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Cognitive Maps of Educators' Attitudes Toward Unauthorized Immigrants: A Multidimensional Scaling Perspective

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COGNITIVE MAPS OF EDUCATORS' ATTITUDES TOWARD UNAUTHORIZED IMMIGRANTS: A MULTIDIMENSIONAL SCALING PERSPECTIVE

Kerry Pecho

135 Pages

Despite America's long-standing history as a nation of immigrants, legislative acts, political discourse, and social movements have highlighted who immigrants are and where they are from play a substantial role in how they are received. Although attitudes toward highly-skilled immigrants who help secure the global standing of the U.S. are typically positive and welcoming, attitudes toward immigrants who are perceived as contributing less, and taking more, are far less positive. Ewing (2012) noted that decisions regarding the U.S. immigration system are "often shaped more by public fears and anxieties than by sound public policy" (p. 2). Additionally, the media often ignore the multiple challenges faced by immigrants and instead focus solely on their legal status (Nittle, 2012). Experiencing prejudice, on an individual and institutional level, has detrimental effects on one's physical well-being, emotional well-being, and achievements and success in life. Research has indicated that teachers' implicit attitudes have resulted in lower expectations of achievement plus discriminatory discipline practices directed toward students from minority ethnic backgrounds (Staats, 2016; van den Bergh, Denessen, Hornstra, Voeten, & Holland, 2010). Studies have also shown that pre-service educators view immigrant students as less competent than their native-born counterparts as well as more responsible for their academic underperformance (Froehlich, Martiny,

Deaux, & Mok, 2016). As such, the purpose of this study was to examine educator attitudes toward unauthorized immigrants. This was the first-known study to utilize multidimensional scaling (MDS) to examine in-service teachers' and pre-service education majors' perspective toward unauthorized immigration.

In-service teachers ($N = 20$) and pre-service education majors ($N = 20$) completed a card-sorting task and several questionnaires. Stimuli for the card-sorting task were statements about immigration derived from the vernacular of media reports. Card-sorting data were analyzed using multidimensional scaling (MDS), and a two-dimensional solution was produced. Dimension 1 reflected the valence (i.e., positive or negative connotation) of the statements, whereas Dimension 2 reflected economic and cultural issues reflected in the content of the statements. Results revealed a continuum of complexity in thinking about immigration based on the differential salience of the content versus valence of item stimuli. Findings indicated that in-service teachers were twice as likely to attend to Dimension 2 (i.e., economic and cultural issues) than pre-service education majors. Results offer important theoretical contributions to the literature on teacher attitudes toward different social groups, as well as methodological contributions to the multidimensional scaling literature.

KEYWORDS: Multidimensional Scaling, Unauthorized Immigration, Teacher Attitudes

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IMMIGRANTS: A MULTIDIMENSIONAL SCALING PERSPECTIVE

KERRY PECHO

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Fulfillment of the Requirements
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Department of Psychology

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COGNITIVE MAPS OF EDUCATORS' ATTITUDES TOWARD UNAUTHORIZED
IMMIGRANTS: A MULTIDIMENSIONAL SCALING PERSPECTIVE

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CHAPTER I

THE PROBLEM AND ITS BACKGROUND

During his landmark address on immigration to the nation in November 2014, President Obama proclaimed, “We are, and always will be, a nation of immigrants” (Office of the Press Secretary, 2014b). President Obama was not the first president to use this adage, and he will not be the last. Throughout American history, millions of people from around the world have immigrated to the U.S. for numerous reasons. These reasons include opportunities to work, study, experience various personal freedoms, improve socioeconomic status, and flee war and persecution. The ‘push’ and ‘pull’ factors driving immigration have ebbed and flowed over time, and the reception of immigrants by U.S. citizens has varied alongside the economy. Today’s immigrants, not unlike those who came before them, are the topic of significant political, economic, and social controversy. U.S. borders, especially those in the southwest, have been denounced in the media as porous and insecure (Dinan, 2015), and the U.S. immigration system has been criticized for functioning slowly and inefficiently. A writer for the Californians for Population Stabilization referred to the U.S. immigration system as a colander, with each hole representing a weak entry point into the country (Cutler, 2014). As President Obama indicated, “Our immigration system is broken, and everybody knows it” (Office of the Press Secretary, 2014b). Some advocates for policy reform view the current system as harsh and unforgiving toward individuals looking to immigrate or maintain their presence in the U.S., whereas other advocates view the system as too lax. Regardless of their position on the matter, politicians and members of the lay community alike feel that immigration, especially unauthorized immigration, is an issue that must be addressed

immediately. Because of the extensive evidence indicating that prejudice toward immigrants has detrimental effects on their psychological well-being (e.g., Stephan, 2012), research and informed advocacy in this area are essential.

In 2013, an estimated 43.1 million immigrants lived in the U.S (Zong & Batalova, 2015). Of these 43.1 million, which represented an all-time high for the U.S., 11.4 million (26%) were unauthorized immigrants. Unauthorized immigrants, also referred to inaccurately as undocumented immigrants and pejoratively as illegal aliens, are foreign-born noncitizens residing in the U.S. without authorization. It is difficult to determine a precise estimate of those who are of unauthorized status because many live ‘in the shadows,’ or ‘underground’ (see Suárez-Orozco, Yoshikawa, Teranishi, & Suárez-Orozco, 2011). Of the estimated 11.4 million unauthorized immigrants in the U.S., 71% were born in Mexico and Central American countries, with 58% hailing specifically from Mexico (Zong & Batalova, 2015).

U.S. immigration policy has been a source of political debate and social discourse for decades, if not centuries. As Stephan, Ybarra, and Bachman (1999) noted, “Americans have a dismaying history of intolerance toward immigrants” (p. 2221). Americans are also strongly divided in terms of how many and what kind of immigrants they are willing to accept, and this division has led to significant consequences. On November 20, 2014, President Barack Obama issued a series of executive actions on immigration. Compared to the executive orders of previous presidents, Obama’s executive order on immigration has “garnered the most antagonism from states, the media, and Congress” (Schulberg, 2015, p. 624). According to the Pew Research Center (2014a), about 50% of Americans disapprove of the President’s Immigration

Accountability Executive Action, whereas 46% approve of it, with the remainder undecided. Further, 82% of Republicans disapprove of the executive order, and 71% of Democrats approve of it. These statistics reflect the sharp division between the two major political parties on this contentious issue.

President Obama's Immigration Accountability Executive Action

President Obama's 2014 executive actions on immigration were delivered after numerous standstills in Congress over the previous 10 years, such as when an immigration bill passed by the U.S. Senate in 2013 went unaddressed by the U.S. House of Representatives in 2014. Because comprehensive immigration reform has been elusive in Congress, immigration policy decisions have been made more frequently by state and local governments and, more controversially, by the executive branch.

Obama's executive order on immigration can be analyzed in terms of two major components that have inspired most of the political and social discourse on this topic. First, the executive order on immigration expanded the number of unauthorized immigrants eligible through *Deferred Action for Childhood Arrivals* (DACA). This program was initiated in 2012 and offered temporary deportation relief and work authorization for children who were born abroad and brought to the U.S. without authorization by their parents (and who meet additional criteria; [USCIS, 2015]). Second, the executive order introduced the *Deferred Action for Parents of Americans and Lawful Permanent Residents* (DAPA) program that provides temporary relief from deportation to the parents of children who are U.S. citizens or lawful permanent residents (and meet additional criteria; Office of the Press Secretary, 2014a). There are those who argue that the executive actions were an exploitation of executive power, whereas others oppose the

actions because they are opposed to legalizing the status of individuals who are currently unauthorized to be in the U.S.

The President defended this portion of the executive order (i.e., DAPA) by asserting that deportation efforts should target “felons, not families. Criminals, not children. Gang members, not a mom who's working hard to provide for her kids” (Office of the Press Secretary, 2014b). Currently, mothers working hard to provide for their children are, in fact, being deported. Research suggests that the negative impact of the apprehension, detention, or deportation of a parent is significant on the family and results in forced family separation, disrupted parent-child attachment, increased familial stress, and economic loss for the household (Yoshikawa & Kalil, 2011). As described by the Human Rights Watch, one mother was deported in 2010 after 14 years in the U.S. in the absence of any criminal convictions. She asserted, "I feel like I'm dying every day my children are alone over there" (Long, 2015). Although many Americans feel a call to action when made aware of these stories of family separation, just as many see them as a warranted consequence of breaking the law. This second group tends to suggest that President Obama’s executive order on immigration offers undeserved amnesty to individuals who have broken the law and provokes presumably devastating consequences. For example, a representative of the Colorado Alliance for Immigration Reform argued, “The result of executive amnesty will be millions upon millions of ‘immigrants’ who are a net drain on the American tax base and who take jobs that over 18 million unemployed Americans would willingly take - at fair wages” (Elbel, 2015). Currently, there are no data to support this fear.

To what extent do beliefs about immigration also reflect beliefs about (and prejudice toward) individuals from a particular race or ethnicity in the case of Latinos? Hartman, Newman, and Bell (2014) found that White Americans reported taking significantly greater offense to transgressions related to unauthorized immigration (e.g., “working under the table”, displaying a “foreign flag”) when the fictional perpetrating immigrant was Hispanic rather than White or unspecified. Similarly, Brader, Valentino, and Suhay (2008) reported that White opposition to pro-immigrant public policy increased when Latino immigrants were featured in news about the economic costs of immigration versus European immigrants. Further, Berg (2013) reported that symbolic racism (i.e., more subtle prejudice, microaggressions) significantly predicted opposition to pro-immigrant public policy (e.g., immigrant access to federal aid, work permits for undocumented immigrants) among native-born U.S. citizens. These findings suggest that public opinion about immigration, especially unauthorized immigration, is complex and merits further exploration of the positive and negative characteristics attributed to unauthorized immigrants, especially those of Latino heritage.

Research has shown that frequent exposure to prejudicial stereotypes negatively affects the devalued group members’ emotional states, particularly in intergroup contexts (Tropp, 2003). Psychological distress and reduced self-esteem are common among regularly stigmatized groups (e.g., racial/ethnic minority groups, people living with mental illness, HIV/AIDS, or obesity; see Pryor & Bos, 2014). Targets of prejudice often experience increases in feelings of anxiety as well as hostility toward the group targeting them, which creates negative experiences of and expectations for intergroup interactions. As the U.S. population continues to diversify, positive communication and interactions

between groups become increasingly important but remain challenging. For example, even though research has shown that the immigration-crime association is a popular myth unsupported by data (e.g., Hagan & Palloni, 1999; Martinez, Stowell, & Lee, 2010), there are many who believe it to be true and spread their fears within their community. Prejudicial comments about immigrant communities as crime-ridden can do serious harm to these devalued groups.

One subset of professionals that has been shown to have increasing opportunity to interact with students from immigrant families is educators. Research has shown that approximately 6.9% of students enrolled in kindergarten through 12th grade in the U.S. reside with at least one unauthorized immigrant parent (Pew Research Center, 2015). There has been a push for educators and administrators to demonstrate increasing cultural competence with students from all backgrounds as the U.S. population continues to become more racially, ethnically, and linguistically diverse (NEA, 2008). Unfortunately, there is research suggesting that teachers' implicit attitudes influence their expectations of achievement for students from different ethnic backgrounds (e.g., Appel, Weber, and Kronberger, 2015; van den Bergh et al., 2010) and that these disparities lead to underperformance and disproportionate discipline practices (Staats, 2016). Due to educators' increasing interactions with students from immigrant families and the potential for their attitudes to influence their academic and behavioral expectations, examining teacher attitudes toward immigration is of great importance and the focus of this study.

