The Complexity and Ambivalence of Immigration Attitudes: Ambivalent Stereotypes Predict Conflicting Attitudes Toward Immigration Policies

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Americans' conflicted attitudes toward immigrants and immigration has stymied immigration reform for decades. In this article, we explore the nuanced nature of stereotypes about immigrants and how they relate to ambivalent attitudes toward immigrant groups and the disparate array of immigration policies that affect them. Using item response theory and multiple regression analysis, we identified and related stereotypes of different immigrant groups to group-based and policy attitudes. Results demonstrate that ambivalent stereotypes mapped onto ambivalent group-based and immigration policy attitudes. Specifically, stereotypes that portray groups in positive or sympathetic ways predicted positive attitudes toward the group and more supportive attitudes toward policies that facilitate their immigration to the United States. Conversely, negative qualities predicted negative attitudes toward the same group and support for policies that prevent the group from immigrating. Results are discussed in light of current theory related to stereotype content, complementarity of stereotypes, and broader implications for immigration attitudes and policy.

Keywords: ambivalent stereotypes, immigration attitudes, immigrant stereotypes, immigration policy

Despite perennial calls to reform immigration laws, immigration remains an intractable problem in the United States. Comprehensive immigration reform has been proposed on numerous occasions and in numerous forms since the 1990s, yet efforts to move these laws forward have been stymied. Although much of this deadlock can be attributed to changing attitudes toward immigration following the terrorist attacks on September 11, 2001 (Esses, Dovidio, & Hodson, 2002; Hitlan, Carrillo, Zárate, & Aikman, 2007) and shifting economic realities (Casas & Cabrera, 2011; Esses, Dovidio, Jackson, & Armstrong, 2001; Esses, Jackson, & Armstrong, 1998), the American public's often-conflicted attitudes toward immigrants and immigration may also be a major roadblock. In this article, we explore the nuanced nature of stereotypes about immigrants and how they relate to ambivalent attitudes toward immigrant groups and the disparate array of immigration policies that affect them. In so doing, we hope to shed light on why attitudes about immigration are so complex and often contradictory.

Anti-Immigration Attitudes: Polarized or Ambivalent?

Social scientists have spent decades examining anti-immigration attitudes. In America, research reveals that, although attitudes toward immigration have ebbed and flowed with social, economic, and cultural changes (Espenshade & Hempstead, 1996; Keeter, 2009), attitudes toward immigrants have largely remained negative (Fiske & Lee, 2012). For example, many people believe immigrants are untrustworthy and threatening to economic security and cultural stability (Espenshade, 1996; Esses et al., 2001; McLaren, 2003; Quillian, 1995). When it comes to particular immigrant groups, we find that attitudes toward immigrants vary significantly depending on who the group is and where they come from. Some groups are more often associated with higher status and legal immigration (e.g., Asians), whereas other groups are associated with lower status and illegal or transient immigration (e.g., Latinos; Lee & Fiske, 2006). Stereotypes of immigrants can also be very polarizing. Immigrants from Mexico and other Latin American countries are often perceived as untrustworthy, poor, prone to criminal behavior, and are seen as taking jobs away from Americans (Casas & Cabrera, 2011; Cowan, Martinez, & Mendiola, 1997; Hitlan et al., 2007). Attitudes toward Middle Eastern, Arab, and Muslim immigrants have grown especially negative since 9/11, with these groups stereotyped as fanatical, dangerous, and threatening to the American way of life (Hitlan et al., 2007). Conversely, other immigrant groups are seen more positively. For example Anglo-European immigrants are often seen as competent (Lee & Fiske, 2006). Asians, who are portrayed as "model minorities," are seen as more likely to be smart, hardworking, and successful (Kitano & Sue, 1973; Lin, Kwan, Cheung, & Fiske, 2005).

Despite these overarching trends, other research suggests that attitudes toward immigrants (and immigration) might be more ambivalent than polarized. Despite the consistency of negative stereotypes toward immigrants in the abstract, some research exploring stereotypes and prejudice toward particular immigrant

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groups has found that these stereotypes are not always monolithic. For example, research applying the stereotype content model (SCM) to immigration (Lee & Fiske, 2006) has shown that people's stereotypes of particular groups are ambivalent and can be affected by nationality and perceived work status. Like with many other stereotyped groups, these researchers find that many immigrant groups are perceived with a mixture of both positive and negative beliefs that often reflect a trade-off between perceived warmth and friendliness on the one hand and perceived competence on the other. Some groups, such as Latin American and Mediterranean immigrants, are seen as less competent but warm. Conversely, immigrants from Asia are seen as less warm but more competent (Lee & Fiske, 2006).

Research based on the SCM is consistent with research demonstrating that stereotypes, in general, tend to be multidimensional, ambivalent, and often complementary (Cuddy, Fiske, & Glick, 2008; Fiske, Cuddy, Glick, & Xu, 2002; Jost & Kay, 2005; Kay & Jost, 2003; Kay et al., 2007). For example, Blacks, Latinos, and the poor are often perceived as less intelligent and more aggressive, but they are also perceived as more family-oriented, happy, and communal (Kay & Jost, 2003; Kay et al., 2007). Asians, lauded when it comes to high education and work ethic, are also perceived as socially awkward, aloof, and obedient (Katz & Braly, 1933; Kitano & Sue, 1973; Lin et al., 2005). Although women are thought to be less capable than men when it comes to domains requiring strength, logic, or assertiveness, women are seen as more nurturing than men (Eagly, 1987; Eagly & Steffen, 1984; Glick & Fiske, 2001; Jost & Kay, 2005).

This ambivalence in beliefs about immigrant groups mirrors a similarly complex array of attitudes about immigration in the United States. According to the Pew Research Center (Keeter, 2009), a majority of Americans support strict border controls, but they also support creating a path to legal citizenship for those already in the country illegally. This is not surprising given the role that immigration has played in the country's history and identity. America is a country built on immigration, and even today, key economic sectors rely on both legal (e.g., technology) and illegal (e.g., agriculture) immigration to prosper (Medrano, 2012). Despite this, Americans have become more insular given the growing fear of foreign and economic threats. This is exemplified in a plurality of support for extreme immigration policies, such as SB 1070 (The New York Times/CBS News, 2012), the anti-immigration law in Arizona that set off a wave of extrapunitive immigration policies across the country. Despite tolerance and even support for these extreme policies (*The New York Times/*CBS News, 2012), a majority of Americans simultaneously support some immigration reforms that make it easier for skilled workers to enter the country legally and for illegal immigrants to gain some form of legal standing (Dutton, De Pinto, Backus, & Salvanto, 2012; Suro, 2009). For example, a majority of Americans (Barreto, 2012), including Republicans (Llorente, 2011), support the DREAM Act, a law that would enable children of illegal immigrants who grow up in America to gain legal standing if they attend college or serve in the armed forces.

Deconstructing Ambivalence

With mounting national attention toward the issue of immigration, it is important to contextualize work on stereotypes about and prejudice toward immigrants in the current political climate regarding immigration policies and reform. Research suggests that the public often holds conflicting views about immigration. The nature of this ambivalence should be examined, especially in the context of how ambivalent beliefs about immigrants influence immigration attitudes and policy. Prior work has explored ambivalent stereotypes in terms of two broad and seemingly universal qualities: warmth versus competence. These qualities are relevant to immigration as they may signal potential threats in the form of danger or economic competition (Esses et al., 1998, 2001; Hitlan et al., 2007; Lee & Fiske, 2006; Stephan, Ybarra, & Bachman, 1999).

Despite the utility of this taxonomy, it may be too broad a tool to fully map the complex array of stereotypes that define divergent immigrant groups and their unique effects on attitudes. First, not every trait that falls into the warmth and competence dimensions may play a role in immigration attitudes. For example, *helpful* may be more relevant to immigration attitudes than *happy-go-lucky*, both traits that fall into the "warmth" dimension. Second, some traits that fall under the same dimension might predict conflicting attitudes. For example, the "competent but cold" profile could be associated with people who are shrewd and business-savvy, desirable qualities for an immigrant group; or it could be associated with people who are smart and conniving, very undesirable qualities. Third, there may be other factors that play a role in attitudes toward immigration that go beyond threats to safety or one's pocketbook. For example, if people believe that immigrants are exploited, this might trigger sympathy and public outcry in support of immigrants' rights. Although perceiving a group as exploited might be considered a sign of low competence, the response to this perception might be very different from the response to other stereotypes that imply low competence (e.g., lazy).[1] Deconstructing this ambivalence into specific stereotypes that are more or less relevant to judgments about immigrants and immigration can further our understanding of how stereotypes influence public opinion.

