

Vol. 73 · No. 3 · July 2014

ISSN 1421-0185

Official Publication of the Swiss Psychological Society

# Swiss Journal of Psychology

# 3/14

[www.verlag-hanshuber.com/SJP](http://www.verlag-hanshuber.com/SJP)

Editors

F. Mast · T. Lecerf · G. Zimmermann

HUBER



# Swiss Journal of Psychology

Volume 73, Issue 3, July 2014

Official Publication of the Swiss Psychological Society

Editor-in-Chief: Fred Mast, Bern

---

## Contents

<b>Original Communications</b>	Steve Binggeli, Franciska Krings, and Sabine Sczesny: Stereotype Content Associated with Immigrant Groups in Switzerland	123
	Monica S. Bachmann, Hansjörg Znoj, and Katja Haemmerli: A Longitudinal Study of Mental Health in Emerging Adults: Is There a Causal Relationship Between Mental Health and the Ability to Satisfy One's Basic Needs?	135
	Robert Schnuerch, Carina Kreitz, Martin Heil, and Kathrin Lange: The Change-Deafness Phenomenon in Harmonic Chords	143
	Regina Jucks, Benjamin Brummernhenrich, Bettina-Maria Becker, and Rainer Bromme: Diagnosis and Repair? How Experts Identify and Respond to a Layperson's Misconceptions in Online Medical Counseling	153
	Nicole Vogler, Nadine Perkinson-Gloor, Serge Brand, Alexander Grob, and Sakari Lemola: Sleep, Aggression, and Psychosocial Adjustment in Male Prisoners	167
<b>Short Research Note</b>	Jan Cieciuch, Eldad Davidov, Michele Vecchione, and Shalom H. Schwartz: A Hierarchical Structure of Basic Human Values in a Third-Order Confirmatory Factor Analysis	177
	Laurent Auzoult and Sandrine Hardy-Massard: Desirability Associated with the Expression of Self-Consciousness in a French Population	183

# Swiss Journal of Psychology

Your article has appeared in a journal published by Hans Huber Publishers.  
This e-offprint is provided exclusively for the personal use of the authors.  
It may not be posted on a personal or institutional website or to an institutional  
or disciplinary repository.

If you wish to post the article to your personal or institutional website or to archive it in an  
institutional or disciplinary repository, please use either a pre-print or a post-print of your  
manuscript in accordance with the publication release for your article and  
our “Online Rights for Journal Articles” (<http://www.verlag-hanshuber.com/informationen>).

HUBER



## Original Communication

# Stereotype Content Associated with Immigrant Groups in Switzerland

Steve Binggeli<sup>1</sup>, Franciska Krings<sup>1</sup>, and Sabine Sczesny<sup>2</sup><sup>1</sup>Faculty of Business and Economics, Department of Organizational Behavior, University of Lausanne, Switzerland, <sup>2</sup>Department of Psychology, University of Bern, Switzerland

**Abstract.** This research examines stereotypes associated with immigrant groups in Switzerland. In line with the stereotype content model, we expected immigrant groups to be perceived differentially on the dimensions of warmth and competence as a function of their national origin. Second, we expected the stereotype content to be predominantly mixed, that is, groups are either perceived as warmer than competent or as colder than competent. Third, we expected stereotype contents to correlate with their sociostructural precursors, namely, competition and status. The results supported our hypotheses: The nine most salient immigrant groups fell into five meaningful clusters, based on their perceived warmth and competence. Most stereotype contents were mixed. Moreover, we found that warmth perceptions were predicted by both competition and status, whereas competence perceptions were predicted by status only. This research emphasizes the importance of considering the diversity of the immigrant population when studying immigrant stereotypes.

**Keywords:** stereotype content, immigrants, Switzerland

The proportion of immigrants in Switzerland (i.e., residents who were born abroad, do not possess the Swiss citizenship, and yet live in the country permanently) has continuously increased during the past thirty years. Today, Switzerland has the second highest proportion of immigrants in Europe (Swiss Federal Statistical Office (SFSO), 2013a). Most immigrants living in Switzerland are from European countries (85.1%), but an increasing number are from countries outside of Europe. Thus, the immigrant population has not only increased in number, but also in cultural diversity. International comparisons suggest that, compared to other nations, the Swiss have a relatively positive attitude toward immigrants (e.g., Gorodzeisky & Semyonov, 2009; Sides & Citrin, 2007). At the same time, several studies conducted in Switzerland demonstrate that stereotypes, prejudice, and discrimination against immigrants exist (e.g., Falomir-Pichastor, Munoz-Rojas, Invernizzi, & Mugny, 2004; Gabarrot, Falomir-Pichastor, & Mugny, 2009; Krings & Olivares, 2007; Sarrasin et al., 2012; Thomsen, Green, & Sidanius, 2008). However, these studies either treated immigrants as one single entity or focused on selected groups. Thus, they have not taken into account immigrants' diversity.

The aim of the present research was to fill this gap by examining the stereotypes associated with the most salient immigrant groups in Switzerland. We built on the stereotype content model (SCM, Cuddy, Fiske, & Glick, 2008; Fiske, Cuddy, Glick, & Xu, 2002), which postulates that warmth and competence are the two fundamental dimensions used to judge social groups. Warmth and competence perceptions are

derived from sociostructural factors, namely, from groups' competition and status. Despite its centrality for understanding stereotypes, this framework has only been used once to study perceptions of immigrant groups in the United States (Lee & Fiske, 2006). This scarcity calls for more systematic research that investigates the stereotypes associated with immigrant groups coming from various countries.

The present research contributes to the literature by offering a comprehensive overview of the stereotype contents associated with the most salient immigrant groups living in Switzerland. This overview is not only relevant for Switzerland, but also for countries that are similar to Switzerland in terms of immigration history and current immigration situation. Furthermore, it demonstrates the validity of the SCM for immigrant groups in a European context, and, at the same time, addresses important questions regarding its basic assumptions. As such, we believe that this research not only sheds light on previous findings, but also provides a basis for developing new research on immigrant stereotypes, their precursors and their consequences.

## The Stereotype Content Model

Warmth (e.g., friendliness, trustworthiness, kindness) and competence (e.g., intelligence, efficacy, skill) are the two fundamental dimensions of social judgments about individuals and social groups (Abele, Cuddy, Judd, & Yzerbyt, 2008). The functional significance of these di-

mensions is grounded in people's interest in determining a group's intentions (positive or negative) toward them, providing the basis of warmth perceptions as well in this group's capacity to pursue its intentions, providing the basis of competence perceptions. Four group stereotypes result from crossing warmth and competence evaluations: two univalent stereotypes, assigned to warm and competent groups (e.g., the ingroup or its close allies) or to cold and incompetent groups (e.g., welfare recipients or poor people), and two ambivalent or mixed stereotypes, assigned to groups that are perceived as warm but incompetent (e.g., housewives) or as cold but competent (e.g., rich people).