Definition of Terms

In this paper, the term, *immigrants*, refers to individuals who migrate from their country of origin to a host country. The phrase, *unauthorized immigrants*, refers to

immigrants who do not have a valid immigrant visa, whose status has not been adjusted to permanent resident, or who have not been naturalized as U.S. citizens (Department of Homeland Security, 2017). *Latino* refers to individuals from any of the Spanish-speaking countries in Central or South America. Although the term *Latino* is used throughout this paper, the term *Hispanic* was used in all materials presented to participants. *Hispanic* is the term used at the federal level to describe persons of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish cultures or origin, regardless of race (U.S. Census Bureau, 2013). The materials presented to participants were intended to reflect the vernacular of laypersons, popular media, and the U.S. government; as such, the term *Hispanic* was used with participants in the study. Similarly, the terms *illegal* and *undocumented* are more commonly used than the term *unauthorized* by laypersons and the media to describe immigrants who do not have proper authorization to reside in this country. The term *illegal* has been widely criticized as pejorative and was not used in the research protocol to avoid priming participants to think negatively about the topic under study. The term *undocumented* is typically inaccurate because the majority of immigrants have documentation (e.g., they may carry an expired visa), but it is more commonly used than *unauthorized* and therefore was used throughout the study. In summary, the phrases *undocumented* immigrants or *Hispanic* immigrants were presented to participants rather than the phrases *unauthorized* immigrants or *Latino* immigrants, which are used in this paper.

To combat the perpetuation of prejudicial stereotypes of unauthorized immigrants, it is necessary to understand the variety of characteristics attributed to unauthorized immigrants and to identify individual differences among those who attribute these

characteristics. Participants' perceptions of unauthorized immigrants were assessed using a series of questionnaires and a card-sorting task, the data from which were analyzed using multidimensional scaling (MDS). The purpose of MDS is to study the interrelations within a given data set and graphically display those relations. A primary advantage of MDS is that it can be used to uncover underlying dimensions in participants' judgments (Rosenberg & Kim, 1975). Therefore, the current study used MDS to contribute to our understanding of perception formation regarding unauthorized immigrants among pre-service and in-service educators. MDS produces geometric distributions of data that can be assessed for individual and group differences, so it was the most appropriate method of data analysis for this exploratory study. This study was the first known investigation to use MDS to examine the characteristics of unauthorized immigrants that are most salient to in-service and pre-service educators.

CHAPTER II
REVIEW OF LITERATURE

Attitudes Toward Immigrants

The U.S. has long been a destination for immigrants from all over the world, and the reception provided has varied over time and across immigrant groups. As Yakushko (2009) described, “immigrants coming to the United States have typically been met by discrimination and prejudice at worst and by mild distrust and indifference at best” (p. 43). Although some immigrant groups, especially those whose skill sets are deemed highly valuable, have consistently received a warm welcome, many groups are perceived as threats to various aspects of American life.

Threat Perceptions

Research has emphasized that perceived threats and competition with others can form and maintain prejudice against immigrants (Dovidio & Gaertner, 2010; Esses, Brochu, & Dickson, 2012). According to Quillian (1995), native populations perceive threat from immigrants when they believe their social position, prerogatives, or control over valued resources are at risk of being overtaken. A common result of these threat perceptions is the generation of negative stereotypes, prejudicial attitudes, and attributions of blame for societal problems against the immigrant group. Even though immigrants may not be contributing to a community’s economic setbacks in reality, a native citizen’s perception that this is the case will take precedence over fact and may result in group derogation, discrimination, and exclusion of immigrants. As Stephan, Ybarra, and Morrison (2009) explained, “perceived threats have real consequences, regardless of whether or not the perceptions of threat are accurate” (p. 45). When

members of one group (e.g., the ingroup) perceive that another group (e.g., the outgroup) is in a position to cause them harm, they experience an intergroup threat. *Ingroup* and *outgroup* are flexible terms that can be applied to any group. Due to this study's investigation of attitudes toward immigrants, throughout this paper *ingroup* refers to U.S.-born citizens and *outgroup* refers to immigrants. It is important to note that researchers have also examined immigrants' attitudes (in which case immigrants constitute the ingroup) toward host citizens as well as other immigrants.

Stephan and Stephan (2000) proposed the integrated threat theory of prejudice that identified four types of threat that predict prejudice toward immigrant groups: realistic threats, symbolic threats, intergroup anxiety, and negative stereotypes. Stephan and Renfro (2002) modified their theory by narrowing its focus to only realistic and symbolic threats and renaming it 'intergroup threat theory.' Realistic intergroup threats include threats to the very existence of the ingroup, its political power and economic assets, and its physical or material well-being (Stephan & Stephan, 2000). These threats elicit concerns about a loss of resources and physical harm (Stephan, Ybarra, & Morrison, 2009). Other researchers have further separated realistic threats into economic threats and security threats (Meuleman & Billiet, 2012). This distinction is used in this study to describe in more detail the growing research on both forms of realistic threat. Finally, symbolic intergroup threats involve threats to group esteem and elicit concerns about the integrity or validity of the ingroup's values (Stephan et al., 2009).

Economic threats. According to Meuleman and Billiet (2012), individuals who view immigrants as an economic threat fear that their social group will need to compete with immigrants for scarce resources. Native citizens often view immigrants as the

primary cause (or at least a major cause) of worsening economic conditions in their community or country. They tend to believe that immigrants take jobs away from American workers and take away more than they put in to the U.S. economy (Meuleman & Billiet, 2012). Cosby, Aanstoos, Matta, Porter, and James (2013) found that perceived economic competition and ethnic prejudice, which is discussed in more detail below, are significantly related to support for the deportation of unauthorized Latino immigrants. Specifically, Cosby and colleagues found that as participants agreed with additional items on their ethnic prejudice and perceived economic competition scale, they demonstrated greater odds of favoring deportation over less punitive responses to the issue of unauthorized immigration (i.e., allowing them to stay temporarily on a work permit and allowing them to stay permanently).

As Cosby et al.'s (2013) findings suggest, perceived economic competition is a key determinant of attitudes toward immigrants that has received significant attention among researchers. For example, Esses, Jackson, and Armstrong (1998) introduced the Instrumental Model of Group Conflict to describe how resource stress (i.e., the perception that there is limited access to a desired resource) and identification of a potentially competitive outgroup lead to perceived group competition for resources. Esses, Dovidio, Jackson, and Armstrong (2001) further argued that perceived group competition often involves zero-sum beliefs (i.e., beliefs that more resources and/or power for immigrants necessitates less resources/power for nonimmigrants). Efforts to reduce or remove group competition often involve outgroup derogation (i.e., making more negative evaluations of outgroup members than one's ingroup), discrimination, and avoidance of the outgroup.

Jackson and Esses (2000) investigated the causal influence of perceived economic competition on participants' willingness to help immigrants through direct assistance, empowerment, and group change. Direct assistance involves solving immigrant groups' problems directly without ascribing responsibility to them for their problems or solutions. Empowerment prioritizes helping immigrants help themselves through the removal of barriers to their successes. Group change, on the other hand, involves admonishing immigrant group members to change themselves and solve their problems. To fabricate a sense of perceived economic competition among participants, Jackson and Esses presented them with one of two editorials about immigration to Canada. The editorial for the economic competition condition focused on skilled immigrants' success in the difficult Canadian job market. In contrast, the editorial for the control condition described vague, general immigration trends. The researchers found that perceived economic competition led to diminished willingness to help immigrants via empowerment. In their second study, Jackson and Esses (2000) found that a higher social dominance orientation (i.e., endorsement of ideologies that maintain group hierarchy) predicted less willingness to endorse empowerment for immigrants. This relation was mediated by participants' level of zero-sum beliefs. Jackson and Esses suggested that these relations reflect native citizens' belief that helping to empower immigrants would equalize power relations and reduce their dominance.

In a related study, Esses et al. (1998) asked participants who were native citizens of Canada to share their attitudes toward 'Sandirians,' a fictitious immigrant group, and their support for Sandirian immigration to Canada. Participants who were prompted to perceive the Sandirians as an economic threat expressed more negative attitudes toward

immigrants and were less willing to support immigration to Canada. Participants who read about the success of immigrants in a difficult job market depreciated the positive characteristics (i.e., hard-working, family-oriented) attributed to Sandirians in the editorial. Specifically, participants suggested that hard-working immigrants worked to the exclusion of everything else (e.g., native citizens' need for jobs), and family-oriented immigrants cared only about the welfare of their own family. Conversely, immigrants who utilize social services (e.g., welfare benefits) due to economic difficulties are perceived negatively by the host society (e.g., as a drain on the economy). Using these results as evidence, Esses et al. (2001) asserted that "because of the threats that they are seen as posing, immigrants face a fundamental dilemma" (p. 391). That is, whether immigrants fail or succeed economically, they are often perceived as threats and therefore negatively by individuals who identify with the host nation (e.g., native citizens).

Security threats. As the substantial research investigating the hypothesized link between immigration and crime would suggest, a frequent concern among many Americans is that more immigrants means more crime (Wang, 2012). However, researchers have found that the levels of crime documented in immigrant communities is typically no where near what would be expected based on citizens' level of fear (Higgins, Gabbidon, & Martin, 2010). In fact, Lee (2013) explained that immigration has been found not only to reduce neighborhood crime, but immigrants also demonstrate better-than-expected health outcomes and contribute to economic revitalization. Nevertheless, the belief that immigration, especially unauthorized immigration, poses a security threat to native citizens is well documented.

For example, in a qualitative study investigating prejudice toward immigrants in the Midwestern United States, Fennelly (2008) held focus groups with older, White, U.S.-born residents in a rural community in Minnesota. Although crime rates in the sample community had decreased over the previous five years, participants reported perceiving an increase in crime. Fennelly (2008) attributed these heightened security worries in the absence of higher rates of crime committed by immigrants to a fear of the unknown, assumptions about local immigrants based on stories about immigrants in other communities, and the selective recall of incidents involving immigrants. Similarly, Mayda (2006) found that native residents who believe immigrants are more likely than native residents to commit crimes tend to have more negative attitudes toward immigrants when in their presence based on their security concerns.

Higgins et al. (2010) investigated whether racial and ethnic groups differ in how they view immigration and crime. For example, they asked whether Hispanics view the issue of immigration and crime differently than other groups because they are frequently associated with it. Higgins and colleagues found that Black and Hispanic participants were less likely than White participants to indicate that immigration made crime worse. These authors suggested that their findings may be influenced by the stereotypical images of immigrants presented by media outlets and national campaigns directed at the majority.

Wang (2012) also reported findings that many native citizens view immigrants as more likely to engage in crime and are, therefore, a threat to social order. Wang suggested that public perceptions of immigrants' criminal threat are not often swayed by empirical fact (i.e., research has found either no significant relationship between immigration and crime or that immigrants are less likely to commit crimes than native-

born individuals [Hagan, Levi, & Dinovitzer, 2008]). Instead, attitudes towards immigrants are based most often on stereotypes (e.g., the belief that unauthorized immigrants are a threat to public safety). For example, Wang (2012) found that the perception of unauthorized immigrants as a criminal threat was strongly influenced by host citizens' fallacious beliefs regarding the number of unauthorized immigrants in the area rather than the actual size of that population. Therefore, it is also necessary to consider the role of perceived immigrant group size in the formation of attitudes toward immigrants.

Symbolic threats. In contrast to economic or security threats, which are associated with a perceived scarcity of tangible resources such as economic assets, political power, and physical well-being, symbolic threats involve the perception that another group (e.g., immigrants) is a danger to the ingroup's core values, attitudes, and customs (Vala, Pereira, & Ramos, 2006). Similarly, Meuleman and Billiet (2012) used the term 'cultural threat' to describe the perception that immigrants who adhere to different cultural traditions pose a threat to the ingroup's worldview. Accordingly, challenges to the ingroup's value system generate perceptions of symbolic threat because the ingroup believes its value system is morally right and superior to that of others and should therefore be maintained.