The Current Research

The current research investigated the diversity of stereotypes about immigrant groups at the heart of the contentious debate over immigration in America. Different immigrant groups may be associated with different stereotypes, which can result in mixed or contradictory attitudes toward immigration policies. We were interested in examining stereotypes of immigrant groups (i.e., Canadian, Arab, Mexican, Polish, and Chinese) in America. Specifically, we were interested in how ambivalent stereotypes (a mix of both positive and negative beliefs) relate to attitudes toward immigrant groups and immigration policies.

To distinguish the different stereotypes associated with each group, we used the framework of item response theory (IRT) to

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[1] One possibility is that exploited people are considered high in warmth and low in competence, which could account for potential sympathy. Although we do not have an item measuring warmth, we found that the relationship between *exploited* and *cold* (reversed-scored) was not significant in the majority of our groups (Arab: $r = .02$, $p = .87$; Canadian: $r = -.39$, $p < .001$; Chinese: $r = -.30$, $p = .01$; Polish: $r = -.10$, $p = .39$; Mexican: $r = -.02$, $p = .89$), and not significant for groups most likely to be exploited, such as Mexicans.

conduct our initial analyses. This approach allowed us to uncover a more complex array of stereotypes (both positive and negative) by identifying the stereotypes most likely to be endorsed for each immigrant group in relation to the other immigrant groups included in the analysis. In other words, these are the stereotypes that most distinguish a group from other groups, arguably an important function of stereotypes. IRT provides more detailed information than mean ratings (which are typically used in stereotyping research) because the latter average the ratings of individuals who are higher and lower in prejudice, resulting in scores that cluster closely around one point in the scale (usually, the "disagree" or "neutral" range of the scale when it comes to stereotypes). Therefore, the IRT framework is more robust to social desirability effects than are means.

We predicted that IRT results would reveal ambivalent stereotypes about the immigrant groups that map fairly well onto prior research about immigrant stereotypes (where available), but also would contribute new information. For example, we expected Mexicans to be perceived as prone to crime and poverty, both stereotypes that have been identified in prior literature (e.g., Cowan et al., 1997), but also helpful and family-oriented (consistent with SCM findings). We also expected that Mexicans would be perceived as exploited and victimized, attributes not previously anticipated in stereotyping research. Although research on the SCM shows that Arabs are moderately threatening (low in warmth and moderate in competence; Lee & Fiske, 2006), we expected that our IRT findings would flesh out these relationships and link them more directly with traditional research on stereotypes of Arabs (Oswald, 2005). For example, *threatening* might be deconstructed as stemming from stereotypes implying support for terrorism and general intolerance; however, Arabs might also be seen as victimized here in America, especially post-9/11. We expected Chinese to be seen as socially awkward and shy, but also smart and industrious (Kitano & Sue, 1973). Although there is much less research on perceptions of Canadians and Poles to guide specific predictions, we expected that these groups would also be associated with ambivalent stereotypes.

Once we identified the stereotypes most likely to be associated with each group compared with the others, we used multiple regression analysis to examine how these stereotypes relate to attitudes toward immigrant groups and support for or opposition to immigration policies. We predicted that some stereotypes, such as those associated with competence, threat, discrimination, or interpersonal warmth, would be more relevant to attitudes about the immigrant group and immigration policies than stereotypes less relevant to immigration (e.g., stereotypes about physical characteristics). We also expected that ambivalent stereotype profiles (i.e., combinations of both positive and negative stereotypes) would predict conflicting attitudes toward the group and conflicting beliefs about immigration. Specifically, we expected desirable qualities (e.g., smart, hardworking, kind) to predict positive attitudes and more lenient or welcoming immigration policies (such as guest worker programs and paths to citizenship), and undesirable qualities (e.g., prone to crime, laziness, ill tempered) to be associated with negative attitudes and more punitive immigration policies (such as automatic deportation or criminal charges). One unique prediction was that undesirable qualities that imply victimization (e.g., being exploited) would be associated with positive group attitudes and more lenient policies.

Method

Participants

Participants were 414 undergraduates from a large, private midwestern university. Participants had a mean age of 19.89 years ($SD = 3.07$), were mostly White (69.50%) or Latino/a (7.90%), and 90% were born in the United States.

Materials and Procedure

The survey was administered online. Participants were randomly assigned to answer questions about one of five immigrant groups: Canadian, Arab, Mexican, Polish, and Chinese. They then completed the following sections in the order presented.

Trait ratings. Participants rated the randomly assigned target group on 47 traits designed to reflect stereotypes of the target groups. They were asked, "To what degree do each of the following characteristics describe [target group] in general?" Participants rated all 47 traits using the same 8-point rating scale anchored at $1 = not\ at\ all$ and $8 = totally$. The traits included personality traits (e.g., smart, lazy, arrogant, warm, devoted to family), target attitudes and beliefs (e.g., values traditions, religious, nationalistic), physical characteristics (e.g., dirty, short), and social circumstances (e.g., exploited, uneducated, oppressed; see Appendix A for a complete list).

Group-based attitudes. Participants rated their feelings toward each immigrant group by answering 10 questions about the group measuring general attitudes (e.g., "My feelings toward [target group] are generally positive," "I don't like [target group] very much") and specific emotions (e.g., "I feel angry toward [target group]," "I feel compassion toward [target group]"). All items were rated on an 8-point scale ($1 = strongly$ $disagree$, $8 = strongly\ agree$). Pertinent items were reverse-scored such that high numbers reflected positive attitudes. The items were combined into an *immigrant group attitudes* scale that had adequate reliabilities across the four groups (Canadian $\alpha = .84$; Arab $\alpha = .92$; Mexican $\alpha = .88$; Polish $\alpha = .88$; Chinese $\alpha = .83$).

Support for immigration policies. Participants rated their support for or opposition to 20 immigration policies. These policies ranged from lenient (e.g., "To what degree do you support a guest worker program for people not yet in the United States?") to very strict (e.g., "To what degree do you support a law that would make illegal immigration a felony [involving a mandatory prison time]?").

These policies were split into three scales. The *proimmigration policy* scale included six policies that focused on transitioning illegal immigrants into society such as promoting work visa and guest worker programs and some forms of amnesty ($\alpha = .76$). The *isolation policy* scale included three policies designed to prevent illegal immigration such as building a fence along the nation's borders and placing higher restrictions on visitors from certain countries ($\alpha = .78$). The *punitive policy* scale included eight policies that are especially strong or punitive such as making illegal immigration a felony, automatic deportation, and the use of

the National Guard to patrol the border ($\alpha = .87$).[2] The immigration policy items were significantly correlated with each other (rs ranging from $-.29$ to $.60$, $p < .001$), but not so highly as to suggest that all of these policies represented the same construct.

Results

We used two primary strategies to explore our data: IRT and multiple regression. We first used IRT to examine the most probable stereotypes associated with each immigrant group. Next, we took the stereotypes most likely to be endorsed for each group and examined how they relate to attitudes toward the group and different immigration policy strategies (proimmigration vs. isolation vs. punitive policies).

The IRT Model

The data were analyzed using the general framework of IRT, which examines participant responses to a set of items, in this case, our stereotypes (Lord, 1980). Specifically, this study employed the rating scale model (Andrich, 1978) for ordered response categories. The rating scale model is an additive linear model that specifies the log odds of a participant choosing a given rating scale category (a number on the 1–8 rating scale) for an item (stereotype) as a function of the participant's observed latent trait level (i.e., level of prejudice toward a given immigrant group), the difficulty of endorsing the stereotype, and the difficulty of the threshold between categories (i.e., the difficulty of selecting a particular rating scale category, e.g., a "3" relative to the previous rating scale category, e.g., a "2" on the 1–8 scale; Wright & Masters, 1982). The rating scale model can evaluate differential item functioning, that is, the nonequivalence of measurement items across groups of people (e.g., different immigrant groups), by examining the probability of endorsing the stereotypes across the immigrant groups of interest (see Appendix B for the rating scale model).

The rating scale model employs a logistic transformation to linearize the observed ratings (raw scores) into an equal-interval, log odds (logit) scale centered at zero. To use regression analysis terminology, the logistic transformation of ratios of adjacent category probabilities is the dependent variable, and the participant's latent trait level (prejudice) and the difficulty of endorsing a stereotype are the independent variables. The model provides the researcher with group-level main effect results for participants and stereotypes, as well as individual-level diagnostic information about how each participant and stereotype is performing.