The SCM postulates that most groups are targets of mixed stereotypes (Eckes, 2002; Fiske, Xu, Cuddy, & Glick, 1999; Glick & Fiske, 2001; Glick et al., 2000), that is, most groups are perceived as being warmer than competent or more competent than warm. Mixed stereotypes are prevalent because they help to justify the status quo, including inequalities within society (Jost, Kivetz, Rubini, Guermendi, & Mosso, 2005; Kervyn, Yzerbyt, Demoulin, & Judd, 2008). For instance, Durante and colleagues (2013) showed that mixed stereotypes are more prevalent in societies with greater income disparity, suggesting that people in these countries rationalize economic inequality through social judgments. Another way of legitimizing social inequality is to associate societal structure with stereotype content (e.g., Cuddy et al., 2008). Accordingly, competitive groups are judged as less warm than cooperative ones, and high-status groups are perceived as more competent than low-status groups (Caprariello, Cuddy, & Fiske, 2009; Russell & Fiske, 2008).

## Content of Immigrant Stereotypes

Cross-cultural studies suggest that immigrants – as one entity – are a universally stigmatized minority, perceived as lacking both warmth and competence (Durante et al., 2013; Cuddy et al., 2009). However, this univalent negative stereotype does not necessarily correspond to the perceptions that individuals have of specific groups of immigrants. Indeed, Lee and Fiske (2006) demonstrated that the stereotype content of immigrant groups differs as a function of the groups' national origin. Results showed that the most salient immigrant groups in the United States can be regrouped into five clusters that differ with respect to warmth and competence. For example, Canadian and third-generation immigrants made up one cluster that was perceived as warm and competent, Italian and Irish immigrants made up another cluster that was perceived as moderately competent but warm. South American immigrants were perceived as cold and incompetent, Asian immigrants as cold but competent, and Eastern Europe, French, German, Middle Eastern, Russian, and Vietnamese immigrants as cold and moderately

competent. In line with the main assumptions of the SCM, the stereotypes associated with immigrant groups were mostly mixed. Moreover, the stereotype contents were related to their sociostructural precursors (Lee & Fiske, 2006). Thus, the stereotype contents associated with most of the immigrant groups differed significantly from the cold and incompetent stereotype that tends to be associated with immigrants as one group (Eckes, 2002).

In the present research, we sought to extend this research to a European context. Switzerland is an interesting testing ground for examining the stereotypes associated with immigrant groups. In 2011, immigrants made up 22.8% of the population, placing Switzerland among the European countries with the highest proportion of immigrants (SFSO, 2013a). The largest immigrant groups are from Italy (15.9%), Germany (15.2%), Portugal (12.3%), Serbia (6.0%), France (5.5%), Turkey (3.9%), and Spain (3.6%). The remaining immigrants mainly come from other European countries (22.8%), Asia and Oceania (about 6.5%), America (4.2%), and Africa (4.1%). Although previous research has investigated stereotypes of as well as prejudice and discrimination against immigrants in Switzerland, little attention has been given to the diversity within the immigrant population. Raymann (2003) found that the Swiss liked Southern European immigrants more than immigrants from the Balkans. In line with this finding, Krings and Olivares (2007) showed that Kosovo-Albanian immigrant job applicants were more likely to be discriminated against than Spanish immigrant applicants.

Given the lack of research on the way different immigrant groups are perceived, we developed our hypotheses drawing on the SCM. The SCM posits that the way a group is perceived is grounded in the group's level of competition and status. *Group competition* is defined by the degree to which a group is perceived as willing to maximize its possession of desirable resources such as economic, political, and social power. It fuels warmth perceptions. *Group status* refers to the ability of a group to control resources. Thus, status refers to the group's level of education, skills, jobs, power, or wealth. Status drives competence perceptions.

The number of German and French immigrants has strongly increased during the past decade (Liebig, Kohls, & Krause, 2012). Germans and French immigrants have a competitive advantage over other immigrants because they speak one of Switzerland's main official languages (i.e., German or French). Thus, they master the local language perfectly. Moreover, they tend to be highly educated and skilled; accordingly, they have higher employment rates and are more likely to work in higher-status positions than other immigrant groups or even the Swiss (SFSO, 2013a). Hence, they are competitive groups with a high socioeconomic status, leading to heightened competence but reduced warmth perceptions. Immigrants from Southern Europe are generally well-liked in Switzerland (Raymann, 2003) and perceived as being better integrated than other immigrant groups like, for example, immigrants

from the Balkans or Turkey (Wimmer, 2004). Accordingly, we expected Southern European immigrants to be perceived as warm, in particular as warmer than immigrants from the Balkans or from Turkey. Most Southern European immigrants work as craftsmen (artisans) and, therefore, occupy lower-status positions than the Swiss and Western European immigrants (SFSO, 2013a). We thus expected them to be perceived as relatively low in competence. Immigrants from Africa, the Balkans, and Turkey are often found at the bottom of the socioeconomic hierarchy. Of all immigrant groups, they have the highest proportion of people who need financial help from the Swiss government (SFSO, 2013b). Because this may be perceived as depleting important resources, these groups may be perceived particularly negatively. Moreover, of all immigrant groups, members of these groups tend to be the least educated and to occupy mostly low-status jobs (Liebig, Kohls, & Krause, 2012). Hence, we expected them to be perceived as relatively cold and incompetent.

Based on the considerations above, we formulated the following hypotheses.

- Hypothesis 1: Immigrant groups will be perceived differentially with respect to warmth and competence and thus form distinct clusters that are positioned at different locations within the two-dimensional space defined by warmth and competence (H1a). Immigrants from Southern Europe will be perceived as warmer than immigrants from Africa, the Balkans, Turkey, and Western Europe (H1b). Immigrant groups from Western Europe will be perceived as more competent than immigrants from Southern Europe. Immigrants from Western and Southern Europe will be perceived as more competent than immigrants from Africa, the Balkans, and Turkey (H1c).
- Hypothesis 2: The majority (> 50%) of immigrant groups will receive mixed stereotypes at cluster as well as group levels, i.e., they will be evaluated more positively on one stereotype dimension than on the other.
- Hypothesis 3: Warmth perceptions of immigrant groups will be negatively related to perceived competition (H3a), and competence perceptions will be positively related to perceived status (H3b).

The data described below and used in the main study to test the above-mentioned hypotheses were collected in another study that analyzed regional differences in stereotypes associated with highly skilled immigrants from neighboring countries, and their underlying mechanisms (see Binggeli, Krings, & Sczesny, 2014). In the present study, we examined the stereotype contents of the nine most salient immigrant groups living in Switzerland, including immigrants from neighboring countries.

## Pilot Study

The aim of the pilot study was to select the most salient immigrant groups living in Switzerland. The study was conducted in the two main linguistic regions of Switzerland, i.e., the French- and the German-speaking region.

