I. (2020). Racism and discrimination in COVID-19 responses. *The Lancet, 395*(10231), 1194. doi:10.1016/S0140-6736(20)30792-3
- Diehl, T., Weeks, B. E., & Gil de Zúñiga, H. (2016). Political persuasion on social media: Tracing direct and indirect effects of news use and social interaction. *New Media & Society, 18*(9), 1875–1895. doi:10.1177/1461444815616224
- Dobson, K., & Knezevic, I. (2018). "Ain't nobody got time for that!": Framing and stereotyping in legacy and social media. *Canadian Journal of Communication, 43*(3), 381–389. doi:10.22230/cjc.2019v44n3a3378
- Domalewska, D. (2016). Immigration, stereotypes, and social security: The portrayal of migrant groups in public discourse. *Security and Defence Quarterly, 13*(4), 15–31. doi:10.35467/sdq/103231
- Duckitt, J. (2003). Prejudice and intergroup hostility. In D. O. Sears, L. Huddy, & R. Jervis (Eds.), *Oxford handbook of political psychology* (pp. 559–600). New York, NY: Oxford University Press.
- Duggan, M. (2017). *Online Harassment 2017* (Research Report No. 202.419.4372). Retrieved from <https://www.pewresearch.org/internet/2017/07/11/online-harassment-2017/>
- Durante, F., Fiske, S. T., Kervyn, N., Cuddy, A. J. C., Akande, A. D., Adetoun, B. E., . . . & Storari, C. C. (2013). Nations' income inequality predicts ambivalence in stereotype content: How societies mind the gap. *British Journal of Social Psychology, 52*(4), 726–746. doi:10.1111/bjso.12005

- Esses, V. M., Dovidio, J. F., Jackson, L. M., & Armstrong, T. L. (2001). The immigration dilemma: The role of perceived group competition, ethnic prejudice, and national identity. *Journal of Social Issues, 57*(3), 389–412. doi:10.1111/0022-4537.00220
- Farquhar, L., & Davidson, T. (2015). Tolerance on Facebook: Exploring network diversity and social distance. *Journal of New Media & Culture, 10*(1). Retrieved from ibiblio.org/nmediac/summer2015/facebook.html
- Fiske, S. T. (2017). Prejudices in cultural contexts: Shared stereotypes (gender, age) versus variable stereotypes (race, ethnicity, religion). *Perspectives on Psychological Science, 12*(5), 791–799. doi:10.1177/1745691617708204
- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology, 82*(6), 878–902. doi:10.1037/0022-3514.82.6.878
- Froehlich, L., & Schulte, I. (2019). Warmth and competence stereotypes about immigrant groups in Germany. *PLOS ONE, 14*(9), e0223103. doi:10.1371/journal.pone.0223103
- Garrett, R. K. (2009). Politically motivated reinforcement seeking: Reframing the selective exposure debate. *Journal of Communication, 59*(4), 676–699. doi:10.1111/j.1460-2466.2009.01452.x
- Grigoryan, L., Bai, X., Durante, F., Fiske, S. T., Fabrykant, M., Hakobjanyan, A., . . . & Yahiiaev, I. (2019). Stereotypes as historical accidents: Images of social class in postcommunist versus capitalist societies. *Personality and Social Psychology Bulletin, 46*(6), 927–943. doi:10.1177/0146167219881434
- Grigoryev, D., Fiske, S. T., & Batkhina, A. (2019). Mapping ethnic stereotypes and their antecedents in Russia: The stereotype content model. *Frontiers in Psychology, 10*, 1643. doi:10.3389/fpsyg.2019.01643
- Guan, Y., Deng, H., & Bond, M. H. (2010). Examining stereotype content model in a Chinese context: Inter-group structural relations and mainland Chinese's stereotypes towards Hong Kong Chinese. *International Journal of Intercultural Relations, 34*(4), 393–399. doi:10.1016/j.ijintrel.2010.04.003
- Guo, L., & Harlow, S. (2014). User-generated racism: An analysis of stereotypes of African Americans, Latinos, and Asians in YouTube videos. *Howard Journal of Communications, 25*(3), 281–302. doi:10.1080/10646175.2014.925413