Data analyses were conducted using the WINSTEPS computer program (Linacre, 2012). WINSTEPS uses maximum likelihood procedures to simultaneously estimate participant prejudice measures and item difficulties (i.e., the difficulty corresponding to the probability of endorsing the particular stereotype). Our strategy for the IRT analysis entailed three steps. First, we investigated the functioning of the 8-point rating scale of the stereotypes. Second, we carried out an analysis using the entire data set to determine the reliability and validity of the instrument used to measure stereotype level. Third, we conducted a differential item functioning analysis to investigate the equivalence of the 47 stereotype items across the five immigrant groups of interest (Canadian, Arab, Mexican, Polish, and Chinese). In the interest of brevity, we

summarize the outcomes of only the first two steps to establish that our methods are sound. We present the results from the third step in more detail.

Functionality of the rating scale. A recommended first step in the analysis of item response data is an investigation into the functioning of the rating scale categories to determine whether respondents used these categories in the intended manner. To test this, we employed the rating scale model and the partial credit model (Masters, 1982). Results suggest that the 8-point rating scale was too fine grained for the set of items under consideration, and that at times participants assigned the same weight to adjacent rating scale options (e.g., 4 and 5). As is common with explicit ratings of stereotypes, participants tended to gravitate toward the middle of the scale (rating categories 3, 4, 5, 6). To enable the scale to conform to model assumptions (see Linacre, 2005), we collapsed rating scale categories as follows: ratings of 1, 2, and 3 formed a new Category 1 (low stereotype levels), ratings 4 and 5 a new Category 2 (medium stereotype levels), and ratings 6, 7, and 8 a new Category 3 (high stereotype levels).[3] Subsequent analyses showed that the 3-point rating scale was well defined, with 1 corresponding to the lowest probability of endorsing a stereotype, 3 corresponding to highest probability, and equal distances between each successive number on the rating scale for all 47 stereotype items. Although this solution sacrifices detail, it enabled the scale to better correspond to the latent stereotyping tendencies of our individual participants; therefore, it represents a more valid measure of individual differences in stereotyping than raw scores alone.

Scale reliability and validity. Using this new three-category rating system, we conducted an item analysis using the entire data set to determine the reliability and validity of the scale used to measure stereotype level. We used the WINSTEPS computer program to calibrate persons, items, and the rating scale so that they are all positioned onto a common logit scale, thus creating a single frame of reference for interpreting the results. The results also included two fit indices: the infit mean square (INFIT) and outfit mean square (OUTFIT; Smith, 2001; Wright & Stone, 1979). We considered items to "fit" the model if the mean square values fell within the range of 0.6 and 1.4 as suggested by Wright, Linacre, Gustafson, and Martin-Lof (1994). The INFIT ($M = 1.00$, $SD = 0.12$) and OUTFIT ($M = 1.01$, $SD = 0.12$) mean square summary statistics for the 47 items suggest that overall the fit of the data to the model was very good. In addition, the fit mean square statistics for each item were within acceptable quality control limits, with INFIT ranging between 0.78 and 1.32 and OUTFIT ranging between 0.77 and 1.32.

Stereotypes of Immigrant Groups: Differential Item Functioning Analysis

To determine whether the stereotypes differed across the five immigrant groups included in our study (Canadian, Arab, Mexi-

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[2] Three policies did not correlate with either of the scales. These involved policies related to fines, fingerprinting, and cuts in welfare for immigrants.

[3] This decision was based on a careful statistical analysis of the scale using the partial credit model (Masters, 1982). For the sake of brevity, these analyses are not included here but are available from the authors on request.

can, Polish, and Chinese), we conducted a differential item functioning (DIF) analysis. DIF refers to the degree to which an item (stereotype) displays different properties for different groups after controlling for the latent trait of the group members (Angoff, 1993). Differences in item difficulties from one subgroup to another can be tested by dividing the difference in item difficulty by the joint standard errors of the items (see Footnotes 4 and 7). The resulting *t* statistic can be interpreted to detect items biased against particular subgroups of respondents (Du, 1995).[4] In addition, the simple difference between the item difficulties of two groups can also be used for the detection of DIF (Draba, 1977). A logit difference of at least .5 classifies an item as biased, that is, as reflecting a higher or lower likelihood of association with one group compared with others—a stereotype.

Using these two guidelines, we considered items to display significant DIF if the difference in item difficulty for two groups was greater than .5 logits and the corresponding adjusted *p* value was less than or equal to .005 (a Bonferroni correction was applied to account for the 10 pairwise comparisons done for each item). Appendix A displays all of the logit scores for each group across the 47 items. Of the 47 items included in the stereotype scale, eight items–*ignorant*, *honest*, *fanatical*, *values traditions*, *ambitious*, *stubborn, untrustworthy*, and *deceitful*—had item difficulties that were not statistically significant, meaning that they did not differentiate one group from another. For the remaining items, the item difficulty for a particular ethnic group was significantly different from at least one other ethnic group, suggesting that this item distinguished that ethnic group in some way (represented a stereotype of that group).

Tables 1–5 detail specific DIF analysis results for each ethnic group.[5] The logit scores for each target group represent the difficulty in choosing that item, and the upward arrows show that a particular item was seen as significantly easier to endorse (more characteristic of the target group) than for that particular comparison group (see Appendix A for specific DIF statistics). Thus, these tables provide two forms of information. First, the difficulty in endorsing an item shows the probability of the item being endorsed for that particular group, with numbers approaching +3 representing a high likelihood of endorsement (low difficulty), numbers near zero representing moderate likelihood of endorsement (moderate difficulty), and numbers approaching −3 representing low likelihood of endorsement (high difficulty). Second, the arrows provide information about traits that distinguish the target immigrant group from other groups—arguably an important characteristic of stereotypes.

Collapsing across all groups, positive traits were easier to endorse than negative traits, reflecting the social desirability pattern often seen in stereotyping research.[6] However, once particular groups are examined, items that might be very difficult to endorse overall, such as *likely to engage in terrorism* (the lowest probability item overall: −1.68 logits), become easier to endorse when examined in the context of a particular group (Arabs: −0.74 logits, a moderate probability), and especially when comparing that immigrant group with other immigrant groups (e.g., Mexicans: −2.32 logits, an extremely low probability of endorsement;[7] see Appendix A, Row 25). In summary, these two forms of information provide richer and more contextualized profiles of our immigrant groups than mean ratings, which would typically wash out these nuances.

Stereotypes of Canadians. Stereotypes of Canadians appear to be largely positive. For example, Canadians were seen as more happy-go-lucky and tolerant than other immigrant groups (see Table 1). This is consistent with research showing that Canadians are seen as relatively warm (Lee & Fiske, 2006). They were also seen as relatively gregarious. In addition to positive characteristics, Canadians were associated with some negative stereotypes, supporting our prediction and predictions of the SCM that stereotypes would be ambivalent. For example, Canadians were seen as relatively lazy compared with Arabs, Mexicans, and Chinese, perhaps suggesting less competence (as in the SCM) or the perception that Canadians might be pickier with regard to the work they do in the United States. They were also seen as relatively passive.

Stereotypes of Arabs. Unlike Canadians, stereotypes of Arabs paint them in a more negative light (see Table 2). Although there was ambivalence in these stereotypes—they were seen as smarter and more educated than some other groups—they were primarily characterized as antisocial (e.g., likely to engage in terrorism, aggressive, quick-tempered, revengeful) relative to at least some, if not all, other groups. These both support and go beyond prior research on Arab stereotypes (Oswald, 2005) and align with the SCM, which characterizes Arabs as somewhat threatening (moderately cold and competent; Lee & Fiske, 2006). Going beyond the SCM, we also see that Arabs were more likely to be perceived as religious, victims of discrimination, and oppressed—qualities that are harder to categorize in the SCM, but may explain why they were seen as only moderately threatening.

Stereotypes of Mexicans. Stereotypes of Mexicans paint a more complex picture of ambivalence that could shed light on why both attitudes and immigration policies aimed at this group are so convoluted. Mexicans were perceived as having both positive and negative qualities, and they were seen as both sympathetic and culpable when it came to their lower status in society (see Table 3). They were perceived as friendly, helpful, and family-oriented, yet often exploited. Conversely, they were seen as prone to crime, uneducated, and caught in a cycle of poverty. These results both confirm and go beyond prior research on both the SCM and stereotypes of Mexicans in general. We explore how these stereotypes affect attitudes toward Mexican immigrants and immigration policies below.