## Method

### Participants

#### French-Speaking Region

Fifty-four undergraduates from the University of Lausanne (36 women, mean age = 21.31,  $SD = 2.41$ ) and 53 nonstudents (32 women, mean age = 39.51,  $SD = 13.82$ ) participated in the study. The majority of the participants were born in Switzerland (77.6%) and all of them had lived in Switzerland for more than five years.

#### German-Speaking Region

Fifty-eight undergraduates from the University of Bern (22 women, mean age = 22.53,  $SD = 2.93$ ) and 54 nonstudents (29 women, mean age = 40.55,  $SD = 20.85$ ) participated in the study. The majority of the participants (89%) were born in Switzerland. All participants had lived in Switzerland for more than five years.

### Procedure

Participants were approached in university cafeterias (undergraduates) or in the cafeterias of large shopping centers (nonstudents). They were asked to fill out a short questionnaire (in French for French speakers, and in German for German speakers) on social groups in Switzerland. Instructions on the questionnaire were modeled after Lee and Fiske (2006) and read as follows: "Please, list groups of immigrants that you personally think are the main immigrant groups living in Switzerland (according to their country of origin)." In addition, participants answered some demographic questions on a separate page.

## Results

### French-Speaking Region

Participants mentioned 81 immigrant groups in total<sup>1</sup>. Certain mentions were merged into a single group to represent meaningful regions. For example, responses such as "immigrants from Ex-Yugoslavia" and "immigrants from Kosovo" were merged into the group "immigrants from the

<sup>1</sup> Preliminary analyses showed that, in the two regions, there were no statistical differences between undergraduates and nonstudents with respect to the rank order of the immigrant groups that were mentioned most frequently.



Balkans." Other groups were rarely cited but closely associated with a region that was frequently mentioned. For example, immigrants from Macedonia were rarely cited and therefore merged with the group of immigrants from the Balkans. Groups cited by more than 20% of the participants were considered salient, namely immigrants from Italy (87.9%), Portugal (87.9%), the Balkans (86%), Spain (65.4%), France (40%), African countries (38.3%), Germany (29.9%), Eastern European countries (27.1%), and Turkey (25.2%).

## German-Speaking Region

Participants mentioned 87 immigrant groups<sup>1</sup>. After applying the same analytical procedure as described above, the most salient groups were immigrants from the Balkans (85.3%), Italy (84.4%), Germany (77.9%), Turkey (49.3%), African countries (47.9%), Spain (44.2%), Portugal (37%), Eastern European countries (33.1%), France (27.7%), and Tamils from India and Sri Lanka (21.5%).

## Discussion

The same nine immigrant groups emerged as most salient in the two linguistic regions. Differences in counts between the two regions were negligible. There was one exception: Tamils from India and Sri Lanka were only salient in the German-speaking region. This is probably due to the specific area in which the study was conducted: Around the university, there are several small restaurants run by people from India and Sri Lanka.

Because the salient immigrant groups were almost identical in the two linguistic regions, we selected the following nine groups for our main study, for both regions: immigrants from Italy, the Balkans, Portugal, Spain, Germany, Africa, Turkey, France, and Eastern Europe. Interestingly, these groups were also the largest immigrant groups in Switzerland. Eastern European immigrants emerged as salient despite the fact that their absolute number is relatively small compared to the other salient immigrant groups. Their perceived salience might be explained by recurrent media discussions about enlargement of the European Union, namely of increasing the number of member states from the East.

## Main Study

### Method

#### Participants

Data were collected at the same universities as for the pre-test, with one being located into the French-speaking (179

participants; 95 women; mean age = 20.16,  $SD = 1.79$ ; 82% Swiss) and one being located in the German-speaking (176 participants; 109 women; mean age = 22.36,  $SD = 4.37$ ; 85% Swiss) region of Switzerland (see also Binggeli, Krings, & Sczesny, 2014, for more details).

## Procedure and Materials

Perceptions of warmth, competence, competition, and status were measured using French and German versions of the questionnaire developed by Cuddy et al. (2009). Participants rated 13 groups, namely, nine immigrant groups (see pilot study) and four anchor groups that are typical representatives of the four quadrants within the SCM: Rich people (high competence/low warmth), poor people (low competence/low warmth), housewives (low competence, high warmth), and Swiss people (ingroup; high competence/high warmth) (e.g., see Fiske et al., 2002). Anchor groups and immigrant groups were presented separately in the questionnaire and their order was randomized. Responses were given on a 5-point Likert scale (1 = *not at all*, 5 = *extremely*). Cronbach's  $\alpha$  for warmth ( $\alpha = .86$  in the Swiss German region;  $\alpha = .84$  in the Swiss French region), competence ( $\alpha = .75$ ;  $\alpha = .79$ ), competition ( $\alpha = .76$ ;  $\alpha = .76$ ), and status items ( $\alpha = .83$ ;  $\alpha = .87$ ) were satisfactory.

## Results

### Warmth and competence stereotypes of immigrants

To test our hypotheses, we followed the methodology used by Lee and Fiske (2006). To test our first hypothesis, we conducted a hierarchical cluster analysis using the warmth and competence scores for each group, applying the Ward's method. The first break in the coefficient of the agglomeration schedule revealed a six-cluster solution that was further supported by an examination of the dendrogram. Following recommendations by Milligan and Cooper (1985), we used Calinski and Harabasz's (1974) method to determine the number of clusters. The Calinski-Harabasz pseudo  $F$  statistic ( $CH$ ) is defined by the equation,

$$CH(k) = \frac{\text{trace}(B)/(k-1)}{\text{trace}(W)/(n-k)}$$

where  $B$  is the between-cluster sum of squared deviations and cross-products matrix,  $W$  the within-cluster sum of squares and cross-products matrix,  $k$  the number of clusters, and  $n$  the number of objects. The results of this analysis, based on the value that maximizes the variance ratio criteria, showed that the six-cluster solution,  $CH_{(6)} = 54.04$ , was superior to solutions ranging from two to eight clusters, whereby  $CH_{(2-8)}$  varied between 31.98 to 52.61.