- Hainmueller, J., & Hopkins, D. J. (2014). Public attitudes toward immigration. *Annual Review of Political Science, 17*(1), 225–249. doi:10.1146/annurev-polisci-102512-194818

- Hameleers, M., & Schmuck, D. (2017). It's us against them: A comparative experiment on the effects of populist messages communicated via social media. *Information, Communication & Society, 20*(9), 1425–1444. doi:10.1080/1369118X.2017.1328523
- Hampton, K. N., Lee, C. J., & Her, E. J. (2011). How new media affords network diversity: Direct and mediated access to social capital through participation in local social settings. *New Media & Society, 13*(7), 1031–1049. doi:10.1177/1461444810390342
- Harris, L. T., Cikara, M., & Fiske, S. T. (2008). Envy as predicted by the stereotype content model: A volatile ambivalence. In R. H. Smith (Ed.), *Envy: Theory and research* (pp. 133–147). New York, NY: Oxford University Press. doi:10.1093/acprof:oso/9780195327953.003.0008
- Harris, L. T., & Fiske, S. (2006). Dehumanizing the lowest of the low: Neuroimaging responses to extreme out-groups. *Psychological Science, 17*(10), 847–853. doi:10.1111/j.1467-9280.2006.01793.x
- Hodson, G., Crisp, R. J., Meleady, R., & Earle, M. (2018). Intergroup contact as an agent of cognitive liberalization. *Perspectives on Psychological Science, 13*(5), 523–548. doi:10.1177/1745691617752324
- Hsueh, M., Yogeewaran, K., & Malinen, S. (2015). "Leave your comment below": Can biased online comments influence our own prejudicial attitudes and behaviors? *Human Communication Research, 41*(4), 557–576. doi:10.1111/hcre.12059
- Hunter, M. (2007). The persistent problem of colorism: Skin tone, status, and inequality. *Sociology Compass, 1*(1), 237–254. doi:10.1111/j.1751-9020.2007.00006.x
- Hutchinson, A. (2019, April 1). *Facebook will now provide detail as to why you're seeing each post in your news feed*. Retrieved from <https://www.socialmediatoday.com/news/facebook-will-now-provide-detail-as-to-why-youre-seeing-each-post-in-your/551708/>
- Janssens, H., Verkuyten, M., & Khan, A. (2015). Perceived social structural relations and group stereotypes: A test of the stereotype content model in Malaysia. *Asian Journal of Social Psychology, 18*(1), 52–61. doi:10.1111/ajsp.12077
- Keele, L., & Wolak, J. (2008). Contextual sources of ambivalence. *Political Psychology, 29*(5), 653–673. doi:10.1111/j.1467-9221.2008.00659.x
- Kervyn, N., Fiske, S., & Yzerbyt, V. (2015). Forecasting the primary dimension of social perception: Symbolic and realistic threats together predict warmth in the stereotype content model. *Social Psychology, 46*(1), 36–45. doi:10.1027/1864-9335/a000219
- Kiesler, S., Siegel, J., & McGuire, T. W. (1984). Social psychological aspects of computer-mediated communication. *American Psychologist, 39*(10), 1123. doi:10.1037/0003-066X.39.10.1123

- Kil, H., Noels, K. A., Vargas Lascano, D. I., & Schweickart, O. (2019). English Canadians' cultural stereotypes of ethnic minority groups: Implications of stereotype content for acculturation ideologies and immigration attitudes. *International Journal of Intercultural Relations, 70*(1), 104–118. doi:10.1016/j.ijintrel.2019.03.005
- Kim, J. H. (2019). Multicollinearity and misleading statistical results. *Korean Journal of Anesthesiology, 72*(6), 558. doi:10.4097/kja.19087
- Kim, Y., Hsu, S. H., & Gil de Zúñiga, H. (2013). Influence of social media use on discussion network heterogeneity and civic engagement: The moderating role of personality traits. *Journal of Communication, 63*(3), 498–516. doi:10.1111/jcom.12034
- Lee, C. S., Ma, L., & Goh, D. H. L. (2011, September). *Why do people share news in social media?* Paper presented at the 7th International Conference on Active Media Technology, Lanzhou, China.