One of the most commonly perceived symbolic threats to national identity is language. According to Fennelly (2008), when immigrants' native languages are not English, they are perceived by many native residents of the U.S. as posing a challenge to English as the *de facto* national language. English proficiency may be perceived as a reflection of core American values instead of a skill that takes time to acquire. The

former view suggests that immigrants make a conscious choice whether or not to learn and speak English in their new community. For some native residents of the community, immigrants who speak English demonstrate an acceptance of American values and a desire to integrate (i.e., assimilate) into the dominant society. Immigrants who continue to speak their native language, however, are viewed as unwilling to assimilate, trying to isolate themselves, and even “devious” (Fennelly, 2008, p. 13). Linguistic differences may be used to justify pre-existing xenophobic attitudes and foster prejudicial beliefs. Often times, symbolic threats such as the use of a ‘different’ language are accompanied by nostalgic beliefs about a community at a time before it experienced demographic changes perceived as contributing to the area’s economic and social decline (Fennelly, 2008). As Mayda (2006) noted, individuals who are very patriotic and nationalistic are more likely to oppose immigration.

Another common source of tension between a host culture and immigrant groups is the extent to which immigrants assimilate to the host culture or maintain their native culture. Host cultures tend to believe that immigrant groups’ values and characteristics differ markedly from their own; therefore, host groups tend to prefer that immigrants assimilate. When an immigrant group seeks to maintain its culture instead of assimilating, the host group may perceive the immigrant group as a threat to its values (Stephen et al., 2009). However, the host group is not the only group to feel threatened. The immigrant group is likely to feel threatened as well, especially in light of documented host group reactions to threat, as discussed below.

Antecedents of Threat Perception

Perceived immigrant group size. One influence on threat perception is perceived immigrant group size. According to Stephan et al. (2009), perception of group size is a key influence on attitudes toward immigrants. They suggested that individuals often misunderstand actual immigrant group sizes, and evidence indicates perceived group size should be considered when modeling threat perception. For instance, inaccurate information about immigrant populations leads to perceived threats (realistic, symbolic, or security) that result in the perpetuation, and sometimes exacerbation, of prejudice against immigrants. According to Kosic, Phalet, and Mannetti (2012), threat perception may be related to individuals' perceptions of the size and composition of the immigrant population in their host country. Kosic and colleagues investigated how host citizens in Italy categorize immigrants and explored the influences of perceived threat, prejudice, and *need for cognitive closure* of this process. Kosic et al. defined need for cognitive closure as "the desire for a definite answer to a question, rather than uncertainty, confusion, or ambiguity" (p. 68). The authors found that during the process of ethnic categorization, participants' level of perceived threat from a group of immigrants increased the amount of prejudice participants exhibited plus their need for cognitive closure.

Research has shown that people have a tendency to overestimate the number of immigrants in the host community, especially in Western countries (Stephan et al., 2009). Individuals who overestimate likely have a high need for cognitive closure and a related lack of motivation to put effort into the extended information-processing required to more accurately estimate immigrant populations and categorize immigrants into more specific

groups (e.g., based on host country; Kosic et al., 2012). Immigrant groups that are perceived to be the largest are usually the most devalued by the media, politicians, and various members of the community. For example, Semyonov, Rajjman, Tov, and Schmidt (2004) found that *perceived* proportion of immigrants, not *actual* proportion, predicted respondents' exclusionary attitudes toward immigrants. Further, this relation was mediated by perceived threats. This tendency to stigmatize the largest immigrant group is likely connected to the perception that a large outgroup poses a greater economic threat in terms of competition for employment opportunities and public welfare resources.

These findings support the popular and media emphasis on unauthorized Latino immigrants, especially those from Mexico versus other countries of origin. According to Zong and Batalova (2015), between 2008 and 2012, 71% of all unauthorized immigrants were born in Mexico and Central American countries. Specifically, 58% were from Mexico, 6% from Guatemala, 3% from El Salvador, and 2% from Honduras. The country with the next largest share of unauthorized immigrants was China (2%). It is important to note that the number of Mexican immigrants (legal and unauthorized) declined 1% from 2010 to 2013, and that the sending regions with the largest increases in immigrants were South Asia, East Asia, the Caribbean, and the Middle East (Camarota & Zeigler, 2014). Therefore, contrary to popular opinion, the number of unauthorized Latino immigrants, particularly from Mexico, is not growing exponentially. Despite this information, the portrayal of U.S. immigration as primarily involving Mexican nationals is likely to influence U.S.-born residents' perceptions of Latino immigrants, even if host citizens' local immigrant population is predominantly of legal status or from countries other than Mexico.

History of group conflict. Another antecedent of threat perception is a history of group conflict. When prior relations between groups have been characterized by intense conflict, each group may perceive a higher level of threat (Stephan et al., 2009). The current U.S. immigration system has been strongly influenced by historical events, cultural attitudes, and an evolving global context (Yakushko, 2009). A brief examination of the history of immigration to the U.S. reveals extensions of welcome as well as strained relations between the U.S. and its multiple sources of immigrants (see Ewing, 2012; Migration Policy Institute, 2013a, 2013b). Many immigration policies have been enacted at the federal level (e.g., Homeland Security Act of 2002), whereas others have been enacted at the state level (e.g., Beason-Hammon Alabama Taxpayer and Citizen Protection Act of 2011). Additionally, some policies have been relevant to unauthorized immigrants, such as the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA). Immigration is an enduring source of legislative activity, and many of these acts add to the stigma associated with and the discrimination experienced by unauthorized immigrants.

Racial and ethnic prejudice. As the literature described above indicates, group threat theory and threat perceptions are often used to explain immigration policy opinions. However, a growing body of evidence suggests that threat perceptions are commonly intertwined with racial and ethnic prejudice as predictors of native-born citizens' attitudes toward immigrants and immigration policy. For example, Fennelly (2008) suggested that perceived symbolic threats to cultural unity are part of a circular process in which the threats stem from and reinforce prejudicial beliefs. Similarly, Vala, Pereira, and Ramos

(2006) argued that racial prejudice drives threat perceptions, which drive host citizens' preferences for restrictive immigration.

Berg (2013) investigated the relation between symbolic racism and native-born citizens' policy opinions toward immigrants with and without authorization. Symbolic racism, which is also referred to as subtle prejudice, aversive racism, and modern racism, represents a "socially subtler form of racial prejudice" (Berg, 2013, p. 2). Berg defined symbolic racism as a "latent psychological belief system that disfavors racial minorities" and "emerges in dominant group members when they are confronted with certain political symbols" that result in the dominant group's opposition to race-related policies (p. 4). The use of the adjective 'symbolic' is intended to highlight prejudice based on abstract moral values rather than personal experience. The construct of symbolic racism has typically been applied to relations between White and Black people in the U.S. (Berg, 2013). Symbolic racism is closely tied to racial microaggressions, which are "brief, everyday exchanges that send denigrating messages to people of color because they belong to a racial minority group" (Sue et al., 2007, p. 273). Microaggressions create and maintain inequities, perpetuate notions of minority inferiority, and denigrate non-White cultural values and communication styles. Microaggressions have been shown to create psychological dilemmas among recipients by fostering self-doubt and feelings of isolation. Sue et al. (2007) explained that Latino Americans and Asian Americans are often recipients of microaggressions that create the sense of being an alien in one's own land, the effect of which is to negate recipients' U.S. American heritage and convey the message that they are perpetual foreigners.

Research in the area of public opinions toward immigration policy has found support for a distinct racial/ethnic dimension in the formation of attitudes toward immigrants. For example, using data from national surveys conducted in 1994 and 2004, Berg (2013) investigated the extent to which symbolic racism and group threat predicted native-born citizens' opinions toward immigration policy. Questionnaire items that measured symbolic racism included beliefs such as "the less privileged group fails to work hard" and "the less privileged group receives undeserved federal aid" (p. 6). Native-born citizens' policy opinions toward unauthorized immigration in particular tapped three main issues: unauthorized immigrants' entitlement to work permits, citizenship for their U.S.-born children, and attendance at public universities at the same costs as U.S.-born students. Berg (2013) found that 45% of native-born citizens favored immigration policy that denied citizenship to the U.S.-born children of unauthorized immigrants. Additionally, symbolic racism significantly predicted opposition to legal immigration, immigrant access to federal aid and standard costs for college, citizenship for U.S.-born children, and work permits for unauthorized immigrants. Symbolic racism and group threat explained approximately the same amount of variance in native-born citizens' opinions about policy related to unauthorized immigration. Therefore, although group threat has received greater attention by researchers, investigations of the formation of attitudes toward immigrants and immigration policy should also consider the impact of racial and ethnic prejudice.

Hartman, Newman, and Bell (2014) highlighted this issue when they identified that "the critical question lurking underneath these debates about immigration in contemporary American politics is the role of prejudice as a contributing factor to this

political polarization” (p. 160). Hartman and colleagues suggested that European Americans have adopted a coded, race-neutral means of expressing prejudice toward Latino immigrants. Specifically, White participants in their study were more supportive of restrictive immigration policies when they received a Latino group cue instead of a non-Latino group cue. Hartman et al.’s (2014) findings support the ‘coded prejudice hypothesis,’ which states that part of White U.S. citizens’ opposition to immigration in the U.S. is rooted in anti-Latino prejudice but this prejudice is disguised as concern over economic, cultural, and criminal threats. Similarly, in their investigation of predictors of attitudes toward unauthorized Latino immigrants, Cowan, Martinez, and Mendiola (1997) found that attitudes toward Mexican Americans significantly predicted attitudes toward unauthorized Latino immigrants, which reflects a bias against Latinos. Their results suggest that immigration status is not the sole reason people reject unauthorized immigration; instead, an immigrant’s ethnicity also plays a role in anti-immigrant sentiment.

Xenophobia. Although there is ample evidence that racial and ethnic prejudice contribute to negative attitudes toward immigrants, all immigrants can be the targets of prejudice. In fact, immigrants and refugees who are of the same race as those in the dominant host culture still experience prejudice because they are perceived as foreign (Yakushko, 2009). Xenophobia can be understood as “an underlying set of attitudes based on fear, dislike, or hatred of foreigners” (Yakushko, 2009, p. 37). Xenophobia involves attitudinal, affective, and behavioral prejudices that are linked to ethnocentrism, or the attitude that one’s group is superior to others. Yakushko also described political xenophobia, which involves the desire to create restrictive public policies against

foreigners. According to Yakushko (2009), anti-immigrant sentiments are often perceived as more justifiable than negative attitudes toward various racial or ethnic groups because they are seen as reflecting realistic concerns.

Stereotypes. Although stereotypes are commonly portrayed as negative, they often serve pragmatic functions. For example, stereotypes help perceivers navigate their daily interactions and determine whom to approach and whom to avoid (Green & Manzi, 2002). However, stereotypes also serve to justify the subordination of minority groups (Stephan et al., 1999). For example, stereotypical characteristics attributed to immigrants include poor, lazy, criminal, uneducated, aggressive, and dependent on social services (Cowan, Martinez, & Mendiola, 1997; Timberlake & Williams, 2012; Yakushko, 2009).

To assess stereotypes attributed to immigrants, Stephan et al. (1999) included a measure with the following 12 traits shown to be associated with immigrant groups: dishonest, ignorant, undisciplined, aggressive, unintelligent, clannish, hard working, reliable, proud, respectful, clean, and friendly. As this list indicates, stereotypes of immigrants can be positive and negative. The connotation of the stereotype associated with a particular immigrant group is often determined by the nationality, race, and/or ethnicity of that group. For example, in their investigation of stereotypes of immigrants from four regions, Timberlake and Williams (2012) found that Latin American immigrants were rated most negatively compared to Middle Eastern immigrants (the second most negatively rated), Asian immigrants, and European immigrants. Moreover, Latin American immigrants were the only group associated primarily with negative stereotypes. Timberlake and Williams (2012) contended that the characteristics attributed to different groups of immigrants are strongly tied to national-level debates and media

portrayal about unauthorized immigration, which is discussed below. For example, concerns about unauthorized immigration had the strongest effect on stereotypes of Latin American immigrants.