Then, a series of k-means analyses were performed,

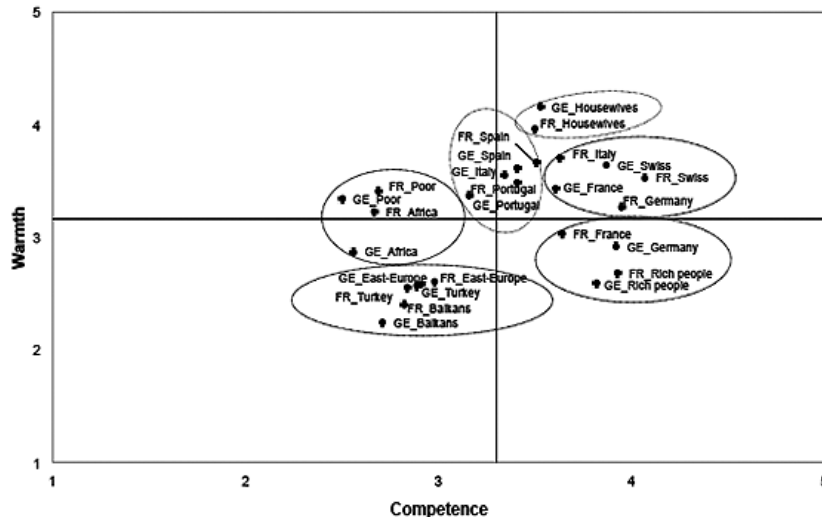


Figure 1. Six-cluster solution for stereotype content (warmth and competence) associated with the most salient immigrant groups and four anchor groups, in the French-speaking and German-speaking regions of Switzerland. Circles with dotted lines represent the clusters. Horizontal and vertical lines represent the means of the competence and warmth scores. FR = French-speaking region. GE = German-speaking region.

specifying solutions with up to eight clusters. The Calinski and Harabasz method was also used to determine the number of clusters based on the results of these k-means analyses. Again, a six-cluster solution,  $CH_{(6)} = 50.87$ , emerged as more adequate than the other solutions ranging from two to eight clusters, for which  $CH_{(2-8)}$  varied between 31.98 to 43.12. We hence selected the six-cluster solution.

To test Hypothesis 1a, we performed a 2 (Stereotype Dimension: warmth, competence)  $\times$  6 (Clusters) mixed model analysis of variance (ANOVA), with stereotype dimensions as a within-subjects variable and clusters as a between-subjects variable. This analysis revealed no main effect of stereotype dimensions,  $F(1, 20) = 2.33$ ,  $p = .142$ , but a main effect of clusters,  $F(5, 20) = 63.82$ ,  $p < .001$ , indicating that the clusters differed significantly. The clusters by stereotype dimensions interaction was significant,  $F(5, 20) = 34.64$ ,  $p < .001$ . Follow-up univariate analyses showed simple effects of clusters on both warmth,  $F(5, 20) = 65.81$ ,  $p < .001$ , and competence,  $F(5, 20) = 42.10$ ,  $p < .001$ , indicating that warmth and competence ratings differed between the six clusters, and supporting Hypothesis 1a.

In the next step, we compared warmth and competence means between clusters with independent *t*-tests to test Hypotheses 1b and 1c. The results are shown in Table 1 (first two columns). In the following, the clusters are briefly described, ordered on the basis of their competence scores, from lowest to highest.

The first cluster comprises poor people and immigrants from Africa. Its competence score was below those of the remaining clusters, all  $t_s \leq -4.30$ , all  $p_s \leq .002$ . Its warmth score was higher than those of Clusters 2 and 6, both  $t_s = 2.57$ , both  $p_s \geq .042$ , similar to that of Cluster 5,  $t(7) = -2.25$ ,  $p = .059$ , and lower than those of Clusters 3 and 4, both  $t_s \leq -2.70$ , both  $p_s \leq .03$ . Based on these between-cluster comparisons, groups in this first cluster can be described as very low in competence and moderate in warmth.

Immigrants from the Balkans, Eastern Europe, and Turkey constitute the second cluster. The competence score of

Cluster 2 was higher than that of Cluster 1,  $t(8) = 4.30$ ,  $p = .002$ , and lower than those of all remaining clusters, all  $t_s \leq -7.58$ , all  $p_s < .001$ . Its warmth score was below those of all other clusters, all  $t_s \leq -2.94$ , all  $p_s \leq .018$ . Taken together, groups of this cluster were perceived as low in competence and very low in warmth.

The third cluster is comprised of immigrants from Portugal and Spain (as well as immigrants from Italy, but only for German-speaking participants). The competence score of this cluster was higher than those of Clusters 1 and 2, both  $t_s \geq 7.58$ , both  $p_s < .001$ , similar to that of Cluster 4,  $t(5) = -1.49$ ,  $p = .195$ , and lower than those of Clusters 5 and 6, both  $t_s \leq -4.32$ , both  $p_s \leq .002$ . Its warmth score was higher than those of Clusters 1, 2, and 6, all  $t_s \leq 2.70$ , all  $p_s \leq .030$ , similar to that of Cluster 5,  $t(8) = 0.21$ ,  $p = .833$ , and lower than that of Cluster 4,  $t(5) = -5.29$ ,  $p = .003$ . In sum, the groups in this cluster were considered warm and moderately competent.

Housewives represent the fourth cluster. Their competence score was higher than those of Clusters 1 and 2, both  $t_s \geq 9.53$ , both  $p_s < .001$ , similar to those of Clusters 3 and 5,  $t(5) \geq -2.10$ ,  $p \geq .089$ , and lower than that of Cluster 6,  $t(4) = -3.05$ ,  $p = .038$ . The warmth score of Cluster 4 was the highest of all clusters, all  $t_s \geq 4.01$ , all  $p_s \leq .010$ . Altogether, housewives were perceived as particularly warm and moderately competent.

Cluster 5 comprises French immigrants as perceived by German-speaking participants, Italian and German immigrants as perceived by the French-speaking participants, and the Swiss (the ingroup). Its competence score was higher than those of Clusters 1, 2, and 3, all  $t_s \geq 4.32$ , all  $p_s \leq .002$ , and similar to those of Clusters 4 and 6, both  $t_s \geq -2.10$ ,  $p \geq .089$ . Its warmth score was higher than those of Clusters 2 and 6, both  $t_s \geq 5.73$ , both  $p_s < .001$ , similar to those of Clusters 1 and 3, both  $t_s \geq -2.24$ , both  $p_s \geq .059$ , and lower than that of Cluster 4,  $t(5) = -4.01$ ,  $p = .010$ . In sum, groups in this cluster were perceived as competent and warm.