Stereotypes of Poles. There is very little research on stereotypes of Polish immigrants, so the data here are novel. Similar to Arabs, participants had relatively negative stereotypes of Poles

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[4] The *t* statistic is calculated as $t = \frac{\delta_{igroup1} - \delta_{igroup2}}{\sqrt{SE_{igroup1}^2 + SE_{igroup2}^2}}$, where $\delta_{igroup1}$ is the difficulty of item *i* for Group 1, $\delta_{igroup2}$ is the difficulty of item *i* for Group 2, and *SE* is the standard error of item *i*, corresponding to Group 1 and Group 2, respectively.

[5] In the interest of brevity and clarity, only items rated as having a higher probability of endorsement for a particular group compared with one or more other groups are included. Items less likely to be endorsed are harder to interpret from a stereotyping perspective and are not presented here.

[6] Overall item functioning data are available from the authors on request.

[7] Inserting the *likely to engage in terrorism* logits and standard errors for Arabs and Mexicans (Appendix A) in the formula from Footnote 4 results in $t(164) = 5.847$, $p < .001$, suggesting a significant difference in the endorsement of these stereotypes across these two groups.

Table 1

Differential Item Functioning Analysis Results for Stereotypes of Canadians

Compared with the other four groups, Canadians are	Canadian	Arab	Mexican	Polish	Chinese
Happy-go-lucky	1.94	↑	↑	↑	↑
Friendly	1.61	↑		↑	↑
Tolerant	1.52	↑	↑	↑	↑
Trustworthy	1.03	↑	↑		
Talkative	1.02	↑			↑
Helpful	0.97	↑			↑
Passionate	0.68				↑
Loud	0.62	↑			↑
Passive	0.42		↑		
Macho	−0.18	↑			↑
Lazy	−0.58	↑	↑		↑

Note. The first column represents the traits that most distinguished the target group from the other immigrant groups. The second column represents the logit scores for the target group on these stereotypes. Higher logit measures (i.e., more positive numbers) indicate that an item is more likely to be endorsed, logit measures near zero are moderately likely to be endorsed, and lower logit measures (i.e., negative numbers) indicate that an item is less likely to be endorsed. The arrows represent that the target group had significantly more of the quality than the groups that differed from the target group on the stereotypes. Empty spaces indicate stereotypes levels similar to the target group.

(see Table 4).[8] They were more likely to be perceived as stubborn, quick-tempered, macho, and arrogant relative to at least some other groups. They were also perceived to be lazier than other groups (Mexicans and Chinese). Consistent with our predictions of

Table 2

Differential Item Functioning Analysis Results for Stereotypes of Arabs

Compared with the other four groups, Arabs are	Arab	Canadian	Mexican	Polish	Chinese
Religious	2.60	↑		↑	↑
Victims of discrimination	1.83	↑		↑	↑
Educated	1.16			↑	
Smart	1.12			↑	
Conservative	0.41			↑	
Quiet	0.29			↑	
Exploited	0.17	↑			
Aggressive	0.08				↑
Oppressed	0.08	↑		↑	
Quick-tempered	−0.09				↑
Intolerant	−0.14	↑			
Revengeful	−0.26	↑			
Socially awkward	−0.27		↑		
Arrogant	−0.29		↑		
Likely to engage in terrorism	−0.74	↑	↑	↑	↑

Note. The first column represents the traits that most distinguished the target group from the other immigrant groups. The second column represents the logit scores for the target group on these stereotypes. Higher logit measures (i.e., more positive numbers) indicate that an item is more likely to be endorsed, logit measures near zero are moderately likely to be endorsed, and lower logit measures (i.e., negative numbers) indicate that an item is less likely to be endorsed. The arrows represent that the target group had significantly more of the quality than the groups that differed from the target group on the stereotypes. Empty spaces indicate stereotypes levels similar to the target group.

Table 3

Differential Item Functioning Analysis Results for Stereotypes of Mexicans

Compared with the other four groups, Mexicans are	Mexican	Canadian	Arab	Polish	Chinese
Religious	2.50	↑		↑	↑
Devoted to family	2.37	↑			
Victims of discrimination	1.23	↑		↑	↑
Friendly	1.07				↑
Helpful	1.07		↑		↑
Passionate	0.76				↑
Exploited	0.55	↑		↑	↑
Loud	0.49	↑			↑
Raised in poverty	0.43	↑	↑	↑	↑
Talkative	0.37	↑			↑
Macho	0.28	↑			↑
Oppressed	0.28	↑		↑	
Short	0.16	↑	↑	↑	
Prone to crime	−0.01	↑	↑	↑	↑
Aggressive	−0.01	↑			↑
Uneducated	−0.23	↑	↑	↑	↑
Dirty	−0.81	↑			↑

Note. The first column represents the traits that most distinguished the target group from the other immigrant groups. The second column represents the logit scores for the target group on these stereotypes. Higher logit measures (i.e., more positive numbers) indicate that an item is more likely to be endorsed, logit measures near zero are moderately likely to be endorsed, and lower logit measures (i.e., negative numbers) indicate that an item is less likely to be endorsed. The arrows represent that the target group had significantly more of the quality than the groups that differed from the target group on the stereotypes. Empty spaces indicate stereotypes levels similar to the target group.

ambivalence, they were also seen as relatively talkative (which may or may not have a positive connotation in this context).

Stereotypes of Chinese. As with Mexicans, participants had complex, ambivalent stereotypes about the Chinese (see Table 5). On the one hand, Chinese were perceived as smart, hardworking, educated, and practical. On the other hand, they were also seen as socially awkward and competitive (but not violent or prone to crime). These patterns are consistent with research on the SCM showing that Chinese are typically seen as competent but less warm (Lee & Fiske, 2006). However, the present data allowed us to examine this pattern in more depth. Both Arabs and Chinese were associated with attributes that are less warm, but these data revealed that this identical conclusion might derive from different traits that can have different consequences for immigration policy. Arabs were seen as angry and aggressive; however, Chinese were seen as socially awkward and quiet. We explore the implications of these different stereotypes below.

Correlations and Regressions Examining the Relationship Between Stereotypes, Attitudes, and Support for Immigration Policy

The stereotype profiles that emerged painted a complex picture of the beliefs people have about these groups—that is, stereotypes

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[8] As of 2000, the Chicago area has the largest number of Polish immigrants in the country, with nearly one third of all Polish immigrants residing in and around Chicago (Paral, 2004).

Table 4

Differential Item Functioning Analysis Results for Stereotypes of Poles

Compared with the other four groups, Poles are	Polish	Canadian	Arab	Mexican	Chinese
Talkative	0.46		↑		↑
Stubborn	0.30			↑	
Loud	0.27		↑		↑
Conservative	0.21			↑	
Quick-tempered	0.06	↑			↑
Macho	0.05		↑		↑
Arrogant	−0.01			↑	
Aggressive	−0.06				↑
Lazy	−0.78			↑	↑
Dirty	−0.99				↑

Note. The first column represents the traits that most distinguished the target group from the other immigrant groups. The second column represents the logit scores for the target group on these stereotypes. Higher logit measures (i.e., more positive numbers) indicate that an item is more likely to be endorsed, logit measures near zero are moderately likely to be endorsed, and lower logit measures (i.e., negative numbers) indicate that an item is less likely to be endorsed. The arrows represent that the target group had significantly more of the quality than the groups that differed from the target group on the stereotypes. Empty spaces indicate stereotypes levels similar to the target group.

appeared to be multidimensional and largely ambivalent. In the next set of analyses, we explored the implications of these varied stereotypes by examining their correlates with group-based attitudes and support for different immigration policies that impact these groups. We were interested in two major issues that were evaluated using two different approaches: First, we wanted to know how the complex stereotype profiles of each group in the IRT analyses interrelate to form broader stereotype factors. For example, when an Arab immigrant is seen as smart, does this imply the same thing as when a Chinese immigrant is seen as smart (stereotype factors with similar composition will receive similar labels)? Second, we wanted to know which of these stereotype factors relate to positive or negative attitudes about each group and our different immigration policies.

One question was whether all of these stereotypes play a role in immigration group and policy attitudes or whether only some of these stereotypes are relevant. A second question was how these ambivalent beliefs relate to these attitudes. We often expect stereotypes to be largely negative and harmful for groups; however, it is possible that some of these stereotypes result in positive, or at least sympathetic, attitudes toward these groups, which could result in more supportive attitudes toward immigration. We predicted that some stereotypes would be more relevant to immigration group and policy attitudes than others. We also predicted that ambivalent stereotypes would predict ambivalent attitudes toward the group and conflicting attitudes toward immigration policies. To test these predictions, we ran multiple regressions in which we used stereotypes about the groups in question to predict group-based attitudes and policy attitudes.