- Lee, T. L., & Fiske, S. T. (2006). Not an out-group, not yet an in-group: Immigrants in the stereotype content model. *International Journal of Intercultural Relations, 30*(6), 751–768. doi:10.1016/j.ijintrel.2006.06.005
- Leiner, D. J., Kobilke, L., Rueß, C., & Brosius, H. B. (2018). Functional domains of social media platforms: Structuring the uses of Facebook to better understand its gratifications. *Computers in Human Behavior, 83*(1), 194–203. doi:10.1016/j.chb.2018.01.042
- Liu, H. (2014). Beyond co-ethnicity: The politics of differentiating and integrating new immigrants in Singapore. *Ethnic and Racial Studies, 37*(7), 1225–1238. doi:10.1080/01419870.2014.892630
- López-Rodríguez, L., Cuadrado, I., & Navas, M. (2013). Extended application of the Stereotype Content Model (SCM) towards three immigrant groups in Spain. *Studies in Psychology, 34*(2), 197–208. doi:10.1174/021093913806751375
- Manin, B. (1987). On legitimacy and political deliberation. *Political Theory, 15*(3), 338–368. doi:10.1177/0090591787015003005
- Matser, C., Oudenhoven, J. P. V., Askevis-Leherpeux, F., Florack, A., Hannover, B., & Rossier, J. (2010). Impact of relative size and language on the attitudes between nations and linguistic groups: The case of Switzerland. *Applied Psychology, 59*(1), 143–158. doi:10.1111/j.1464-0597.2008.00369.x
- Messing, S., & Westwood, S. J. (2014). Selective exposure in the age of social media: Endorsements trump partisan source affiliation when selecting news online. *Communication Research, 41*(8), 1042–1063. doi:10.1177/0093650212466406

- Morgan, J. S., Lampe, C., & Muhammad, Z. S. (2013, February). *Is news sharing on Twitter ideologically biased?* Paper presented at the 2013 Conference on Computer Supported Cooperative Work, San Antonio, TX. doi:10.1145/2441776.2441877
- Mutz, D. C. (2002). Cross-cutting social networks: Testing democratic theory in practice. *American Political Science Review*, 96(1), 111–126. doi:10.1017/S0003055402004264
- Nortio, E., Niska, M., Renvik, T. A., & Jasinskaja-Lahti, I. (2020). "The nightmare of multiculturalism": Interpreting and deploying anti-immigration rhetoric in social media. *New Media & Society*, 23(3), 438–456. doi:10.1177/1461444819899624
- Oró-Piqueras, M., & Marques, S. (2017). Images of old age in YouTube: Destabilizing stereotypes. *Continuum*, 31(2), 257–265. doi:10.1080/10304312.2016.1265098
- Ortiga, Y. Y. (2015). Multiculturalism on its head: Unexpected boundaries and new migration in Singapore. *Journal of International Migration and Integration*, 16(4), 947–963. doi:10.1007/s12134-014-0378-9
- Oudenhoven, J. P. V., Askevis-Leherpeux, F., Hannover, B., Jaarsma, R., & Dardenne, B. (2002). Asymmetrical international attitudes. *European Journal of Social Psychology*, 32(2), 275–289. doi:10.1002/ejsp.89
- Pariser, E. (2011). *The filter bubble: What the Internet is hiding from you*. New York, NY: Penguin.