Table 1  
 Mean scores and differences in perceived warmth and competence at group and cluster levels

	Cluster level		Group level				<i>t</i>	
	Warmth	Competence	Warmth		Competence			
	<i>M</i>	<i>M</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<i>Cluster 1</i>								
FR_Poor people	3.21 <sub>c</sub>	>	2.61 <sub>c</sub>	3.41	0.76	2.69	0.77	13.98*
FR_Immigrants from Africa				3.22	0.82	2.67	0.68	9.95*
GE_Poor people				3.34	0.70	2.50	0.71	16.39*
GE_Immigrants from Africa				2.87	0.85	2.56	0.68	6.15*
<i>Cluster 2</i>								
FR_Immigrants from the Balkans	2.48 <sub>c</sub>	<	2.86 <sub>d</sub>	2.39	0.78	2.82	0.64	-8.84*
FR_Immigrants from Eastern Europe				2.60	0.73	2.98	0.67	-7.63*
FR_Immigrants from Turkey				2.55	0.75	2.84	0.62	-5.74*
GE_Immigrants from the Balkans				2.22	0.81	2.71	0.65	-10.73*
GE_Immigrants from Eastern Europe				2.58	0.78	2.91	0.68	-7.92*
GE_Immigrants from Turkey				2.56	0.77	2.89	0.65	-7.35*
<i>Cluster 3</i>								
FR_Immigrants from Portugal	3.53 <sub>b</sub>	>	3.37 <sub>c</sub>	3.48	0.67	3.41	0.62	1.77
FR_Immigrants from Spain				3.66	0.61	3.51	0.53	3.45*
GE_Immigrants from Portugal				3.37	0.59	3.16	0.54	5.75*
GE_Immigrants from Spain				3.55	0.58	3.34	0.51	6.04*
GE_Immigrants from Italy				3.61	0.60	3.41	0.50	4.99*
<i>Cluster 4</i>								
FR_Housewives	4.06 <sub>a</sub>	=	3.51 <sub>b,c</sub>	3.96	0.67	3.50	0.63	8.96*
GE_Housewives				4.16	0.50	3.53	0.69	11.42*
<i>Cluster 5</i>								
FR_Swiss				3.53	0.73	4.07	0.51	-10.49*
FR_Immigrants from Germany	3.51 <sub>b,c</sub>	=	3.82 <sub>a,b</sub>	3.27	0.63	3.95	0.59	-12.95*
FR_Immigrants from Italy				3.70	0.64	3.63	0.54	1.68
GE_Swiss				3.64	0.59	3.87	0.51	-6.38*
GE_Immigrants from France				3.43	0.55	3.61	0.51	-4.49*
<i>Cluster 6</i>								
FR_Rich people	2.80 <sub>d</sub>	<	3.83 <sub>a</sub>	2.68	0.83	3.93	0.62	-19.95*
FR_Immigrants from France				3.02	0.79	3.64	0.66	-12.05*
GE_Rich people				2.59	0.60	3.82	0.56	-21.65*
GE_Immigrants from Germany				2.92	0.73	3.92	0.59	-18.23*

Note. FR = French-speaking region, GE = German-speaking region. Cluster level: Clusters are represented by their numbers, decrypting position, and groups. Within each row, means differ at  $p < .05$  if < or >. Within each column, means that do not share subscripts differ at  $p < .05$ . Group level:  $df = 178$  in the French-speaking part and 175 in the German-speaking part. \* $p < .05$ .

Finally, the sixth cluster includes rich people, French immigrants as perceived by French-speaking participants, and German immigrants as perceived by German-speaking participants. Groups in this cluster obtained a higher competence score than those in Clusters 1, 2, 3, and 4, all  $t_s \geq 3.05$ , all  $p_s \leq .038$ , and similar to those in Cluster 5,  $t(7) = 0.01$ ,  $p = .987$ . The warmth score was lower than those of Clusters 1, 3, 4, and 5, all  $t_s \leq 2.57$ , all  $p_s \leq .042$ , and higher than that of Cluster 2,  $t(8) = 2.94$ ,  $p = .018$ . Taken together, the groups in this cluster were perceived as low in warmth and high in competence.

In sum, our analyses showed that, at the cluster level, immigrants from Southern European countries were perceived as warmer than immigrants from Africa, the Balkans, Eastern European countries, Turkey, France (in the French-speaking region), and Germany (in the German-speaking region), supporting Hypothesis 1b. Furthermore, immigrants from Western Europe (i.e., Germany and France) were perceived as more competent than those from Southern Europe (i.e., Italy, Portugal, and Spain) as well as those from Africa, the Balkans, Eastern Europe, and Turkey. Finally, immigrants from Southern Europe were per-

ceived as more competent than those from Africa, the Balkans, Eastern Europe, and Turkey. Hence, Hypothesis 1c was supported.

### Mixed Immigrant Stereotypes

The mixed hypothesis (Hypothesis 2) was tested at both the group and the cluster level following Lee and Fiske's (2006) procedure. At the group level (Table 1), the results of a series of paired sample *t*-tests supported the hypothesis: Competence and warmth ratings differed for all groups, except for immigrants from Italy and Portugal in the French-speaking region. For comparisons at the cluster level, Lee and Fiske (2006, p. 761) specified that "clusters received ambivalent stereotypes if they (1) differed in competence and warmth and (2) were higher on their high dimension than groups low on that dimension and lower on their low dimension than groups high on that dimension." To test the first requirement, we conducted a series of paired sample *t*-tests. These tests showed that warmth and competence scores differed for Clusters 1, 2, and 3, all *t*s  $\geq 2.94$ , all *p*s  $\leq .018$ , but differences were not significant for Clusters 4 and 5, both *t*s  $\leq 6.87$ , *p*s  $\geq .08$ . To test the second requirement, we examined the results of the independent sample *t*-tests reported in the previous section (see subscripts in Table 1). Clusters that scored lower on warmth than competence (i.e., Clusters 2, 5, 6) were perceived as warmer than Cluster 4 (the one with the highest score on warmth) and more competent than Cluster 1 (the one with the lowest score on competence). Furthermore, clusters that scored higher on warmth than competence (i.e., Clusters 1, 3, 4) were perceived as warmer than Cluster 2 (the one with the lowest score on warmth) and less competent than Cluster 6 (the one with the highest score on competence). Taken together, results support Hypothesis 2.

### Sociostructural Underpinnings of Immigrant Stereotypes

To test the relationships between perceptions of warmth and competition and between perceptions of competence and status (see Hypotheses 3a and 3b), Lee and Fiske (2006) calculated individual-level correlations by "computing correlations for each participant, transforming them to Fisher's *Z* scores, averaging them, and transforming back to correlations" (p. 762). They then averaged the means of warmth, competence, competition, and status across participants for every group and calculated group-level correlations based on these aggregated means. These procedures were probably used to deal with the difficulty of estimating correlations in repeated measures designs. However, they are based on aggregated scores and, therefore, do not fully take into account the nonindependence of the data.

We tried to address these limitations, using a different analytical approach. To formally test our hypotheses, we

used panel regression models to predict warmth and competence with competition and status, respectively. To determine which estimators had to be used, we conducted the following tests. First, we conducted the Breusch and Pagan Lagrangian multiplier test (Breusch & Pagan, 1980) to determine if ordinary least squares (OLS) or random effects had to be estimated. We then used a robust test of overidentifying restrictions for panel data (Schaffer & Stillman, 2010) to determine if random or fixed effects were more appropriate for estimating the models. For all analyses, robust standard errors were estimated by clustering the data at the individual level.

The regression model used to test Hypothesis 3a included competition as a predictor of warmth, as well as status and competence as control variables. To test Hypothesis 3b, status was used as a predictor of competence whereas competition and warmth were used as control variables. The control variables were included in both models to obtain purer estimates of the hypothesized effects.