Before conducting our primary regression analyses, we combined stereotypes into conceptually coherent stereotype scales. We began with principal axis factoring and then evaluated the conceptual coherence of the factors and their interitem reliability to determine our scales. We considered all items with factor loadings

above .3 (Floyd & Widaman, 1995). Items that did not scale well with the other items were analyzed separately or dropped.

Models for Canadians. Principal axis factoring for the stereotype trait items for Canadians suggested a four-factor solution. The *friendly*, *tolerant*, *lazy* (reverse-scored), *trustworthy*, and *happy-go-lucky* items all loaded onto one factor (eigenvalue = 2.87, variance explained = 26.09%). The item *lazy* loaded weakly on this factor, was conceptually dissimilar, and lowered the alpha for this scale. We removed the *lazy* item from the scale and analyzed it separately. The remaining items were combined into a new *amiable* scale (α = .72). The *loud* and *talkative* items loaded onto an *effusive* stereotype factor (r = .43, eigenvalue = 1.29, variance explained = 11.76%). The *passive* item served as a stand-alone stereotype item (eigenvalue = 1.00, variance explained = 9.11%), and the *helpful*, *passionate*, and *macho* items loaded onto a *lumberjack* stereotype factor (α = .60, eigenvalue = 0.76, variance explained = 6.92%).

As predicted, ambivalent stereotypes resulted in ambivalent attitudes toward Canadians (see Table 6). The *amiable* stereotype scale was related to positive immigrant group attitudes, whereas the *passive* and *lazy* stereotype items were related to negative group attitudes. Only the *amiable* stereotype predicted opposition to isolation policies, suggesting that not all stereotypes were related to immigration policy attitudes.

Models for Arabs. Principal axis factoring of Arab stereotypes suggested a four-factor solution. The *quick-tempered*, *revengeful*, *aggressive*, *intolerant*, *likely to engage in terrorism*, and *arrogant* items loaded onto one *aggressive* stereotype factor (α = .89, eigenvalue = 4.64, variance explained = 30.97%). The *exploited*, *oppressed*, and *victims of discrimination* items loaded onto a second *persecuted* stereotype factor (α = .71, eigenvalue = 1.60,

Table 5

Differential Item Functioning Analysis Results for Stereotypes of Chinese

Compared with the other four groups, Chinese are	Chinese	Canadian	Arab	Mexican	Polish
Smart	2.18	↑	↑	↑	↑
Hardworking	2.01	↑	↑		
Educated	1.76			↑	↑
Short	1.25	↑	↑	↑	↑
Practical	1.00		↑	↑	
Quiet	0.98	↑		↑	↑
Conservative	0.90	↑		↑	
Competitive	0.78		↑	↑	
Passive	0.52		↑	↑	
Conformist	0.34	↑	↑	↑	↑
Socially awkward	0.13	↑		↑	↑
Oppressed	0.10	↑			↑
Materialistic	0.07		↑	↑	
Cold	−0.61			↑	

Note. The first column represents the traits that most distinguished the target group from the other immigrant groups. The second column represents the logit scores for the target group on these stereotypes. Higher logit measures (i.e., more positive numbers) indicate that an item is more likely to be endorsed, logit measures near zero are moderately likely to be endorsed, and lower logit measures (i.e., negative numbers) indicate that an item is less likely to be endorsed. The arrows represent that the target group had significantly more of the quality than the groups that differed from the target group on the stereotypes. Empty spaces indicate stereotypes levels similar to the target group.

Table 6
Models for Canadians

Stereotype	Immigrant Group Attitudes	Proimmigration Policy	Isolation Policy	Punitive Policy
Amiable	**1.04 (0.30)**[***]	0.30 (0.18)	**−0.68 (0.29)**[*]	−0.12 (0.25)
Effusive	−0.28 (0.22)	0.09 (0.13)	0.33 (0.22)	0.05 (0.18)
Lumberjack	0.21 (0.23)	0.04 (0.14)	0.09 (0.22)	0.11 (0.19)
Lazy	**−0.32 (0.15)**[*]	−0.09 (0.09)	−0.11 (0.15)	0.13 (0.13)
Passive	**−0.34 (0.17)**[*]	−0.21 (0.11)	−0.04 (0.17)	−0.10 (0.14)

Note. Data are unstandardized betas. The far left column contains the names of the stereotypes (the independent variables) included in each model for the group in question. The columns labeled Immigrant Group Attitudes, Proimmigration Policy, Isolation Policy, and Punitive Policy use these variables, respectively, as the dependent variable. Bolded values are significant. Numbers in parentheses represent standard errors.
[*] $p \leq .05$.   [***] $p \leq .001$.

variance explained = 10.66%). The *educated*, *smart*, and *socially awkward* (reverse-scored) items loaded onto a *smart* stereotype factor (α = .65, eigenvalue = 0.99, variance explained = 6.57%), and the *religious*, *conservative*, and *quiet* items loaded onto a *devout* stereotype factor (α = .53, eigenvalue = 0.79, variance explained = 5.29%).

For Arabs (see Table 7), only the *smart* stereotype predicted positive group attitudes. The effects of ambivalent stereotypes primarily manifested in immigration attitudes. Seeing Arabs as aggressive predicted support for isolationist policies; however, seeing them as smart and persecuted predicted support for proimmigration policies and opposition to punitive policies targeting Arabs. Being devout was unrelated to immigration attitudes.

Models for Mexicans. The principal axis factoring of Mexican stereotypes suggested a four-factor solution. The *devoted to family*, *religious*, *helpful*, *friendly*, and *passionate* items loaded onto a *communitarian* stereotype factor (α = .75, eigenvalue = 3.33, variance explained = 19.61%), the *dirty*, *uneducated*, *prone to crime*, *raised in poverty*, and *short* items loaded onto a *lower class* stereotype factor (α = .74, eigenvalue = 2.20, variance explained = 13.00%), the *talkative*, *aggressive*, *loud,* and *macho* items loaded onto a *machismo* stereotype factor (α = .70, eigenvalue = 1.79, variance explained = 10.54%), and the *oppressed*, *exploited*, and *victims of discrimination* items loaded onto a *persecuted* factor (α = .79, eigenvalue = 0.79, variance explained = 5.29%).

Ambivalent stereotypes predicted ambivalent attitudes for Mexicans (see Table 8). Participants felt more positively toward Mexicans when thinking about them as communitarian or exploited.

Perceiving Mexicans as exploited also predicted opposition to isolationist and punitive immigration policies. Conversely, seeing Mexicans as lower class predicted negative attitudes toward them and support for punitive immigration policies.

Models for Poles. Principal axis factoring suggested a four-factor solution for Polish stereotypes. The *quick-tempered*, *aggressive*, *lazy*, *dirty*, and *stubborn* items loaded onto an *obstinate* factor (α = .82, eigenvalue = 3.30, variance explained = 33.01%), the *loud* and *talkative* items loaded onto an *effusive* factor (r = .47, $p < .001$, eigenvalue = 1.04, variance explained = 10.38%), the *conservative* item loaded onto its own factor (eigenvalue = 0.65, variance explained = 6.50%), and the *arrogant* and *macho* items loaded onto a *boorish* factor (r = .25, p = .02, eigenvalue = 0.44, variance explained = 4.41%).

Ambivalent stereotypes of Polish people primarily manifested in ambivalent group-based attitudes (see Table 9). People had fairly negative attitudes toward Polish people when thinking about them as obstinate, but fairly positive attitudes when thinking about them as effusive. Stereotypes of obstinate Poles also predicted opposition to lenient immigration attitudes. As with other groups, not all stereotypes of Poles were relevant to immigration issues.