Lee and Fiske (2006) put forth a similar argument after finding that the following groups were associated with the least favorable stereotypes: poor people, African Americans, farm-workers, Latinos, Mexicans, South Americans, and unauthorized immigrants. They explained their findings using the Stereotype Content Model that provides a two-dimensional framework for perceiving others (Lee & Fiske, 2006). The first dimension is competence, which is associated with perceived social status and power. The second dimension is warmth (described by some researchers as ‘morality’), which is associated with the level of competition an outgroup poses for the ingroup. Groups perceived as warm are perceived as uncompetitive with the ingroup. The groups mentioned above that were most devalued were associated with low competence and low warmth. Fiske, Cuddy, Glick, and Xu (2002) described the prejudice associated with this combination of attributes (low-low) as contemptuous prejudice. The groups assigned to the low-low category are viewed as parasites in the system who compete for economic and political capital from society that they have not earned (Fiske et al., 2002).

Timberlake and Williams (2012) have argued that framing by the news media has caused many Americans to believe that recent Latin American immigrants are the poorest, least educated, and most residentially segregated immigrant group. According to Chavez (2008), there is a ‘Latino Threat Narrative’ in which recent Latino immigrants, in contrast to prior immigrating groups, are perceived to be unwilling or unable to assimilate and become “part of the American national fabric” (Timberlake, Howell, Baumann Grau, &

Williams, 2015, p. 273). Similarly, Fussell (2014) argued that the blame and responsibility for social problems assigned to unauthorized immigrants from Mexico and Central America have hardened negative stereotypes of Latinos. Timberlake and Williams (2012) suggested that this association between immigration as a problem for the U.S. and stereotypes of Latinos and Latin American immigrants has been reinforced by a strong anti-immigration rhetoric that is centered in areas experiencing high levels of Mexican immigrants and conveyed in political discourse and news stories.

Responses to Threat Perception

According to Stephan, Ybarra, and Morrison (2009), individuals who perceive threat evince cognitive, emotional, and behavioral responses to threat. Threat perception has been shown to trigger the following cognitive reactions: ethnocentrism, intolerance, hatred, and dehumanization of the outgroup, as well as a number of cognitive biases (Stephan et al., 2009). For example, individuals who perceive threat may make the ‘ultimate attribution error’ by attributing negative acts of the outgroup to internal member characteristics and positive acts of the outgroup to extreme situations. Additional cognitive biases that form in response to threat perception include the stereotype disconfirmation bias (i.e., outgroup stereotypes are more difficult to disconfirm than ingroup stereotypes) and an overestimation bias that leads individuals to exaggerate the size of the outgroup, as described above. The most concerning consequence of these biases and cognitive responses is that they lead members of the ingroup (e.g., U.S.-born citizens) to more easily justify acts of violence against the outgroup (e.g., immigrants, racial and ethnic minorities) because the outgroup is devalued (Stephan et al., 2009).

Emotional responses associated with threat perception include fear, anxiety, anger, resentment, contempt, and disgust (Stephan et al., 2009). Self-reported anger is most often elicited by economic threats, and self-reported fear is most often elicited by security threats. Stephan et al. (2009) indicated that threat has also been shown to undermine emotional empathy for the outgroup and increase it for the ingroup. Behavioral responses to threat are varied, including negotiation, discrimination, aggression, harassment, and warfare. Threats usually trigger hostile behaviors toward outgroup members, but they can also elicit positive behaviors if an ingroup member strives not to appear prejudiced. Typically, perceptions of threat increase groupthink and decrease the ability of a minority within the ingroup to influence the majority. Stephan et al. (2009) suggested that symbolic threats likely lead to the most vicious behavioral responses (e.g., torture, genocide) to outgroups as well as a preference for the assimilation of the outgroup (e.g., immigrants adopt American cultural values and the English language). Conversely, realistic threats are more likely to lead to avoidance, aggression, and a preference for separatism (e.g., immigrants remain separated from the majority of a country's native residents). Stephan et al. (2009) explained that cognitive, emotional, and behavioral responses to threat often serve to make it difficult for the ingroup to think carefully and accurately about the outgroup and possible responses to the threat.

Media Portrayal of U.S. Immigration

According to the Pew Research Center (2014b), the American public obtains information about politics through news media, social media, and discussions about politics with friends and family. Although social media's sphere of influence has been steadily growing, news media have long been a primary source of political information.

According to McCombs (2005), the press “plays a major role in public life, influencing citizens’ focus of attention and providing many of the facts and opinions that shape perspectives on the topics of the day” (p. 156). Santa Ana (2013) further argued that people build their worldviews through their interactions with mass media by internalizing media discourse characterized by concrete images and suggestion. The specific sources people seek out for political news influence the content and maintenance of their political beliefs. For example, individuals who are consistently conservative in their beliefs (i.e., 47%) primarily follow Fox News (Pew Research Center, 2014b). Consistent liberals, on the other hand, name multiple major news sources (i.e., CNN, NPR, and MSNBC). Finally, individuals who are more moderate tend to follow CNN, local TV, and Fox News. Each of these news sources is able to determine how issues are framed and therefore “[set] the ground rules for deliberation” (Merritt & McCombs, 2004, p. 45). It is this power and influence that will now be examined in relation to the media portrayal of immigration.

In his book *Juan in a Hundred: The Representation of Latinos on Network News*, Otto Santa Ana reviewed evening news stories aired across four networks (ABC, CBS, CNN, NBC) in 2004 to investigate their portrayal of Latinos. Santa Ana found that immigration was a common topic in news stories featuring Latinos and that television news programs varied in the extent to which they framed immigration policy as a matter of legal, economic, and humanitarian considerations (Santa Ana, 2013). News stories, especially their visual elements, can be used “to humanize immigrants, swiftly providing them with full human subjectivity” by presenting individual immigrants on camera and allowing them to share their viewpoints (p. 108). However, they can also be used to “strip

Latinos of their subjectivity with a zoomed-in distance shot showing them as dark-skinned masses...moving to a border checkpoint like cattle in a funnel chute corral” (p. 108). For example, news stories can choose to portray an ‘immigration bust’ by airing video shot through a chain-link fence of ICE agents frisking five Latino men against an ICE bus, or they can choose to show multiple clips of ICE agents escorting men, women, and children to reflect the fact that families make up a significant component of immigration. Santa Ana (2013) suggested that this latter news story helps refute stereotypes and portray unauthorized immigrants in a more humanizing way.

Media coverage often uses biased language to characterize immigrants (e.g., illegals, anchor babies). For example, certain immigrant groups, regardless of their actual population size in a host country, are more negatively stigmatized than other groups through their portrayal by the media as a high-crime group and threat to social security (Kosic, Phalet, & Mannetti, 2012). Further, the media often ignore the multiple challenges faced by immigrants and instead focus solely on their legal status (Nittle, 2012). The public may not know, for example, that perpetrators of domestic violence often use a woman’s unauthorized status to maintain their cycle of violence. Specifically, unauthorized immigrant women may fear contacting the authorities for risk of being jailed or deported, a scenario that has played out numerous times. Additionally, some spouses of unauthorized immigrants could petition to change their partner’s status but intentionally choose not to in order to maintain their position of authority and abuse.

Using the term ‘illegal’ as a noun (e.g., illegals sneak across the border) exacerbates the dehumanizing of immigrants (Santa Ana, 2013) and strengthens the ‘immigrant as criminal’ metaphor. The use of ‘illegals’ “reduces the individual to an

exaggerated description of his or her ascribed immigration status” and obstructs perceptions of immigrants as workers or human beings (p. 161). Conversely, using the terms ‘unauthorized’ or ‘undocumented’ as adjectives describing individuals without a legal presence in the country creates a more humane discourse about immigrants. Santa Ana (2013) explained that the adjective ‘undocumented’ elicits associations with official documents and minor infractions of the law instead of criminals with unethical and illegal intentions when crossing a border.

According to Santa Ana (2013), network television news and national discourse on immigration policy have used various metaphors to describe, and primarily denigrate, unauthorized immigrants, including “a menacing army, a devastating plague, criminals, and otherwise less-than-human creatures who deserve no better treatment than dogs or vermin” (p. 93). Santa Ana explained that the ‘immigrant as animal’ metaphor dominated U.S. public discourse in the 1990s and then was replaced with the ‘immigrant as criminal’ metaphor by 2004. At this point in time, President George W. Bush was seeking re-election. When President Bush revealed his immigration plan, he described immigrants as “Americans by choice” and “people of talent, character, and patriotism,” which infuriated his conservative party members. President Bush was accused of offering an immigration policy that was essentially amnesty (Santa Ana, 2013), the same argument that was made against President Obama’s executive actions on immigration.

It is often argued that the American public as a whole tends to be uncritical of the stories reported by television news programs. For example, a Stanford University study, which revealed that almost 8,000 young adults from 12 states were unable to assess the credibility of news stories, suggested that “democracy is threatened by the ease at which

disinformation about civic issues is allowed to spread and flourish” (Wineburg, McGrew, Breakstone, & Ortega, 2016, p. 5). However, the formation of worldviews is not fully dependent on the media. As Santa Ana (2013) explained, the discourse presented by the press is also reinforced (or punished) by other social institutions, including schools, religious affiliations, and the legal system. Furthermore, individual factors (e.g., personal association with and knowledge about the topic) influence how people process information presented by the media. One purpose of the study was to explore how individual differences impact attitudes toward unauthorized immigrants, especially in response to their representation in the media.

Implicit Attitudes

The research literature on implicit bias, or the automatic association between particular social groups and attitudes (typically stereotypes) that unconsciously impact our decision-making, is vast (e.g., Devine, 1989; Dovidio & Gaertner, 2004; Godsil, Tropp, Goff, and Powell, 2014). In the United States, most of the investigations of implicit bias have assessed implicit race bias, especially the bias demonstrated by White Americans toward Black Americans. For example, Reeves (2014) conducted a study of the impact that race plays in determinations of merit. Participants in that study included partners from various law firms who reviewed two writing samples. Participants were led to believe that one was written by a White law associate and the other was written by an African American law associate. Results indicated that participants identified an average of 2.9 / 7.0 spelling/grammar errors in the White associate’s sample compared to 5.8 / 7.0 spelling/grammar errors found in the African American associate’s sample. Reeves (2014) connected this finding to confirmation bias, in which individuals draw conclusions

about what they see based on previously held stereotypes. Reeves' (2014) support for the behavioral manifestation of implicit bias has been consistent across social institutions, including the criminal justice system (Mustard, 2001), general hiring practices (Rooth, 2010), and the education system (Dee, 2005; Skiba, Horner, Chung, Rausch, May, & Tobin, 2011).

Implicit Attitudes Among Teachers

As indicated above, many institutions (e.g., law firms, police departments, city governments, and school districts) have joined the movement to increase research on the behavioral effects of implicit bias and address these effects in real-life work settings. As the demographics of the U.S. continue to change, increasing attention is being directed toward investigating and improving educators' abilities to teach and support a more diverse student body (Maxwell, 2014). As Godsil, Tropp, Goff, and Powell (2014) poignantly illustrated, "the specter of the white teacher who fails to recognize the academic potential of young people of color and views them as disruptive or inattentive has been empirically established" (p. 34). Research has consistently shown that teachers' implicit attitudes influence their expectations of achievement for students from different racial and ethnic backgrounds (Tenenbaum & Ruck, 2007; van den Bergh et al., 2010). For example, Skiba, Horner, Chung, Rausch, May, and Tobin (2011) found that racial disparities in discipline practices are most likely to occur in response to subjective student behaviors (e.g., disrespect, loitering) than more egregious behaviors such as physical aggression or bringing a weapon to school. As Godsil and colleagues (2014) suggested, most teachers would be uncomfortable admitting that they have differential expectations of their students, and it is likely that many of them would not even realize

that this is the case, hence the implicit nature of their attitudes that operate through mechanisms such as stereotype threat and confirmation bias. Therefore, it is important to examine teacher attitudes toward different social groups in order to identify any sources of bias and consequently identify areas for professional development.