The Breusch and Pagan Lagrangian multiplier test, using competition, status, and competence as predictors of warmth, indicated that random effects were more appropriate than OLS,  $\chi^2(1) = 276.76$ ,  $p < .001$ . Then, the robust test of overidentifying restrictions showed that fixed effects had to be estimated,  $\chi^2(3) = 213.71$ ,  $p < .001$ . The results of the regression predicting warmth supported Hypothesis 3a: Competition was negatively related to warmth, after we controlled for status and competence (see left columns of Table 2). Further, status was negatively related, and competence was positively related, to warmth.

The Breusch and Pagan Lagrangian multiplier test showed that random effects were more appropriate than OLS to test the effect of status on competence,  $\chi^2(1) = 1068.36$ ,  $p < .001$ . The robust test of overidentifying restrictions indicated that fixed effects had to be estimated,  $\chi^2(3) = 120.66$ ,  $p < .001$ . The regression results predicting competence (see right columns of Table 2) supported Hypothesis 3b: Status was positively related to competence, after we controlled for competition and warmth. Finally, warmth was positively related to competence.

## Discussion

The aim of this research was to examine the stereotypes associated with the most salient immigrant groups living in Switzerland. We found that perceptions of immigrant groups' warmth and competence differed remarkably as a function of their competition and status. As expected, most of the stereotype contents were mixed, that is, most immigrant groups were either perceived as warmer than competent or as more competent than warm. These findings extend previous research conducted in the United States to a European context. They further underline the necessity to take into account the mixity of immigrant stereotype contents (instead of assuming univalence) as well as the differ-

Table 2  
*Competition and status as predictors of warmth and competence perceptions*

Variable	Warmth				Variable	Competence			
	<i>B</i>	<i>Robust SE</i>	<i>t</i>	<i>p</i>		<i>B</i>	<i>Robust SE</i>	<i>t</i>	<i>p</i>
Competition	-0.32	.017	-18.17	< .001	Status	0.48	.012	38.02	< .001
Status	-0.11	.018	-6.08	< .001	Competition	0.00	.013	0.14	.891
Competence	0.52	.032	16.43	< .001	Warmth	0.23	.016	14.49	< .001

*Note.* For warmth,  $R^2$  within = .2769,  $F(3, 350) = 231.96$ ,  $p < .001$ . For competence,  $R^2$  within = .5918,  $F(3, 350) = 765.31$ ,  $p < .001$ . Fixed effects are estimated and unstandardized betas are shown.

ences between different immigrant groups (instead of treating immigrants as one entity). This is an important insight, given the fact that most research on immigrants has focused on univalent negative prejudice against immigrants as an entity (Esses, Dovidio, Jackson, & Armstrong, 2001; Pettigrew & Meertens, 1995; Stephan, Ybarra, & Bachman, 1999).

## Immigrant Stereotype Content

Immigrant groups could be meaningfully distinguished along five clusters. The most negative stereotypes (low warmth/low competence) were assigned to immigrants from the Balkans, Eastern Europe and Turkey. Their particularly low competence scores probably reflect their low socioeconomic status in Switzerland (Liebig et al., 2012). Interestingly, two of these three immigrant groups are predominantly Muslims (i.e., immigrants from the Balkans and Turkey), a highly stigmatized religious group in Europe (Asbrock, 2010; Strabac & Listhaug, 2008). This observation suggests that immigrant groups perceived as low in warmth and competence are associated with multiple stigmata.

Immigrants from Africa were associated with poor people<sup>2</sup> and stereotyped as moderately warm but incompetent. These findings differ from those of Lee and Fiske (2006), who found that African immigrants and poor people were categorized as the “least competent and clearly low-warmth cluster” (p. 759). This perception also differs from the high warmth/high competence stereotype of African immigrants in Belgium (Cuddy et al., 2009). Differences may be due to the term “immigrants” which refers to people of low status (Duckitt & Sibley, 2007). In line with this interpretation, in the United States, immigrants from Africa were perceived as low in warmth and competence, whereas African Americans received moderate scores on both di-

mensions. Taken together, it seems that African immigrants are more positively perceived in Europe than in the United States. This difference may be due to historical factors such as the American history of slavery and racial segregation.

Immigrants from Portugal, Spain, and Italy (the latter in the German-speaking region) were perceived as warm and moderately competent. These groups have lived in Switzerland for several generations. Third-generation immigrants are perceived as being closer to the ingroup than first-generation immigrants (Lee & Fiske, 2006), suggesting that, over the course of generations, locals tend to dissociate immigrants from their country of origin and perceive them more and more as allies. In line with this observation, as well as previous research on Swiss attitudes toward these groups (Raymann, 2003), their scores on warmth were particularly high. Nevertheless, Portuguese, Spanish, and Italian immigrants (the latter in the German-speaking region) were perceived as moderately competent; they also did not fall into the same cluster as the ingroup and hence were not perceived as close allies (yet). This is probably due to their relatively low socioeconomic status in Switzerland<sup>3</sup>.

Finally, immigrants from France and Germany were special because stereotype content for these groups differed at the cluster level between linguistic regions. French immigrants in the French-speaking region and German immigrants in the German-speaking region were both associated with rich people, that is, a prototypical low warmth/high competence group. Furthermore, French immigrants in the German-speaking region and German immigrants in the French-speaking region were closely associated with the ingroup, that is, a prototypical high warmth/high competence group. Binggeli et al. (2014) examined these regional differences in detail, based on the idea that French and German immigrants are highly relevant social groups because they are similar to the ingroup on dimensions that make them more likely to take over desirable resources; as a con-

2 Interestingly, in the current study poor people and housewives were not perceived as low in warmth and competence and high in warmth but low in competence, respectively. The stereotype associated with the poor found in our study is closer to the one observed in Belgium (Cuddy et al., 2009), suggesting that poor people may not be universally perceived as a low competence/low warmth group. Furthermore, the stereotype ascribed to housewives in our study is closer to the high warmth and high competence stereotype observed in Study 1 by Cuddy et al. (2007), suggesting that the traditional perception of housewives as being low in competence may be changing.

3 Immigrants from Italy fell into the same cluster as the ingroup in the French-speaking region only. However, this apparent difference in stereotype content between the two linguistic regions could not be confirmed when applying more rigorous statistical tests (see Binggeli et al., 2014).

sequence, they are more likely to be perceived as highly competitive (Esses, Jackson, & Armstrong, 1998). Indeed, regional differences in warmth stereotypes were mediated by the perceived competition of these two immigrant groups (Binggeli et al., 2014).