Models for Chinese. With stereotypes of Chinese people as the subject of analysis, principal axis factoring suggested a four-factor solution. The first stereotype factor, *social climbers*, was composed of the items *conservative*, *competitive*, *conformist*, and *materialistic* (α = .50, = eigenvalue = 2.38, variance explained = 16.96%). The second stereotype factor, *industrious*, was composed of the items *smart*, *hardworking*, *oppressed* (reverse-scored), and *educated* (α = .67, eigenvalue = 1.49, variance explained =

Table 7
Models for Arabs

Stereotype	Immigrant Group Attitudes	Proimmigration Policy	Isolation Policy	Punitive Policy
Aggressive	−0.41 (0.24)	−0.13 (0.13)	**0.48 (0.17)**[***]	0.24 (0.15)
Persecuted	0.24 (0.19)	**0.34 (0.11)**[**]	−0.24 (0.14)	**−0.39 (0.13)**[**]
Smart	**0.74 (0.18)**[*]	**0.41 (0.10)**[***]	−0.26 (0.14)	**−0.38 (0.12)**[**]
Devout	−0.13 (0.26)	0.08 (0.14)	−0.31 (0.19)	−0.02 (0.17)

Note. Data are unstandardized betas. The far left column contains the names of the stereotypes (the independent variables) included in each model for the group in question. The columns labeled Immigrant Group Attitudes, Proimmigration Policy, Isolation Policy, and Punitive Policy use these variables, respectively, as the dependent variable. Bolded values are significant. Numbers in parentheses represent standard errors.
[*] $p \leq .05$.   [**] $p \leq .01$.   [***] $p \leq .001$.

Table 8
Models for Mexicans

Stereotype	Immigrant Group Attitudes	Proimmigration Policy	Isolation Policy	Punitive Policy
Communitarian	**0.64 (0.33)**[*]	−0.09 (0.20)	−0.05 (0.24)	0.10 (0.23)
Lower class	**−0.86 (0.25)**[***]	−0.01 (0.16)	0.32 (0.19)	**0.37 (0.17)**[*]
Machismo	0.17 (0.28)	0.33 (0.18)	−0.13 (0.21)	−0.22 (0.20)
Persecuted	**0.62 (0.21)**[**]	0.17 (0.13)	**−0.49 (0.16)**[**]	**−0.33 (0.15)**[*]

Note. Data are unstandardized betas. The far left column contains the names of the stereotypes (the independent variables) included in each model for the group in question. The columns labeled Immigrant Group Attitudes, Proimmigration Policy, Isolation Policy, and Punitive Policy use these variables, respectively, as the dependent variable. Bolded values are significant. Numbers in parentheses represent standard errors.
[*] $p \le .05$.   [**] $p \le .01$.   [***] $p \le .001$.

10.65%). The items *socially awkward* and *cold* loaded onto an *aloof* stereotype factor ($r = .38$, $p = .003$, eigenvalue = 1.39, variance explained = 9.94%). The items *passive*, *quiet*, and *practical* loaded onto a *demure* stereotype factor ($\alpha = .67$, eigenvalue = 0.62, variance explained = 4.41%). The *short* item did not load onto any of the factors and was theoretically irrelevant, so we removed it from the analyses. In the regression models (see Table 10), the *aloof* stereotype was related to negative immigrant group attitudes; however, stereotypes of the Chinese did not appear to predict attitudes toward immigration policies.

Discussion

The present study investigated the role that complex and often ambivalent stereotypes play in predicting attitudes toward a diversity of immigrant groups and immigration policies. We proposed that stereotypes about immigrant groups are complex and often ambivalent (consisting of both positive and negative qualities). Ambivalent stereotypes were expected to map onto ambivalent group-based and immigration policy attitudes. Specifically, stereotypes that portray groups in positive or sympathetic ways were expected to predict positive attitudes toward the group and more supportive attitudes toward policies that facilitate their immigration to the United States. Conversely, negative qualities were expected to predict negative attitudes toward the group and support for policies that prevent the group from immigrating. Because both positive and negative qualities may be perceived within each group, this could result in conflicting attitudes about each immigrant group and immigration policies that affect them.

Ambivalent and Relative Stereotypes of Immigrant Groups

Using IRT, we were able to uncover unique stereotype profiles of five groups that have been at the center of immigration issues in the United States: Canadians, Arabs, Mexicans, Poles, and Chinese. The results of the IRT analyses supported the prediction that stereotypes of immigrant groups are both complex and ambivalent. Each of the immigrant groups was stereotyped as possessing both positive and negative qualities. These patterns replicated, as well as expanded on, prior research examining stereotypes of these groups. For example, prior research revealed that Far East Asians were often stereotyped as being smart and industrious, yet shy and socially awkward (Kitano & Sue, 1973; Lin et al., 2005). Our data replicated these patterns, as well as added to this profile by unveiling additional stereotypes (e.g., materialistic, competitive) often overlooked in the extant literature on immigration (however, see Lin et al., 2005, for stereotypes in general). The same was true for the other groups. It is not surprising that Arabs were stereotyped as revengeful and likely to engage in terrorism (Oswald, 2005), but the belief that they are also smart and persecuted has received little attention. The belief that Canadians are warm and friendly is prevalent (Kirby & Gardner, 1973); yet, little research has investigated beliefs that they might be seen as relatively lazy compared with other immigrant groups. Finally, stereotypes that Mexicans are lower status and dangerous have been explored (Casas & Cabrera, 2011; Cowan et al., 1997), but the belief that they are also exploited has received less attention, particularly in terms of immigration attitudes.

Table 9
Models for Poles

Stereotype	Immigrant Group Attitudes	Proimmigration Policy	Isolation Policy	Punitive Policy
Obstinate	**−1.01 (0.23)**[***]	**−0.42 (0.14)**[**]	0.23 (0.18)	0.27 (0.14)
Effusive	**0.65 (0.21)**[**]	0.05 (0.13)	−0.01 (0.16)	−0.16 (0.13)
Conservative	−0.08 (0.21)	−0.21 (0.12)	−0.11 (0.16)	0.04 (0.13)
Boorish	−0.37 (0.21)	0.12 (0.12)	0.11 (0.17)	0.20 (0.13)

Note. Data are unstandardized betas. The far left column contains the names of the stereotypes (the independent variables) included in each model for the group in question. The columns labeled Immigrant Group Attitudes, Proimmigration Policy, Isolation Policy, and Punitive Policy use these variables, respectively, as the dependent variable. Bolded values are significant. Numbers in parentheses represent standard errors.
[**] $p \le .01$.   [***] $p \le .001$.

Table 10
Models for Chinese

Stereotype	Immigrant Group Attitudes	Proimmigration Policy	Isolation Policy	Punitive Policy
Social climbers	−0.37 (0.28)	−0.002 (0.15)	−0.07 (0.22)	0.13 (0.20)
Industrious	0.51 (0.27)	0.28 (0.14)	0.06 (0.22)	−0.14 (0.19)
Aloof	**−0.43 (0.22)**[*]	−0.18 (0.11)	0.06 (0.17)	0.18 (0.15)
Demure	0.09 (0.22)	0.11 (0.12)	0.08 (0.18)	0.10 (0.15)

Note. Data are unstandardized betas. The far left column contains the names of the stereotypes (the independent variables) included in each model for the group in question. The columns labeled Immigrant Group Attitudes, Proimmigration Policy, Isolation Policy, and Punitive Policy use these variables, respectively, as the dependent variable. Bolded values are significant. Numbers in parentheses represent standard errors.
[*] $p \leq .05$.

These data contribute to the literature in a number of ways. First, they reveal additional stereotypes of immigrant groups previously overlooked or understudied in the literature on immigrant stereotypes. Second, they suggest that stereotypes are rarely absolute but rather are relative. Canadians were seen as friendly, but only when compared with Arabs and Chinese (Mexicans were equally likely to be seen as friendly). Mexicans were perceived as exploited and victimized, but only when compared with Canadians and Chinese (Arabs were equally likely to be victimized). These relative patterns can be especially important for issues related to immigration. The government allows only a certain number of immigrants into the country and companies have limited slots available to hire foreign workers. Understanding the relative nature of stereotypes can shed light on the types of trade-offs that people might consider when comparing multiple immigrant groups. For example, according to these data, Canadians were seen as friendly, but so were Mexicans; however, Mexicans were seen as less lazy than Canadians. Arabs were also less lazy, but were less friendly as well. However, Arabs were seen as smarter than Mexicans. Chinese were seen as the smartest of the four groups and as equally hardworking as Mexicans, but less friendly than Mexicans. Therefore, when it comes to hiring a labor force, some companies might prioritize certain groups for certain jobs based on these relative stereotypes (e.g., in the tech industry vs. service industry). Future research should further explore the extent to which these relative differences map onto beliefs about the roles and contributions that different immigrant groups can fulfill in their host country.

Ambivalent Stereotypes Predict Ambivalent Attitudes

These results support our hypothesis that ambivalent stereotypes would predict both positive and negative attitudes toward these groups. Across all four groups, traits associated with positive or sympathetic qualities predicted positive attitudes; however, those associated with negative qualities predicted negative attitudes. That valenced stereotypes predict corresponding valenced attitudes is not surprising. What is more interesting is that these conflicting attitudes were held simultaneously about each group. Therefore, it is not that some immigrant groups were seen as positive and others as negative; rather, all of these immigrant groups were seen as both positive and negative.