Teacher Attitudes Toward Immigrants

According to the Pew Research Center (2015), approximately 6.9% of students enrolled in kindergarten through 12th grade in the U.S. reside with at least one unauthorized immigrant parent. Appel, Weber, and Kronberger (2015) conducted a meta-analysis of 19 experiments investigating the influence of stereotype threat on immigrant academic performance in Europe and the United States. The authors defined stereotype threat as “a state of psychological discomfort that is thought to arise when individuals are confronted with a negative stereotype about their own group in a situation in which the negative stereotype could be confirmed” (p. 2). Stereotype threat theory posits that negative stereotypes regarding a group’s academic or cognitive performance undermine actual performance via heightened pressure for individuals of that group not to fail. In addition to testing situations, stereotype threat has been associated with poorer learning and disidentification from school. Overall, Appel, Weber, and Kronberger (2015) found significant support (mean effect size = .63) for the application of stereotype threat theory to immigrant students. However, it is important to examine differences among immigrant groups in different host regions, in addition to the content and valence of their stereotypes. For example, whereas many Hispanic Americans face negative stereotypes in academic contexts, many Asian Americans experience superior expectations for their academic performance (Appel et al., 2015).

Froehlich, Martiny, Deaux, and Mok (2016) investigated the influence of stereotypes and causal attributions on student teachers' assessment of immigrants' underperformance in Germany. Froehlich and colleagues reported that German student teachers rated Italian-origin and Turkish-origin immigrants in Germany as less competent than German students. Their findings reflected differential evaluation of competence among immigrant outgroups, with more negative evaluations of the immigrant group perceived as more culturally distant and foreign (i.e., the Turkish-origin immigrants). In addition to perceiving immigrant students as less competent than their native-born counterparts, student teachers also held immigrant students more accountable for their respectively low academic performance. Froehlich et al. (2016) cautioned that participants' attribution of responsibility within the immigrant students instead of within the educational system may be predictive of their efforts to address the performance gap often found between certain immigrant groups and their native-born counterparts. These findings support the inclusion of pre-service teachers as participants in the current study and highlight the importance of contributing to research literature that will inform interventions targeting the potential diffusion of responsibility for immigrant students' academic performances.

Outcomes of Negative Attitudes Toward Immigrants

In his presidential campaign announcement speech in June 2015, then-candidate Donald Trump made controversial comments that highlighted one side of the sharp political division in the U.S., and media and political groups were abuzz about the effect of Trump's statements on 'the Latino vote' in the upcoming presidential election (Ross, 2015). Although much emphasis has been placed on the impact of Trump's comments on

voters, the true impact of Trump's words does not end at the polls. Instead, his stereotypical and inflammatory language has direct and serious consequences on the mental health and socialization of immigrant (and non-immigrant) families, especially those from Mexico who were called out directly by Trump.

Experiencing prejudice has detrimental effects on the individual's physical well-being, emotional well-being, and achievements and success in life (Zick, Küpper, & Hovermann, 2011). For example, targets of prejudice and discrimination demonstrate a decrease in self-respect and an increase in self-stigmatization. Perceived discrimination has also been associated with psychological distress, low levels of self-control and personal agency, and suicidal ideation (Hwang & Goto, 2008). Membership in a perceived outgroup (and therefore subjection to prejudice and discrimination) does not require an individual to actually be a member of that group (e.g., an immigrant). Instead, individuals can be targets of prejudice as long as they are *perceived* to belong to that group. As discussed above, an individual's identification as a Latino, an immigrant, or an unauthorized Latino immigrant is not always considered by those who hold prejudice against any or all of those groups. Instead, the individual may be subject to negative stereotypes, even if he or she does not identify with the group perceived as 'other' by the ingroup (i.e., U.S.-born citizens). According to Stephan (2012), when immigrants are viewed as belonging to an outgroup and characterized by negative stereotypes, they often experience anger, fear, "loss, feelings of incompetence, hopelessness, humiliation, embarrassment, alienation, distress, disorientation, dysphoria, loneliness, and depression" (p. 35). Moreover, the dehumanization of members of an outgroup, at its most extreme, may "sometimes per[mit] violence and crimes to be committed against them without guilt

or remorse” (p. 34). This extensive, yet not exhaustive list of detrimental outcomes is cause for serious concern and the impetus for this investigation.

The Present Study

Research questions concerning the influence of attitudes, particularly prejudice, toward unauthorized immigrants on teacher behavior would presuppose that there are specific perceptual dimensions guiding teachers’ attitudes and behavior. Therefore, the first step in answering those questions is to identify the perceptual dimensions that are most salient to pre-service and in-service teachers. Pre-service and in-service teachers’ attitudes toward unauthorized Latino immigrants were examined through a multidimensional scaling analysis of data from a card-sorting task and questionnaire data. Card sorting is a popular data-gathering technique in social psychological research due to its ease of administration, low susceptibility to experimenter demand characteristics, and utility with a large number and different types of stimuli (Whaley & Longoria, 2009). During a card-sorting task, participants are presented with a set of stimuli that constitutes a representative sampling of the ‘universe’ of potential stimuli. That is, to uncover underlying dimensions in participants’ perceptions that are “uncontaminated by the researcher’s preconceptions” (Whaley & Longoria, 2009, p. 106), the stimuli included in the task must represent the perceptual domain(s) being investigated to avoid limiting the participants’ responses to factors included by the researcher.

Card-sorting tasks clarify the psychological dimensions to which participants attend without asking them directly to rate the degree to which they believe certain characteristics or phrases truly represent a topic. In other words, participants do not have to endorse or oppose items. Instead, they focus on identifying stimuli that are similar to

each other and sort these stimuli into groups. This feature of the card-sorting task reduces socially desirable responding and facilitates the examination of participants' uncensored perceptions.

As described above, multidimensional scaling (MDS) is a method of data analysis that uncovers meaningful dimensions representing the conceptual relations among *proximity data* (Whaley & Longoria, 2009). The term *proximity* refers to a numerical measure of relation including, for example, correlations, similarity judgments, and co-occurrence frequencies from sorting tasks (Fitzgerald & Hubert, 1987). Proximities reflect how similar or dissimilar each stimulus is to all other stimuli. Multidimensional scaling analyses produce visual representations ('cognitive maps') of the relations among the stimuli. Objectives of this study were to interpret the cognitive map produced by all participants, assess for individuals differences among each participant's cognitive map, and compare the cognitive maps of participant sub-groups (e.g., pre-service vs. in-service).

Support for the use of MDS in the current study includes research conducted by Green and Manzi (2002) that explored the relative utility of different data collection techniques (i.e., card sorting vs. attribute generation tasks) as well as data analytic techniques (i.e., MDS vs. discriminant function analyses) in the examination of racial stereotype subgrouping among White college students. Green and Manzi (2002) found that the MDS analysis of card sorting data revealed more prejudice among participants against Black targets than the attribute generation task (i.e., producing characteristics for a label), likely because participants felt less pressure by the procedure to be 'politically correct.' This method also demonstrated less overlap between the racial subtypes and the

superordinate category label 'Black' (i.e., multiple racial subtypes were grouped together in a large cluster instead of distributed into smaller clusters), suggesting that MDS analysis of card sorting data was more sensitive to participants' perceptions of the social targets. Due to the effectiveness of a multidimensional scaling analysis of card sorting data in identifying dimensions underlying person perception and stereotyping, this study employed a multidimensional scaling analysis of the data.

As Ding (2006) explained, MDS is most suitable for studies in which profiles or themes are derived from data rather than specified by theory. Although theories of threat perception and racial/ethnic prejudice were used to guide the selection of stimuli, this study was inherently exploratory and therefore was not driven by traditional hypothesis testing. Instead, the following research questions guided the study:

- What characteristics attributed to unauthorized immigrants by the media are most salient to individuals in the field of education?
- What factors (e.g., participants' individual differences) influence the relative salience of the dimensions within participants' cognitive maps?
- To what extent is multidimensional scaling (MDS) an appropriate way of examining educators' attitudes toward unauthorized immigrants?

CHAPTER III

RESEARCH DESIGN

Participants

Participants were recruited from two populations. The first participant group included pre-service educators ($N = 20$) who were preparing to enter the teaching work force and who may be required to work with children of immigrant families. This group was comprised of individuals ages 19 to 22 years (mean age = 20.45, $SD = 1.00$ year) who were recruited from the Elementary Education program at a mid-size university in the Midwest. The second group of participants included in-service teachers from two elementary schools in the local community ($N = 20$), ages 26 to 60 years (mean age = 41.85, $SD = 10.95$ years), some of whom may work directly with immigrant families with and without authorization to live in the U.S. Because the use of multidimensional scaling of card-sorting data to derive perceptual dimensions does not require a large number of participants, a total of 40 participants was considered sufficient. Of the 40 participants, 90% identified as female and 10% identified as male. Additionally, 95% identified as White or Caucasian, 2.5% identified as African American, and 2.5% did not indicate racial identity. Regarding political party affiliation, 60% of participants identified as Democrat, 30% identified as Republican, and 10% did not endorse either party.

Materials

Stimuli for Card-Sorting Task

For the current study, the stimuli for the card-sorting task reflected perceptions of unauthorized immigrants and Latinos as portrayed in the public domain (e.g., through media reports, political discourse, and social media). The researcher surveyed these

media and identified statements that appeared to represent the primary factors or constructs constituting attitudes toward unauthorized immigrants. Based on previous research (Berg, 2013; Meuleman & Billiet, 2012; Stephan & Renfro, 2002; Vala et al., 2006), these included economic threat, symbolic threat, security threat, and racial and ethnic prejudice. Therefore, the item stimuli (i.e., statements about unauthorized immigrants) used in this study corresponded to those primary constructs from the literature and were written in the vernacular of media statements. For example, an item that represented the construct of economic threat, and was drawn from a *New York Times* article, was “undocumented immigrants use more public services than they pay for in taxes” (Connelly, 2006). To avoid establishing a response set by participants and to reflect the diverse attitudes toward immigrants held by a large portion of the population, the item stimuli were generated to reflect both negative and positive valence (e.g., “The work of undocumented immigrants in the U.S. adds value and contributes to the economy.”). Additionally, to prevent participants from attending solely to grammatical details instead of statement content, all item stimuli used the terms “Hispanic” and “undocumented” instead of “Latino,” “unauthorized,” or “illegal.” A total of 62 statements were included in the stimuli set. Each statement was printed on a 3x5 index card.

Stimuli Questionnaire

Participants were asked to indicate the extent to which each statement in the stimuli set was true on a 7-point scale that ranged from completely false (1) to completely true (7) (see Appendix A).

Measure of Attitudes Toward President Obama’s Executive Actions on Immigration

Participants read a description of President Obama’s executive order on immigration that contained a brief explanation of two of its major components: the extension of *Deferred Action for Childhood Arrivals* (DACA) and the introduction of *Deferred Action for Parents of Americans and Lawful Permanent Residents* (DAPA), which is also referred to as *Deferred Action for Parental Accountability* (see Appendix B). Each participant read that an implication of DACA would be that unauthorized immigrants who were brought to the U.S. by their parents could apply for permission not to be deported. Furthermore, the measure clarified that an implication of DAPA is that unauthorized immigrants who gave birth to children in the U.S. could apply for permission to not be deported and to work legally in the U.S. These two components were selected to represent the executive order on immigration because they had received the most extensive attention by politicians and the media. Participants were prompted to indicate on a 4-point Likert scale (1 = strongly disapprove, 4 = strongly approve) the extent to which they support or oppose each component of the executive order. Participants’ responses to this measure were used as an individual differences variable.

Personal Characteristics and Beliefs Questionnaire

Participants indicated their age, gender, race, and ethnicity on the questionnaire (see Appendix C). Additional variables associated with laypersons’ attitudes toward immigrants were also assessed, including educational attainment and parental education (Brenner & Fertig, 2006), perceived size of the unauthorized Latino immigrant population and intergroup contact (Stephan et al., 2009), and political affiliation (Cosby et al., 2013). The information gathered from this questionnaire was used to explore the

characteristics of participants who may share similar attitudes toward unauthorized immigrants.