In support of the societal structure assumptions of the SCM, we found that status predicted competence and (lack of) competition predicted warmth. However, when controlling for competition and competence, negative relationships between status and warmth emerged. System justification motives may explain these relationships (Jost & Banaji, 1994). More specifically, immigrants who have a high status, independently of their competition or competence, might be perceived as breaking the social order. Indeed, a social group might appear suspicious if it possesses many resources (i.e., has a high status), but does not have the skills and competence that are usually needed to obtain and sustain these resources. For example, people may quickly conclude that these immigrants are involved in illegal activities. As a consequence, the immigrants' high status would be perceived as illegitimate. And to restore the status quo, they would be denigrated on warmth.

In this study, warmth and competence were positively related. Both positive and negative relationships between the two dimensions have been observed (e.g., Brambilla, Sacchi, Castellini, & Riva, 2010; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Kervyn et al., 2008; Rosenberg, Nelson, & Vivekananthan, 1968; Yzerbyt, Kervyn, & Judd, 2008), suggesting that their relationship is contextually malleable. As Durante and colleagues (2013, p. 8) note: "Warmth and competence relate to each other in different ways, in different societies." In their research, and in line with our findings, they found positive correlations between warmth and competence in three out of four samples stemming from three different regions in Switzerland. This suggests that, in some countries, there might be a kind of halo effect when judging social groups, such that people tend to believe that competent groups are also warm and vice versa.

## Limitations and Future Directions for Research

This study has limitations. It is possible that the immigrant groups mentioned in the pilot study were associated with additional, specific characteristics. For example, to generate groups, participants might have thought of the most liked and the most disliked immigrant groups in Switzerland. If this was the case, it may at least partially explain why warmth and competence were positively related in this study. Furthermore, some unexpected but significant relationships between the four SCM variables (i.e., between status and warmth) were observed in this study. This may be partially due to the cross-sectional nature of the study. However, it also indicates that relationships between socio-

structural dimensions and stereotype contents as well as between warmth and competence, are more malleable than assumed in the original SCM model. Future research should therefore more closely investigate the conditions under which such relationships emerge.

This study may give rise to new research questions. We focused on the stereotype dimensions of the SCM, but the model also includes assumptions concerning affects and behaviors (Cuddy et al., 2007). More specifically, the model predicts that each combination of high versus low warmth and competence judgments elicits specific types of emotions and behaviors. Therefore, the present results can be used to develop hypotheses concerning the way certain immigrant groups are treated. For example, immigrant groups perceived as lacking both competence and warmth (e.g., immigrants from the Balkans in Switzerland) should be more likely targets of blatant discrimination than immigrant groups with more mixed stereotypes (e.g., high warmth/low competence, such as Italian immigrants in Switzerland). Furthermore, immigrant groups perceived as highly competent but lacking warmth may be targeted by more subtle, interpersonal discrimination. Indeed, German and French immigrant employees, i.e., a group perceived as high in competence but low in warmth, experience more subtle incivilities at work than any other immigrant group in Switzerland (Krings, Johnston, Binggeli, & Maggiori, in press).

## Conclusion

The stereotypes of immigrant groups in Switzerland differ remarkably on warmth and competence as a function of immigrants' national origin. Most immigrant groups are not perceived uniformly negatively (or positively), but are associated with a combination of positive and negative characteristics. The stereotypes reflect each immigrant group's specific position within the societal structure, so that more competitive groups are perceived as colder and those with a higher socioeconomic status as more competent. Considering these meaningful differences in perception between immigrant groups can improve our understanding of the specific difficulties that each group faces.

## Acknowledgments

This research was supported by a grant from the Swiss National Science Foundation (100014-122644) awarded to Franciska Krings. The authors would like to thank Jörg Dietz and Mikki Hebl for their valuable comments on this work.



## References

- Abele, A.E., Cuddy, A.J.C., Judd, C.M., & Yzerbyt, V.Y. (2008). Fundamental dimensions of social judgment. *European Journal of Social Psychology*, 38, 1063–1065. doi 10.1002/ejsp.574
- Asbrock, F. (2010). Stereotypes of social groups in Germany in terms of warmth and competence. *Social Psychology*, 41, 76–81. doi 10.1027/1864-9335/a000011
- Binggeli, S., Krings, F., & Sczesny, S. (2014). Regional differences in immigrant stereotypes: The role of competition. *Social Psychology*, 45, 62–70. doi 10.1027/1864-9335/a000160
- Brambilla, M., Sacchi, S., Castellini, F., & Riva, P. (2010). The effects of status on perceived warmth and competence: Malleability of the relationship between status and stereotype content. *Social Psychology*, 41, 82–87. doi 10.1027/1864-9335/a000012
- Breusch, T.S., & Pagan, A.R. (1980). The Lagrange multiplier test and its applications to model-specification in econometrics. *The Review of Economic Studies*, 47, 239–253. doi 10.2307/2297111
- Calinski, R.B., & Harabasz, J. (1974). A dendrite method for cluster analysis. *Communications in Statistics*, 31, 1–27. doi 10.1080/03610927408827101
- 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, 147–155. doi 10.1177/1368430208101053
- 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, 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 M.P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 40, p. 61–149). San Diego, CA: Elsevier.
- Cuddy, A.J.C., Fiske, S.T., Kwan, V.S.Y., Glick, P., Demoulin, S., Leyens, J.P., ... Ziegler, R. (2009). Stereotype content model across cultures: Toward universal similarities and some differences. *British Journal of Social Psychology*, 48, 1–33. doi 10.1348/014466608X314935
- Duckitt, J., & Sibley, C.G. (2007). Right wing authoritarianism, social dominance orientation and the dimensions of generalized prejudice. *European Journal of Personality*, 21, 113–130. doi 10.1002/per.614
- Durante, F., Fiske, S.T., Kervyn, N., Cuddy, A.J.C., Akande, A., 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, 726–746.
- Eckes, T. (2002). Paternalistic and envious gender stereotypes: Testing predictions from the stereotype content model. *Sex Roles*, 47, 99–114. doi 10.1023/A:1021020920715
- 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, 389–412. doi 10.1111/0022-4537.00220
- Esses, V.M., Jackson, L.M., & Armstrong, T.L. (1998). Intergroup competition and attitudes toward immigrants and immigration: An instrumental model of group conflict. *Journal of Social Issues*, 54, 699–724. doi 10.1111/0022-4537.911998091
- Falomir-Pichastor, J.M., Munoz-Rojas, D., Invernizzi, F., & Mugny, G. (2004). Perceived in-group threat as a factor moderating the influence of in-group norms on discrimination against foreigners. *European Journal of Social Psychology*, 34, 135–153. doi 10.1002/ejsp.189
- 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, 878–902. doi 10.1037/0022-3514.82.6.878
- Fiske, S.T., Xu, J., Cuddy, A.C., & Glick, P. (1999). (Dis)respecting versus (dis)liking: Status and interdependence predict ambivalent stereotypes of competence and warmth. *Journal of Social Issues*, 55, 473–489. doi 10.1111/0022-4537.00128
- Gabarrot, F., Falomir-Pichastor, J.M., & Mugny, G. (2009). Being similar versus being equal: Intergroup similarity moderates the influence of in-group norms on discrimination and prejudice. *British Journal of Social Psychology*, 48, 253–273. doi 10.1348/014466608X342943
- Glick, P., & Fiske, S.T. (2001). Ambivalent sexism. In M.P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 33, pp. 115–188). San Diego, CA: Academic Press.
- Glick, P., Fiske, S.T., Mladinic, A., Saiz, J.L., Abrams, D., Masser, B., ... López, W.L. (2000). Beyond prejudice as simple antipathy: Hostile and benevolent sexism across cultures. *Journal of Personality and Social Psychology*, 79, 763–775. doi 10.1037/0022-3514.79.5.763
- Gorodzeisky, A., & Semyonov, M. (2009). Terms of exclusion: Public views toward admission and allocation of rights to immigrants in European countries. *Ethnic and Racial Studies*, 32, 401–423. doi 10.1080/01419870802245851
- Jost, J.T., & Banaji, M.R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology*, 33, 1–27. doi 10.1111/j.2044-8309.1994.tb01008.x
- Jost, J.T., Kivetz, Y., Rubini, M., Guermendi, G., & Mosso, C. (2005). System-justifying functions of complementary regional and ethnic stereotypes: Cross-national evidence. *Social Justice Research*, 18, 305–333. doi 10.1007/s11211-005-6827-z
- Judd, C.M., James-Hawkins, L., Yzerbyt, V., & Kashima, Y. (2005). Fundamental dimensions of social judgment: Understanding the relations between judgments of competence and warmth. *Journal of Personality and Social Psychology*, 89, 899–913. doi 10.1037/0022-3514.89.6.899
- Kervyn, N., Yzerbyt, V.Y., Demoulin, S., & Judd, C.M. (2008). Competence and warmth in context: The compensatory nature of stereotypic views of national groups. *European Journal of Social Psychology*, 38, 1175–1183. doi 10.1002/ejsp.526
- Krings, F., Johnston, C., Binggeli, S., & Maggiori, C. (in press). Selective incivility: Immigrant groups experience subtle workplace discrimination at different rates. *Cultural Diversity and Ethnic Minority Psychology*.
- Krings, F., & Olivares, J. (2007). At the doorstep to employment: Discrimination against immigrants as a function of applicant ethnicity, job type, and raters' prejudice. *International Journal of Psychology*, 42, 406–417. doi 10.1080/00207590701251721
- Lee, T.L., & Fiske, S.T. (2006). Not an outgroup, not yet an in-group: Immigrants in the stereotype content model. *Internation-*