These stereotypes also predicted conflicting support for different immigration policies. Positive stereotypes tended to predict support for more tolerant polices and opposition to intolerant policies, and negative stereotypes tended to predict the opposite pattern. Once again, this pattern is not surprising at face value, but what is surprising is that these patterns existed within each group. Prior research has tended to combine stereotypes into single scales, masking the possible role of conflicting beliefs in driving attitudes (e.g., Cowan et al., 1997; Oswald, 2005). The present data show that new information regarding intergroup perceptions and attitudes can be gleaned from separating different stereotype categories. The implications of this can be significant. We know from national surveys that the American electorate sees immigration as an important issue, but supports policies that appear at face value to conflict. Although this can be accounted for in part by polarized ideological attitudes, less is known about the role of ambivalence in predicting support for seemingly contradictory policies.

The present data provide another perspective with which to understand these patterns. If people endorse both positive and negative stereotypes about these groups, then whichever stereotypes are salient might affect the policies toward which people lean. Children of illegal immigrants who wish to attend college or serve in the military might remind people of stereotypes suggesting hard work or intelligence. Images of the inhumane conditions that migrant workers often endure might trigger sympathy toward the overall group, making them appear more exploited and in need of protection. On the other hand, news reports of terrorist attacks around the globe or crime in the Latino community might prioritize very different stereotypes, making more negative attitudes salient and the desire to protect the country more urgent.

Ambivalent stereotypes can also result in more fine-grained categorization of immigrant groups. People with more ambivalent attitudes may be more likely to perceive subgroups of immigrants within the larger ethnic or national category (Lee & Fiske, 2006). For example, people may break down Mexicans into those who are helpful and communal and those who are trapped in a cycle of poverty, promoting positive attitudes and support for the former subgroup, but ire toward the latter. Research on subgrouping supports the notion that parsing a social category into different subgroups can result in unique and often independent attitudes toward each subgroup (Richards & Hewstone, 2001).

Finally, our data show that not all stereotypes are relevant to intergroup and/or immigration attitudes. For example, although we may stereotype some Mexicans and Canadians (lumberjack types) as "macho," this may not play a role in how we evaluate the group overall and our willingness to let them into the country. This

finding has important implications for advocacy. Those promoting a certain image of an immigrant group in order to garner support for that group (or opposition) need to be mindful of the fact that only certain stereotypes might be relevant to particular judgments in particular contexts.

Warmth, Competence, and Beyond

Very little research has been done to investigate ambivalent stereotypes about immigrants. One program of research that has explored this issue stems from a larger body of work on the SCM. The SCM proposes that stereotypes in general tend to be multidimensional, ambivalent, and often complementary (Cuddy et al., 2008; Fiske et al., 2002; see also Jost & Kay, 2005; Kay & Jost, 2003; Kay et al., 2007). The model proposes that these ambivalent stereotypes reflect combinations of two overarching dimensions: competence and warmth. SCM research has typically demonstrated ambivalence by showing how social groups cluster to reflect differing combinations of warmth and competence judgments. It is also possible that many individual attributes and traits can reflect these two dimensions as well. In examining the results from the present study, we see that our findings both support and go beyond the two dimensions of the SCM.

First, many of the stereotypes that emerged in the IRT are relevant to either warmth or competence or both. However, not all of the stereotypes fall easily into either of these categories (e.g., stereotypes related to physical attributes or personal beliefs). This may be due to our inclusion of a broader array of qualities that we consider stereotypes (see Method section). But this also suggests that warmth and competence, although likely fundamental dimensions with which we judge groups, cannot account for all possible judgments.

Second, examining the overall pattern of stereotypes suggests that these two dimensions combine (sometimes in complementary ways) here as well. Prior research applying the SCM to immigrants has primarily examined ratings of warmth and competence across groups (Lee & Fiske, 2006); however, the present data shed light on the specific stereotypes that go into these judgments, revealing that they might be based on stereotypes that have very different implications for immigration attitudes. For example, in work on the SCM (Lee & Fiske, 2006), neither Middle Eastern nor Chinese immigrants are rated as very warm. The present research reveals that this could be due to very different beliefs: Arabs were seen as aggressive but Chinese were seen as socially awkward.

When it comes to immigration policies and practices, these different stereotypes could result in very different treatment of and opportunities for these groups. In the present study, *aggressive* (an Arab trait) predicted intolerant immigration policies; however, *aloof* (a Chinese trait) was less relevant to immigration attitudes. This suggests that different groups, although falling into similar clusters in the SCM (see Lee & Fiske, 2006), can be categorized into these clusters via different stereotypes. Furthermore, these stereotypes might have different potencies when it comes to predicting attitudes and policy choices. A similar example emerges with perceptions of competence. Both *lazy* and *exploited* suggest less competence, but the *lazy* item for Canadians predicted negative immigrant group attitudes, and the *persecuted* scale for Mexicans and Arabs uniformly predicted positive group-based and immigration policy attitudes.

These findings support the benefit in using different levels of analysis to understand how and when different traits related to broader categories of warmth and competence predict different attitudes and potential behaviors toward a group. The strategy used in the present research offers a different (but complementary) level of analysis compared with research on the SCM. The SCM provides a macrolevel analysis of stereotype content and the nature of ambivalence by examining how different groups (different immigrant, professional, racial, national, and social groups; e.g., Fiske et al., 2002; Lee & Fiske, 2006) fall along warmth versus competence dimensions using methods like cluster analysis of warmth and competence ratings of each group (however, see Linet al., 2005, for an examination of stereotype items within a group). The present strategy examined stereotypes on a more microlevel. Rather than cluster by groups, we used IRT to examine the actual stereotypes of each group and how these perceived traits vary both across and within groups. This enabled us to provide convergent validity of the more overarching SCM dimensions (the majority of our immigrant group stereotypes suggested warmth- and competence-relevant dimensions), but also to examine the effects of these individual stereotypes on group-based and policy attitudes. Here is where we were able to make specific predictions and see patterns that a macrolevel analysis might not provide.

Limitations and Future Directions

The present research largely supported our goals and predictions; however, these results should also be interpreted in the context of certain limitations. First, although the use of IRT to uncover commonly perceived stereotypes provides a more powerful means for assessing stereotypes without the social desirability and restriction of range problems we often see using only mean ratings of explicit measures, this method is relatively novel in this context. IRT is a well-established statistical method, but its use in detecting stereotypes is a new frontier. Although these analyses were able to provide the likelihood of each group being associated with particular stereotypes, we were unable to use these logit scores to directly predict attitudes. Instead, we took the most probable stereotypes that emerged from the IRT and returned to the raw scores of these items to predict group-based and policy attitudes. Although the latter technique is the one most commonly used in stereotyping research, future research is needed to better explore the implications of combining these two methods.

A second limitation is the use of a student sample. Students tend to be younger, more educated, more financially stable, more liberal, and more racially homogenous than the general population (see Henry, 2008). However, they also vote. In the 2008 elections, the youth vote (college-age adults—many of whom were current college students) was a powerful force in the election of Barak Obama (Dahl, 2008). Although not necessarily representative of the population at large, they do represent a relevant voting block that will play a role in elections that have ramifications for immigration policy.

There is also converging evidence from other research that suggests that the present data are consistent with national trends. First, many of the stereotypes that emerged in the IRT replicated prior work on stereotypes related to those groups (see Introduction for a review). This suggests that when examined using IRT, student data looked similar to data from other nonstudent samples.

Second, the patterns of data were consistent with research on the SCM that has used a variety of different samples, some of which were representative (e.g., Sibley et al., 2011). Although replication and converging evidence may increase confidence in these patterns of data, nevertheless, the present results should be interpreted with the sample in mind.

The present research raised other questions that can inform future work on stereotypes more broadly and immigration in particular. The proposition that stereotypes are both ambivalent and relative is an important departure from a legacy of stereotype research that has often examined groups in isolation. Furthermore, the stereotype ambivalence issue has been examined in the context of other stereotyped groups (e.g., women and ethnic minorities; Fiske et al., 2002; Glick & Fiske, 2001); however, it is only beginning to play a role in understanding attitudes toward immigrant groups. More research is needed to better understand the interrelations between seemingly contradictory stereotypes. Key questions are whether ambivalent stereotypes become combined to form new profiles (e.g., a group being warm but incompetent), or whether different stereotypes can come to the fore to influence attitudes uniquely or in the form of subgroups (e.g., the warmth-related stereotypes overpowering the incompetent stereotypes in predicting certain attitudes).