Procedure

All tasks were administered individually in a private, quiet room. The study was presented to each participant as an investigation of public opinion on the issue of U.S. immigration policy. After signing the consent form, participants completed the card-sorting task and then the questionnaire packet. This sequence was selected to avoid possible demand characteristics affecting card-sorting resulting from the questionnaires.

Practice Card-Sorting Task

The Study Instructions (Appendix D) were read to the participants, who were provided with nine laminated practice cards (see Appendix E) and asked to sort the cards into piles based on similarities. Once participants demonstrated an ability to sort the cards and an understanding that there were no right or wrong ways to sort the cards within the guidelines provided (i.e., the number of cards in a pile could be as few as one, but at least two piles must be created), they began the actual card-sorting task with the stimuli cards containing statements about immigration.

Card-Sorting Task

During this card-sorting task, participants were asked to sort the 62 stimuli cards into an unspecified number of mutually exclusive subsets (i.e., piles of cards) that contained statements they deemed to be similar in some way (Giguère, 2006; Whaley & Longoria, 2009). The standardized instructions for this card-sorting task (Appendix D) included a reminder to focus only on the conceptual similarity of statements, not the

extent to which participants agreed or disagreed with each statement. The researcher reiterated to participants that there were no right or wrong ways to sort the cards.

Once participants sorted all cards, they were instructed to bind the cards within each pile with a rubber band to ensure that their responses remained sorted as they had done so for data analysis. The final step of the card-sorting task was for participants to assign a label (any label) to each of their piles. The purpose of the label was to characterize each pile with the theme or construct that the participant believed tied the statements together. The researcher then offered participants a chance to determine whether they were satisfied with their groupings having written labels for each pile. To counter demand characteristics, the researcher reiterated that there were no right or wrong groupings of cards and that many people do not change their groupings, but that the participant was welcome to do so.

Questionnaire Packet

After completing the card-sorting task, each participant completed the stimuli questionnaire, the measure of attitudes toward President Obama's executive actions on immigration (i.e., DACA and DAPA), and the personal characteristics and beliefs questionnaire.

Data Entry

Each participant was assigned an ID number that was associated with the piles he or she created as well as the questionnaire data completed. Data from the card-sorting task were entered into an Excel spreadsheet for each participant, and a triangular data matrix (see, for example, Figure 1) was created that indicated each co-occurrence of statements coded as a binary variable (i.e., 0 or 1). If the participant placed two cards in

the same pile, a '1' was entered in the cell for those two cards. If the participant placed two cards in different piles, a '0' was entered in that cell. A triangular data matrix was also created to display the total co-occurrence rates of the statements across all participants (Appendix F). To explore individual differences by subgroup (e.g., in-service teachers vs. pre-service education majors), triangular data matrices were also created to display co-occurrence rates of the statements across participants in each subgroup (Appendices G & H).

Whaley & Longoria (2009) suggested that statements frequently sorted in the same pile should be considered psychologically similar and, therefore, positioned closer together in cognitive maps produced during data analysis. Conversely, statements that are rarely sorted in the same pile should be viewed as psychologically dissimilar and should be further apart in cognitive maps. For example, 90% of participants sorted cards #16 and #22 into the same pile, which suggests that the two statements represent a similar construct. Conversely, 0% of participants sorted cards #1 and #2 into the same pile. This suggests these two statements do not represent a similar construct. The data in the matrix in Appendix F served as the input for the multidimensional scaling analysis.

Data Analysis

One benefit of multidimensional scaling (MDS) is that it can be used to analyze different levels of data measurement (i.e., nominal, ordinal, interval, and ratio). Whereas *metric* MDS is used to analyze interval and ratio level data, *non-metric* MDS is used to analyze nominal and ordinal level data (Kruskal & Wish, 1978). Non-metric MDS is more common in the field of psychology and typically uses ordinal level data (Jaworska

& Chupetlovska-Anastasova, 2009) and was used in this study to analyze the ordinal card-sorting data.

In addition to the metric vs. non-metric distinction, the literature (Giguère, 2006) suggests there are three primary models of MDS: Classical MDS (CMDS), Replicated MDS (RMDS), and Weighted MDS (WMDS). The model of MDS used in this study was Weighted MDS (WMDS) because it allows for the examination of individual differences. This capability explains why this type of MDS is often referred to as *individual differences scaling* (INDSCAL; Jaworska & Chupetlovska-Anastasova, 2009). WMDS produces a *group space* as well as *personal spaces* (Blake, Schulze, & Hughes, 2003). The group space represents a geometric configuration common to all participants as a group (Frisby, 1996). In the current study, each stimulus (i.e., each statement about unauthorized immigrants) had its own *coordinates* in the group space. The *personal spaces* reflect data from individuals or each subgroup (vs. all 40 participants). The creation of the group space and the selection of the optimal MDS solution is discussed first, followed by a description of the personal spaces and individual differences scaling.

Interpreting the MDS Output

Using WMDS, the proximity data matrix (Appendix F) was converted into a geometric configuration in an n -dimensional space. This geometric configuration (i.e., cognitive map) is referred to as a MDS solution. MDS can produce multiple solutions that differ by number of dimensions. A *dimension* represents “an underlying characteristic of the proximity data that is represented by an axis through the space” (Frisby, 1996, p. 78). The space in which the solution is produced is referred to as n -dimensional because the investigator is responsible for selecting the number of

dimensions that produces the most interpretable solution. That is, researchers aim to select the MDS solution that most accurately reflects the input data using the smallest possible number of dimensions (Jaworska & Chupetlovska-Anastasova, 2009). MDS solutions have a closer fit to the input data with each additional dimension, but one's ability to interpret the map decreases with more dimensions.

The selection of the optimal MDS solution is accomplished using measures of fit: R^2 and *Kruskal's stress index* (Giguère, 2006; Whaley & Longoria, 2009). These measures indicate the extent to which the n -dimensional model represents the input data (i.e., how participants sorted the cards). R^2 , which measures 'goodness of fit,' represents the proportion of variance of the input data that is explained by the n -dimensional configuration produced by MDS (Giguère, 2006). Higher R^2 values indicate better fit. Conversely, *Kruskal's stress index* is a 'badness of fit' measure, such that smaller stress values indicate better fit. Stress refers to the distance between the input proximities (i.e., the dissimilarity ratings among the statements as perceived by participants) and the output distances in the n -dimensional space (i.e., the distances between data points in the group space; Jaworska & Chupetlovska-Anastasova, 2009). Kruskal and Wish (1978) suggested that the stress value should be at least < 0.15 and preferably ≤ 0.10 .

Another way to determine the optimal MDS solution is to examine the amount of change in stress from n dimensions (e.g., 3 dimensions) to $n - 1$ dimensions (e.g., 2 dimensions; Whaley & Longoria, 2009). If this increase in stress is significant, the additional dimension (e.g., Dimension 3) adds significant information to the model and should be maintained. Conversely, if the increase in stress is negligible, the additional dimension (i.e., Dimension 3) does not add significant information and should not be

included. In this case, the optimal solution would have two dimensions. These changes are often assessed by visually inspecting and identifying an ‘elbow’ in a *scree plot* that represents stress value and dimension number (see Jaworska & Chupetlovska-Anastasova, 2009; Whaley & Longoria, 2009).

Dimension Interpretation

Once the optimal n -dimensional solution is selected, it is necessary to interpret the dimensions incorporated in the model. This process involves identifying the attributes participants attended to when “responding to a class of stimuli” (e.g., completing a card-sorting task; Fitzgerald & Hubert, 1987, p. 473). As Blake et al. (2003) explained, WMDS reflects the perceived similarity of the stimuli, but it does not explain the basis of that similarity. Interpreting the dimensions is often accomplished by visually inspecting the stimuli and identifying themes based on *clusters* of data. In some cases, researchers may need additional information to determine which label to apply to each dimension. Interpretation of dimensions may also be accomplished by incorporating the dimensions that emerge from MDS with additional information such as bipolar scale ratings (e.g., degree of importance, strength of impact on society) into regression analyses (Jaworska & Chupetlovska-Anastasova, 2009; Kruskal & Wish, 1978). In the current study, the data from the questionnaires were incorporated into correlational and multivariate analyses to further examine the attitudes and attributes of participants.

Examining Group Differences

As described above, WMDS produces a group space as well as personal spaces. Personal spaces were computed for each subgroup, and *subject weights* were derived. Subject weights measure the importance of each dimension to each subgroup.

Dimensions were determined to be important to a subgroup when participants demonstrated greater differentiation among stimuli on a given dimension (Blake et al., 2003). The purpose of this individual differences scaling that applied to subgroups as well as individual participants was to adjust the group space mapping to reflect the unique judgments of each subgroup (Blake et al., 2003). This process allowed for examination of the relative salience of the dimensions for each subgroup. Market research that uses MDS often groups participants based on factors such as gender and level of income. In this study, participants were grouped according to occupation (i.e., in-service teachers vs. pre-service education majors), variables assessed by the questionnaires (e.g., frequency of contact with immigrants), and behavioral outcome variables (e.g., number of piles created during the sorting task). Therefore, the degree to which the subject weights varied between subgroups was examined through a comparison of the subgroup spaces and the positioning of the stimulus statements in each space (Blake et al., 2003).

CHAPTER IV

RESULTS

The purposes of this study were (a) to uncover the characteristics of unauthorized immigrants that individuals in education perceive as most salient, (b) to identify factors (i.e., individual differences) that influence the relative salience of these dimensions within participants' cognitive maps, and (c) to examine the extent to which multidimensional scaling (MDS) is an appropriate way to examine attitudes toward immigration.

Attitudes Toward President Obama's Executive Actions on Immigration

The majority of participants approved of both executive actions (Table 1). The mean approval rating for DACA was 3.30 ($SD = 0.76$) on the 1 ("strongly disapprove") to 4 ("strongly approve") scale, and the mean approval rating for DAPA was 3.08 ($SD = 0.94$). Three participants (7.5%) did not approve of either component of President Obama's executive action. In-service teachers and pre-service education majors, the two

Table 1

Variable name	Item response (Value)	Frequency	%
DACA	Strongly disapprove (1)	1	2.5%
	Disapprove (2)	4	10.0%
	Approve (3)	17	42.5%
	Strongly approve (4)	18	45.0%
DAPA	Strongly disapprove (1)	3	7.5%
	Disapprove (2)	7	17.5%
	Approve (3)	14	35.0%
	Strongly approve (4)	16	40.0%

primary subgroups, did not differ significantly in their approval ratings of DACA (Mann–Whitney $U = 165.50$, $p = .31$) or DAPA (Mann–Whitney $U = 182.50$, $p = .62$).

Card Sorting Variables

Similarity ratings from the card-sorting task were analyzed using multidimensional scaling, but additional data were gathered from this task, including the number of piles that participants created as well as whether or not they mentioned ethnicity or country of origin in their pile labels. Table 2 provides the frequencies for the number of piles (mean = 4.95, $SD = 3.61$) during the sorting task. Two piles were most common among participants, and only 15% of participants created more than 6 piles.

Table 2

Card-Sorting Task Outcomes

Variable name	Group	Frequency	%
Number of sorted piles	2	9	22.5%
	3	5	12.5%
	4	8	20.0%
	5	8	20.0%
	6	4	10.0%
	7	1	2.5%
	8	2	5.0%
	11	1	2.5%
	14	1	2.5%
	21	1	2.5%

Based on the role of racial and ethnic prejudice in attitude formation supported by the literature (e.g., Berg, 2013; Hartman, Newman, & Bell, 2014; Vala, Pereira, & Ramos, 2006), participants' distinction between items that mentioned Hispanic and Mexican immigrants or the country of Mexico versus items that referred to unauthorized

immigrants generally was examined. Only 25% ($N = 10$) of participants made explicit reference to ethnicity/country of origin in their sorted pile labels. As such, this reference was used as an individual difference variable in the analyses described below.