- Price, V., Cappella, J. N., & Nir, L. (2002). Does disagreement contribute to more deliberative opinion? *Political Communication*, 19(1), 95–112. doi:10.1080/105846002317246506
- Ramsay, J. E., & Pang, J. S. (2017). Anti-immigrant prejudice in rising East Asia: A stereotype content and integrated threat analysis. *Political Psychology*, 38(2), 227–244. doi:10.1111/pops.12312
- Russell, A. M. T., & Fiske, S. T. (2008). It's all relative: Competition and status drive interpersonal perception. *European Journal of Social Psychology*, 38(7), 1193–1201. doi:10.1002/ejsp.539
- Scheufele, D. A., Hardy, B. W., Brossard, D., Waismel-Manor, I. S., & Nisbet, E. (2006). Democracy based on difference: Examining the links between structural heterogeneity, heterogeneity of discussion networks, and democratic citizenship. *Journal of Communication*, 56(4), 728–753. doi:10.1111/j.1460-2466.2006.00317.x
- Schkade, D., Sunstein, C. R., & Hastie, R. (2007). What happened on deliberation day. *California Law Review*, 3, 915–940. Retrieved from https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=12230&context=journal_articles

- Schmid, K., Hewstone, M., Küpper, B., Zick, A., & Wagner, U. (2012). Secondary transfer effects of intergroup contact: A cross-national comparison in Europe. *Social Psychology Quarterly*, 75(1), 28–51. doi:10.1177/0190272511430235
- Sherif, C. W., & Sherif, M. (1969). *Social psychology*. New York, NY: Harper & Row.
- Singapore Department of Statistics. (2020). *Population in Brief 2020*. Retrieved from <https://www.strategygroup.gov.sg/files/media-centre/publications/population-in-brief-2020.pdf>
- Singer, J. B. (2014). User-generated visibility: Secondary gatekeeping in a shared media space. *New Media & Society*, 16(1), 55–73. doi:10.1177/1461444813477833
- Stanciu, A., Cohrs, J. C., Hanke, K., & Gavreliuc, A. (2017). Within-culture variation in the content of stereotypes: Application and development of the stereotype content model in an Eastern European culture. *The Journal of Social Psychology*, 157(5), 611–628. doi:10.1080/00224545.2016.1262812
- Tartakovsky, E., & Walsh, S. D. (2020). Factors affecting the psychological well-being of immigrants: The role of group self-appraisal, social contacts, and perceived ethnic density. *Cultural Diversity and Ethnic Minority Psychology*, 26(4), 592–603. <https://doi.org/10.1037/cdp0000333>
- Turetsky, K. M., & Riddle, T. A. (2018). Porous chambers, echoes of valence and stereotypes: A network analysis of online news coverage interconnectedness following a nationally polarizing race-related event. *Social Psychological and Personality Science*, 9(2), 163–175. doi:10.1177/1948550617733519
- Tzeng, R. (2019). Beyond palatable: White privilege and Western immigrant restaurateurs in postcolonial Taiwan. *International Area Studies Review*, 22(2), 168–185. doi:10.1177/2233865918815569
- Villi, M. (2012). Social curation in audience communities: UDC (user-distributed content) in the networked media ecosystem. *Participations: Journal of Audience & Reception Studies*, 9(2), 614–632. Retrieved from https://tuhat.helsinki.fi/ws/files/32193073/Villi_Participations.pdf
- Yang, P. (2018). Desiring “foreign talent”: Lack and Lacan in anti-immigrant sentiments in Singapore. *Journal of Ethnic and Migration Studies*, 44(6), 1015–1031. doi:10.1080/1369183X.2017.1384157
- Zhang, W. (2016). The silence of the majority: Political talk during election time. In T. H. Tan, A. Mahizhnan, & P. H. Ang (Eds.), *Battle for hearts and minds: New media and elections in Singapore* (pp. 227–245). Singapore: World Scientific. doi:10.1142/9789814713627_0012