Regarding the relative nature of stereotypes, it is interesting that in the present data, some stereotypes were seen as hallmarks of a particular group (e.g., Arabs uniquely stereotyped as likely to engage in terrorism); however, most of the stereotypes only distinguished groups when compared with other groups. This latter pattern may represent a more accurate way to conceptualize stereotypes. Although beyond the scope of the present article, future research should consider the implications of relative stereotypes, such as how might the effects of a stereotype differ in contexts with differing comparison groups. The present research suggests that stereotypes can still have unique potency when predicting group-based and immigrant attitudes. Future research can examine how these attitudes change when making relative judgments between multiple groups, such as who to hire or let into the country.

The present research also has implications for immigration policies. If people's attitudes toward immigrant groups are ambivalent, it might make finding common ground on immigration policies challenging. However, it also suggests that capitalizing on positive beliefs and sidestepping fears or negative stereotypes might be successful. If policymakers can focus on positive impressions and beliefs, people might be more open to pragmatic immigration strategies that focus on the mutual benefits for both citizens and those coming into the country. We can see an example of this with the DREAM Act, a policy that plays up the positive beliefs and contributions of nonthreatening immigrant groups while avoiding more controversial issues. Future research should examine the effects of priming particular aspects of ambivalent beliefs to see whether priming positive beliefs makes people more open to tolerant strategies compared with priming negative beliefs and vice versa. This could shed light on the impact of various media campaigns on both sides of the issue, but also could suggest ways in which to counteract one-sided rhetoric.

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(*Appendices follow*)

Appendix A

Logit Measures for Each Immigrant Group Across the 47 Stereotypes

Item	Canadian		Arab		Mexican		Polish		Chinese	
	Measure	SE	Measure	SE	Measure	SE	Measure	SE	Measure	SE
1. Hardworking	1.12	0.18	1.03	0.19	1.69	0.23	1.20	0.19	2.01	0.24
2. Happy-go-lucky	1.94	0.19	−0.56	0.17	0.34	0.17	0.52	0.17	0.27	0.17
3. Loud	0.62	0.17	−0.50	0.17	0.49	0.17	0.27	0.17	−1.35	0.18
4. Smart	0.85	0.17	1.12	0.20	0.24	0.17	0.46	0.17	2.18	0.24
5. Religious	0.60	0.17	2.60	0.27	2.50	0.28	1.07	0.19	0.56	0.18
6. Friendly	1.61	0.19	0.52	0.18	1.07	0.19	0.79	0.18	0.24	0.17
7. Nationalistic	1.50	0.19	1.11	0.20	1.39	0.21	1.39	0.20	0.72	0.18
8. Tolerant	1.52	0.19	0.10	0.17	0.72	0.18	0.51	0.17	0.33	0.17
9. Ignorant	−0.39	0.17	−0.61	0.17	−0.61	0.16	−0.41	0.17	−0.75	0.18
10. Helpful	0.97	0.17	0.19	0.17	1.07	0.20	0.46	0.17	0.21	0.17
11. Devoted to family	1.05	0.18	1.70	0.23	2.37	0.28	1.40	0.20	1.78	0.23
12. Arrogant	−0.40	0.17	−0.29	0.17	−1.03	0.17	−0.01	0.17	−0.53	0.17
13. Prone to crime	−1.29	0.20	−0.97	0.18	−0.01	0.16	−0.72	0.17	−1.63	0.20
14. Raised in poverty	−1.00	0.19	−0.68	0.17	0.43	0.17	−0.37	0.17	−0.35	0.17
15. Honest	1.06	0.18	0.43	0.18	0.50	0.17	0.68	0.17	0.73	0.18
16. Macho	−0.18	0.17	−0.91	0.18	0.28	0.17	0.05	0.17	−1.59	0.19
17. Educated	1.25	0.18	1.16	0.20	−0.29	0.16	0.66	0.17	1.76	0.22
18. Intolerant	−0.90	0.18	−0.14	0.17	−0.63	0.16	−0.46	0.17	−0.47	0.17
19. Trustworthy	1.03	0.18	−0.01	0.17	0.20	0.16	0.66	0.17	0.58	0.18
20. Fanatical	−0.04	0.17	−0.09	0.17	−0.62	0.16	−0.50	0.17	−0.13	0.17
21. Aggressive	−0.42	0.17	0.08	0.17	−0.01	0.16	−0.06	0.16	−0.81	0.18
22. Talkative	1.02	0.18	−0.41	0.17	0.37	0.17	0.46	0.17	−0.36	0.17
23. Values traditions	1.18	0.18	1.99	0.26	1.91	0.25	1.75	0.22	2.02	0.26
24. Passive	0.42	0.17	−0.18	0.17	−0.36	0.16	−0.14	0.17	0.52	0.18
25. Likely to engage in terrorism	−1.99	0.24	−0.74	0.17	−2.32	0.21	−1.79	0.21	−1.79	0.21
26. Lazy	−0.58	0.17	−1.35	0.19	−1.59	0.18	−0.78	0.17	−1.80	0.21
27. Quick-tempered	−0.75	0.18	−0.09	0.17	−0.56	0.16	0.06	0.17	−1.02	0.18
28. Revengeful	−1.20	0.19	−0.26	0.17	−0.51	0.16	−0.66	0.17	−0.80	0.18
29. Socially awkward	−0.56	0.17	−0.27	0.17	−1.01	0.16	−0.58	0.17	0.13	0.17
30. Conservative	−0.13	0.17	0.41	0.18	−0.69	0.16	0.21	0.17	0.90	0.18
31. Ambitious	0.71	0.17	0.74	0.19	0.65	0.18	0.82	0.18	1.27	0.20
32. Materialistic	−0.38	0.17	−0.70	0.17	−1.01	0.16	−0.39	0.17	0.07	0.17
33. Stubborn	−0.27	0.17	−0.09	0.17	−0.44	0.16	0.30	0.17	−0.07	0.17
34. Practical	0.56	0.17	0.16	0.17	0.20	0.16	0.40	0.17	1.00	0.19
35. Untrustworthy	−0.88	0.18	−0.87	0.18	−1.03	0.17	−1.09	0.18	−1.15	0.18
36. Uneducated	−1.20	0.20	−1.30	0.19	−0.23	0.16	−0.90	0.17	−1.93	0.21
37. Exploited	−0.67	0.18	0.17	0.17	0.55	0.17	−0.39	0.17	−0.33	0.17
38. Dirty	−1.58	0.21	−1.16	0.18	−0.81	0.16	−0.99	0.18	−1.78	0.21
39. Competitive	0.31	0.17	−0.10	0.17	−0.14	0.16	0.43	0.17	0.78	0.18
40. Quiet	−0.01	0.17	0.29	0.17	−0.85	0.16	−0.25	0.17	0.98	0.19
41. Deceitful	−1.28	0.20	−0.90	0.18	−1.25	0.17	−0.98	0.18	−1.25	0.19
42. Oppressed	−1.36	0.20	0.08	0.17	0.28	0.17	−0.76	0.17	0.10	0.17
43. Victims of discrimination	−1.37	0.18	1.83	0.20	1.23	0.19	−0.42	0.17	0.45	0.17
44. Conformist	−0.41	0.17	−0.52	0.17	−0.56	0.16	−0.85	0.17	0.34	0.17
45. Cold	−0.66	0.18	−0.60	0.17	−1.30	0.17	−0.64	0.17	−0.61	0.17
46. Passionate	0.68	0.17	0.37	0.17	0.76	0.18	0.21	0.17	−0.24	0.17
47. Short	−0.70	0.18	−0.65	0.17	0.16	0.17	−0.63	0.17	1.25	0.19

(*Appendices continue*)

Appendix B

Formula for the Rating Scale Model Used in the IRT Analyses

For this study, the rating scale model takes the following form:

$$\log \frac{P_{jik}}{P_{ji(k-1)}} = \beta_j - \delta_i - \tau_k,$$

where P_{jik} is the probability that person j assigns a rating of k to item i; $P_{ji(k-1)}$ is the probability that person j assigns a rating of $k-1$ to item i; β_j is the observed latent trait-level (stereotype level) of person j; δ_i is the difficulty of endorsing item i; and τ_k is the location (difficulty) of the threshold between rating scale categories $k-1$ and k. For the rating scale model, thresholds are common across all items, and are defined as the location at which the probability of observing category $k-1$ is equal to the probability of observing the adjacent category k, i.e., the point at which the probability characteristic curves intersect.