Multidimensional Scaling Analysis with MDSCAL

The non-metric multidimensional scaling program MDSCAL was utilized to portray the cognitive maps that participants developed when considering statements about unauthorized immigrants. The input for the MDSCAL solution was one data matrix of similarity ratings for each of the 62 stimuli aggregated across all participants ($N = 40$) (see Appendix F). To determine the dimensionality of the optimal MDS solution for these data, Kruskal's stress index and R^2 were examined. Recall that stress represents how poorly distances in the configuration reflect the proximities data from which the configuration space was derived, and R^2 , which measures 'goodness of fit,' represents the proportion of variance of the input data explained by the n -dimensional configuration produced by MDS. Table 3 depicts the stress and R^2 values for each potential solution of one through five dimensions.

Table 3

Stress and R^2 Values for Dimensions 1-5

Number of dimensions	Stress	R^2
1	0.163	0.941
2	0.108	0.964
3	0.086	0.972
4	0.072	0.977
5	0.059	0.981

Examination of this information suggested that a solution with two or three dimensions would be optimal based on their acceptable levels of stress and R^2 values. Specifically, a solution with two dimensions had a stress value of 0.108 and an R^2 value of 0.964, and a solution with three dimensions had a stress value of 0.086 and an R^2 value of 0.972. Based on the location of the elbow in the scree plot for 40 participants (Figure 2), the optimal solution for the group space was determined to have two dimensions.

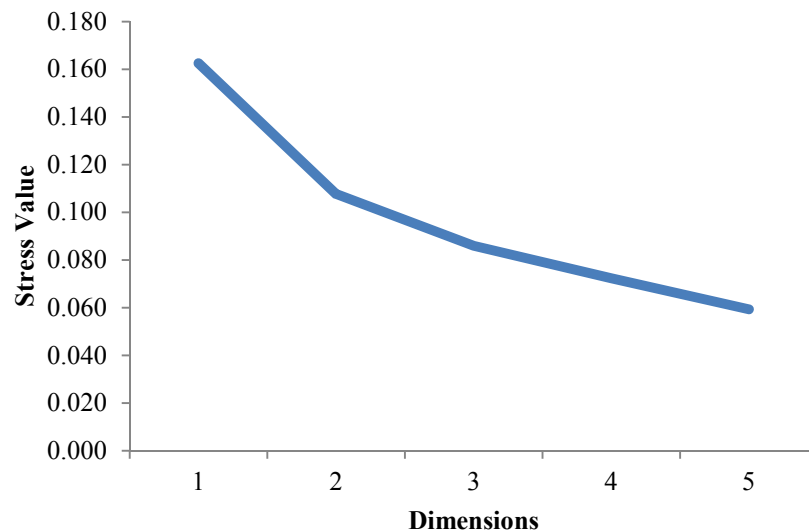


Figure 2. Scree plot.

The group space produced by MDS is represented by Figure 3, which reflects the relationship between Dimensions 1 and 2. The group space reflects the similarity ratings for all 62 statements used in the card-sorting task, aggregated across participants. This configuration revealed two distinct groups falling along Dimension 1. For example, Card #12 (“Undocumented immigrants come here to create a better life for themselves. They work hard for everything. They don’t just expect money or food to be handed to them.”)

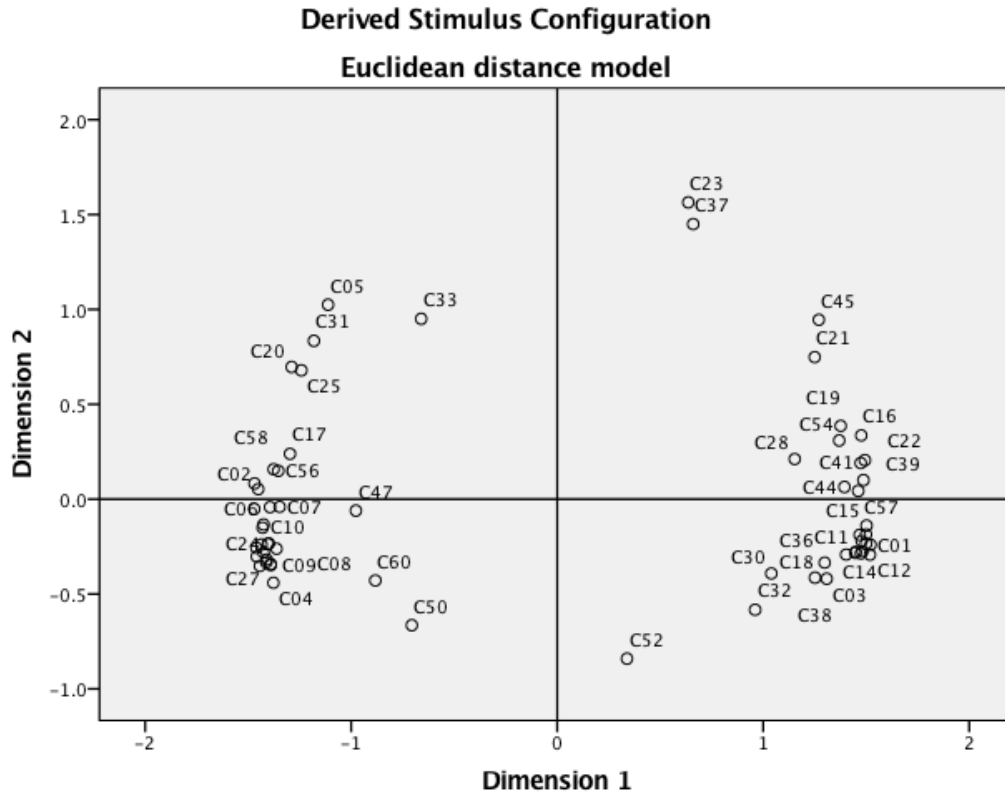


Figure 3. Stimulus configuration derived in two dimensions.

fell at the high end of Dimension 1, and Card #02 (“Our borders, our culture, our language and our traditions must be preserved. Allowing undocumented immigrants to enter the U.S. and run over these things is wrong.”) fell at the low end of Dimension 1. The configuration revealed less distinct groups along Dimension 2. For example, Card #23 (“Spanish is becoming a crucial second language to have in the U.S. Those who fail to acknowledge this do so at their own peril.”) fell at the high end of Dimension 2, and Card #52 (“It is in no one's interest for undocumented immigrants and their families to live in the shadows. We need everyone to participate in the mainstream economy, to pay taxes, to participate openly in their communities, to be willing to report crimes.”) fell at

the low end of Dimension 2; however, many of the stimuli (i.e., cards) fell in the middle of Dimension 2 with greater dispersion at the high end than at the low end of the dimension. Appendix I includes the stimulus coordinates for each of the 62 statements along Dimensions 1 and 2 as depicted by Figure 3.

Dimension Interpretation

MDSCAL generated a group configuration that was most meaningfully interpreted in two dimensions. Dimension interpretation was accomplished through visual inspection of the derived stimulus configurations and review of how statements were positioned along each dimension, paying particular attention to the statements at the extremes of each dimension.

MDSCAL Dimension 1: Positive vs. negative valence. Dimension 1 appeared to represent the extent to which participants viewed the stimuli as reflecting positive or negative attitudes toward immigrants. For example, Card #01, which fell at the positive end of Dimension 1, stated “Undocumented immigrants are honest men and women who just want to work.” In contrast, Card #02 (mentioned above) fell at the low end of Dimension 1. Participants relied heavily on this dimension to distinguish among stimuli, as reflected in the two distinct groups falling along Dimension 1 in Figure 3.

The positive end of the dimension (i.e., statements with a positive loading on the dimension, falling on the right side of Figure 3) reflected a humanizing attitude toward immigrants that includes sensitivity to the needs of immigrants (e.g., a better life, greater opportunity). Many of the statements at the positive end referenced immigrants’ work ethic and positive contributions to the U.S. economy and predominantly White culture. The negative end of the dimension (i.e., statements with a negative loading on the

dimension, falling on the left side of Figure 3) reflected nativist attitudes, which prioritized the protection of the interests of native-born inhabitants against those of immigrants.

MDSICAL Dimension 2: Economic issues vs. cultural and linguistic issues.

Interpretation of Dimension 2 was less straightforward than interpretation of Dimension 1. The configuration revealed less distinct groups along Dimension 2, with the majority of stimuli clustered around the 0 value, some dispersion at the negative end, and more dispersion at the positive end. The smoother continuum of proximities along Dimension 2 suggested that participants might have perceived subtle rather than conspicuous differences among statements along this dimension. The absence of distinct clusters (like those observed along Dimension 1) may suggest that participants had more difficulty making cognitive distinctions among the statements beyond their valence.

In contrast to Dimension 1, Dimension 2 appeared to capture the content of each statement, regardless of its valence. Interpretation of Dimension 2 required an examination of the magnitude of the statements' loadings on the dimension (i.e., the magnitude of their positive or negative value) and emphasis on the most extreme items during interpretation (see Appendix J). It was determined that Dimension 2 appeared to represent the extent to which statements reflected economic issues versus cultural and linguistic issues. The items with the strongest positive loadings on Dimension 2 (e.g., #23, #37, #05, #45) all referenced language (i.e., English, Spanish). Some of these statements reflected the benefit of speaking Spanish in the U.S. job market, whereas others carried a negative connotation about Spanish (e.g., Card #05) or how Mexican and Hispanic immigrants should learn English more quickly (e.g., Cards #31 and #20). Card #23,

which had the strongest positive loading, stated, “Spanish is becoming a crucial second language to have in the U.S. Those who fail to acknowledge this do so at their own peril.”

In contrast, the strongest negatively loaded items had the strongest statements about economic issues. For example, Card #52, which fell at the negative end of Dimension 2, stated “It is in no one's interest for undocumented immigrants and their families to live in the shadows. We need everyone to participate in the mainstream economy, to pay taxes, to participate openly in their communities, to be willing to report crimes.” Further, Card #32, which had the third most negative loading on Dimension 2, stated “Undocumented immigrants have contributed \$100 billion to Social Security over a decade without any intention of collecting benefits.”

The distinction between economic and cultural/linguistic issues was not perfect across the dimension (i.e., statements referencing the economy were also located near the zero value and the positive half of the dimension). Additionally, elements of crime and security were also reflected in the negative end of Dimension 2. However, reference to the economy was most salient and frequent at the extreme of the negative end of Dimension 2.

Individual Differences Scaling Analysis with INDSCAL

INDSCAL was utilized for the purposes of determining (a) whether individual participant-by-participant data source analysis provided a compelling interpretation of the card-sorting task data and (b) whether subgroup differences among participants (e.g., occupation, political party) or participant behavioral outcomes (e.g., number of piles created during sorting task) provided compelling interpretations.

Dimension Interpretation

Prior to examining individual differences by participant and by subgroup, it was necessary to verify whether the dimensions produced by INDSICAL represented the same constructs as the dimensions produced by MDSCAL. The same process described above (i.e., examination of the content of items, especially at the extremes of each dimension) was completed.

INDSCAL Dimension 1. A comparison of the stimuli on the extreme ends of Dimension 1 (Appendix K) revealed the same theme as those represented by the MDSCAL configuration. For example, Card 61, which stated “Undocumented immigrants replenish the American spirit with hope and optimism, and often raise good kids with a work ethic and strong traditional values,” had the highest positive loading, and Card 13, which stated “Undocumented immigrants threaten traditional U.S. beliefs and customs,” had the highest negative loading. Therefore, the interpretation of Dimension 1 as positive vs. negative valence held.

INDSCAL Dimension 2. A comparison of the stimuli on the extreme ends of Dimension 2 (Appendix L) revealed the same theme as those represented by the MDSCAL configuration. For example, Card 52 (“It is in no one's interest for undocumented immigrants and their families to live in the shadows. We need everyone to participate in the mainstream economy, to pay taxes, to participate openly in their communities, to be willing to report crimes.”) had the highest positive loading, and Card 32 (“Undocumented immigrants have contributed \$100 billion to Social Security over a decade without any intention of collecting benefits.”) had the third highest positive loading on Dimension 2. In contrast, Card 23 (“Spanish is becoming a crucial second

language to have in the U.S. Those who fail to acknowledge this do so at their own peril.”) had the highest negative loading. Therefore, the interpretation of Dimension 2 as economic vs. cultural and linguistic issues held.