- tional Journal of Intercultural Relations*, 30, 751–768. doi 10.1016/j.ijintrel.2006.06.005
- Liebig, T., Kohis, S., & Krause, K. (2012). *The labor market integration of immigrants and their children in Switzerland* (OECD Social, Employment and Migration Working Papers No. 128, Directorate for Employment, Labor and Social Affairs). Paris, France: OECD Publishing.
- Milligan, G. W., & Cooper, M. C. (1985). An examination of procedures for determining the number of clusters in a data set. *Psychometrika*, 50, 159–179. doi 10.1007/bf02294245
- Pettigrew, T. F., & Meertens, R. W. (1995). Subtle and blatant prejudice in Western Europe. *European Journal of Social Psychology*, 25, 57–75. doi 10.1002/ejsp.2420250106
- Raymann, U. (2003). *Meinungen und Einstellungen gegenüber AusländerInnen in der Schweiz* [Opinions and attitudes toward foreigners in Switzerland]. Zurich, Switzerland: GfS-Forschungsinstitut.
- Rosenberg, S., Nelson, C., & Vivekananthan, P. S. (1968). A multidimensional approach to structure of personality impressions. *Journal of Personality and Social Psychology*, 9, 283–294. doi 10.1037/h0026086
- Russell, A. M. T., & Fiske, S. T. (2008). It's all relative: Competition and status drive interpersonal perception. *European Journal of Social Psychology*, 38, 1193–1201. doi 10.1002/ejsp.539
- Sarrasin, O., Green, E. G. T., Fasel, N., Christ, O., Staerklé, C., & Clémance, A. (2012). Opposition to anti-racism laws across Swiss municipalities: A multilevel analysis. *Political Psychology*, 33, 651–681. doi 10.1111/j.1467-9221.2012.00895.x
- Schaffer, M. E., & Stillman, S. (2010). Xtoverid: Stata module to calculate tests of overidentifying restrictions after xtreg, xtivreg, xtivreg2 and xthtaylor. From: <http://ideas.repec.org/c/boc/bo-code/s456779.html>
- Sides, J., & Citrin, J. (2007). European opinion about immigration: The role of identities, interests and information. *British Journal of Political Science*, 37, 477–504. doi 10.1017/S0007123407000257
- Stephan, W. G., Ybarra, O., & Bachman, G. (1999). Prejudice toward immigrants. *Journal of Applied Social Psychology*, 29, 2221–2237. doi 10.1111/j.1559-1816.1999.tb00107.x
- Strabac, Z., & Listhaug, A. (2008). Anti-Muslim prejudice in Europe: A multilevel analysis of survey data from 30 countries. *Social Science Research*, 37, 268–286. doi 10.1016/j.ssresearch.2007.02.004
- Swiss Federal Statistical Office. (2013a). *Migration and integration*. Retrieved from <http://www.bfs.admin.ch/bfs/portal/en/index/themen/01/07.html>
- Swiss Federal Statistical Office. (2013b). *Social assistance*. Retrieved from <http://www.bfs.admin.ch/bfs/portal/fr/index/themen/13/03/03/dos/04.html>
- Thomsen, L., Green, E. G. T., & Sidanius, J. (2008). We will hunt them down: How social dominance orientation and right-wing authoritarianism fuel ethnic persecution of immigrants in fundamentally different ways. *Journal of Experimental Social Psychology*, 44, 1455–1464. doi 10.1016/j.jesp.2008.06.011
- Wimmer, A. (2004). Does ethnicity matter? Everyday group formation in three Swiss immigrant neighborhoods. *Ethnic and Racial Studies*, 27, 1–36. doi 10.1080/0141987032000147922
- Yzerbyt, V. Y., Kervyn, N., & Judd, C. M. (2008). Compensation versus halo: The unique relations between the fundamental dimensions of social judgment. *Personality and Social Psychology Bulletin*, 34, 1110–1123. doi 10.1177/0146167208318602

---

Steve Binggeli

---

Faculty of Business and Economics  
Department of Organizational Behavior  
University of Lausanne  
Quartier Unil Dorigny  
Internef 621  
1015 Lausanne  
Switzerland  
steve.binggeli@unil.ch