Individual Differences Analysis: Participant-By-Participant

The purpose of analyzing the individual differences scaling by participant was to explain the relationship between participants' differential perceptions of a set of stimuli. The input for this INDSCAL solution was 40 data matrices (i.e., one matrix with binary data for each participant). Table 4 depicts the stress index and R^2 values for each potential solution derived in two through five dimensions.

Table 4

<i>Stress and R^2 Values for Dimensions 2-5</i>		
# of Dimensions	Stress	R^2
2	0.406	0.295
3	0.315	0.286
4	0.269	0.283
5	0.245	0.275

The elevated stress indices and low R^2 values in Table 4 suggest that the data did not lend themselves well to individual difference examinations across all 40 participants. It is speculated that the binary nature of these sorting data (i.e., 0 = different pile, 1 = same pile) did not provide the necessary sensitivity to explain individual differences among participants' sorting patterns by applying the individual subject weights to the group configuration. Figure 4 depicts the subject weights of all 40 participants for the configuration derived in two dimensions.

Individual Differences Analysis: Subgroup

Similarity ratings generated from the card sorting task were aggregated across participants in each subgroup. That is, for a subgroup of 20 participants (e.g., in-service teachers), 20 individual data matrices were summed to generate one data matrix. Aggregating the input data across participants may have circumvented the difficulty noted above with the binary input matrices.

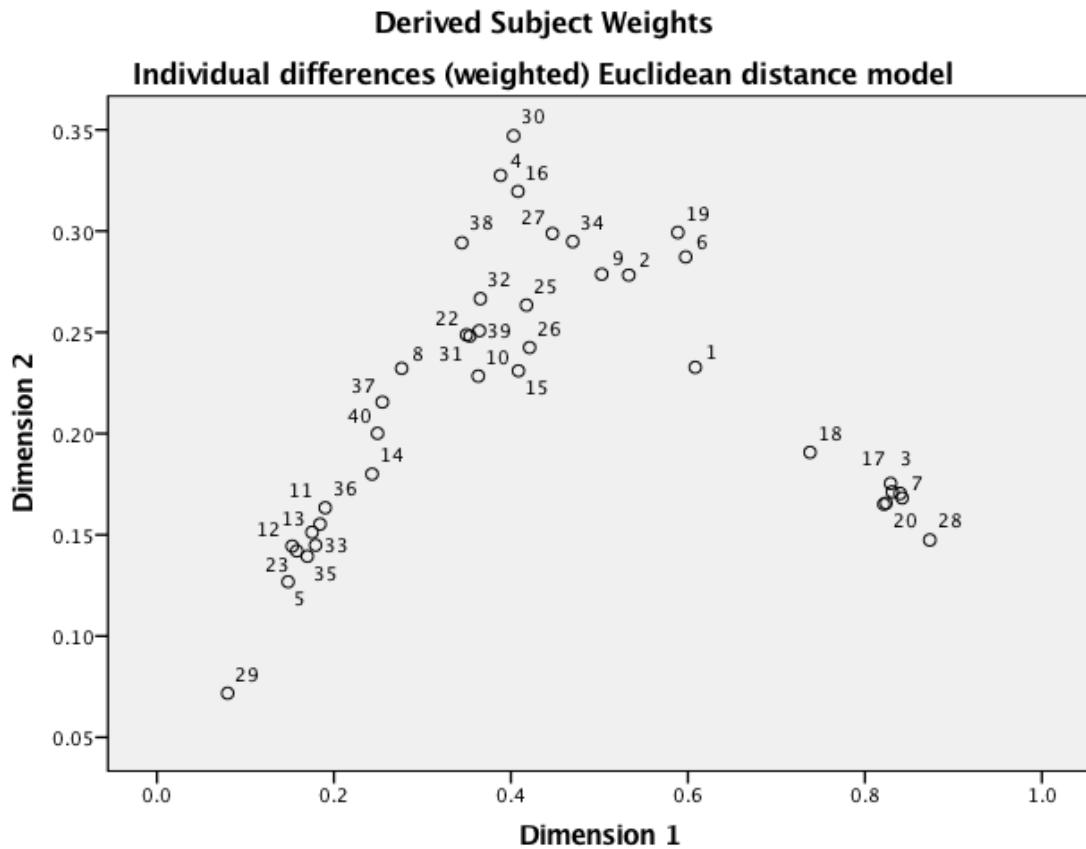


Figure 4. Subject weights for all 40 participants in two dimensions.

Participant occupation (i.e., in-service teachers vs. pre-service education majors) was used to provide subgroup aggregate data to inform interpretations of the card-sorting

data based on differences between subject weights on Dimensions 1 and 2. Participants in both subgroups weighted Dimension 1 more strongly than Dimension 2 (Table 5). In other words, in-service teachers and pre-service education majors attended primarily to the valence of the statements. Examination of dimension weights by participant occupation also revealed that in-service teachers (subject weight = 0.219) were twice as sensitive to Dimension 2 than pre-service education majors (subject weight = 0.113). This magnitude of difference was not present in Dimension 1, which suggests that both subgroups view Dimension 1 as equally salient. Subject weights have a non-arbitrary and absolute zero, so they allow for meaningful proportional interpretation.

Table 5

Subject Weights on Dimensions 1 and 2 by Participant Occupation

Group	Subject Weights	
	Dim. 1	Dim. 2
In-service	0.917	0.219
Pre-service	0.966	0.113

MANOVAs

Multiple one-way MANOVAs were implemented to explore the extent to which variables previously shown to impact perceptions of immigration (e.g., Stephen et al., 2009; Wang, 2012) influenced participants' subject weights on Dimension 1 and Dimension 2. Results revealed non-significant multivariate main effects for education (less than a bachelor's degree, bachelor's degree, more than a bachelor's degree; Wilks' $\Lambda = .90$, $F(2,37) = .93$, $p = .45$, $\eta^2_p = .05$), parent education (Wilks' $\Lambda = .92$, $F(2,37) = .81$, $p = .52$, $\eta^2_p = .04$), number of friends or their parents who are immigrants (several,

a few, none; Wilks' $\Lambda = .89$, $F(2,37) = 1.13$, $p = .35$, $\eta^2_p = .06$), frequency of contact with immigrants (once a month or less, more than once a month; Wilks' $\Lambda = .91$, $F(2,37) = 1.92$, $p = .16$, $\eta^2_p = .09$), and political party (Democrat, Republican; Wilks' $\Lambda = .94$, $F(2,33) = 1.11$, $p = .34$, $\eta^2_p = .06$). Results also revealed a non-significant multivariate main effect for occupation (in-service teacher vs. pre-service education major; Wilks' $\Lambda = .94$, $F(2,37) = 1.09$, $p = .35$, $\eta^2_p = .06$), which served as an independent variable for this study. Additionally, results revealed a non-significant multivariate main effect for participants' combined approval ratings of the two executive actions (DACA and DAPA) by President Obama (Wilks' $\Lambda = .91$, $F(2,37) = 1.90$, $p = .16$, $\eta^2_p = .09$). Although most of the analyses revealed statistically insignificant results, some of the findings demonstrated a medium effect ($\eta^2_p \geq .06$) and warranted examination. For example, participants who were more supportive of the executive order attended more to the content of statements (i.e., Dimension 2) than participants who were less supportive.

Number of piles created during the sorting task. One-way MANOVA was also implemented to explore the extent to which sorting behavior variables influenced participants' subject weights on Dimension 1 and Dimension 2. Results revealed a significant multivariate main effect for the number of piles created for the combined dimension weights, Wilks' $\Lambda = .711$, $F(2,37) = 7.50$, $p < .01$, $\eta^2_p = .29$. Given the significance of the overall test, the univariate main effects were examined. The main effect of number of piles created during the sorting task on Dimension 1 subject weight had a large effect ($\eta^2_p = .29$). The main effect of number of piles created on Dimension 2 subject weight revealed no practical significance ($\eta^2_p = .00$).

Reference to ethnicity/country of origin in pile labels. Results revealed a significant multivariate main effect for reference to ethnicity/country of origin in pile labels (referenced vs. not referenced) for the combined dimension weights, Wilks' $\Lambda = .82$, $F(2,37) = 3.94$, $p < .05$, $\eta^2_p = .18$. Given the significance of the overall test, univariate main effects were examined. The main effect of reference to ethnicity/country of origin on Dimension 1 subject weight had a medium effect ($\eta^2_p = .10$).

Correlations Between Continuous Outcome Variables and Dimension Weights

Pearson product-moment correlations were conducted to examine the relation between participant sorting behavior variables and dimension weights. There was a significant correlation between the number of piles created during the sorting task and Dimension 1 subject weights ($r = -.53$, $p < .001$). That is, participants for whom Dimension 1 was more salient created fewer piles than participants whose subject weights were lower on Dimension 1. In other words, participants who attended more to the valence of items than their content created fewer piles than participants who attended more to the content. There was also a significant correlation between the strength of participants' ratings on the truthfulness scale (i.e., to what extent did participants endorse item stimuli as true statements) and Dimension 2 subject weights ($r = -.32$, $p < .05$). Specifically, participants for whom Dimension 2 was more salient were more likely to rate in a neutral manner ('4' on a Likert scale from 1 to 7) than those whose subject weights were lower on Dimension 2.

Perceived Truthfulness of Statements Regarding Unauthorized Immigrants

Pearson product-moment correlations were also conducted to examine the relations between stimulus coordinates within the group space and the average

truthfulness rating of each statement across all participants. Participants' average truthfulness rating was significantly correlated with the location of each stimulus on Dimension 1 in MDSCAL ($r = .67, p < .001$) and INDSCAL ($r = .68, p < .001$). Specifically, participants were more likely to indicate that statements reflecting a positive attitude toward immigrants were true than statements reflecting a negative attitude. Average truthfulness rating was not significantly correlated with the location of each stimulus on Dimension 2 in MDSCAL ($r = .15, p = .23$) or INDSCAL ($r = -.17, p = .19$).

CHAPTER V

DISCUSSION

Immigration has been a salient issue in many election cycles, and it was one of the most contentious and emotional topics during the 2016 presidential campaign (Kurtzleben, 2015). Candidates within and across party lines asserted a diversity of opinions, staking their claims in the immigration debate in hopes of strengthening ties to key demographic groups in the American electorate (Agbafé, 2016). Although the respective immigration platforms of the 2016 presidential nominees were frequent recipients of media attention, the immigration debate was a hot topic even within political parties throughout the primaries. For example, the *New York Times* (2015) declared that immigration was “a particularly contentious issue in the Republican primary, providing fodder for numerous attacks” on whether candidates’ platforms were too conservative or not conservative enough. Of greater concern than attacks among politicians about their platforms were the physical and verbal attacks against minority groups (e.g., Latin Americans, Muslim Americans, transgender individuals) that were tied to the vitriol of the 2016 presidential campaign (Lichtblau, 2016). For example, on the Sunday following Trump’s election, a rector in Maryland reported that a sign advertising Spanish services had been ripped down (Reilly, 2016). Moreover, the words TRUMP NATION WHITES ONLY had been written on the sign and on a brick wall near the church's memorial garden.

As Hempkin (2016) highlighted, the immigration debate often runs the risk of slipping into stereotype, prejudice, and hate speech. Substantial research on attitudes toward immigration has also been conducted in Europe, such as Hempkin’s investigation

of how the surge in refugees and migrants entering Europe in 2015-2016 “provoked an often ferocious and wide-ranging debate” about which individuals Europeans should feel they are obligated to assist, what their assistance should entail, and the effects on the existing European population (p. 112). Although the U.S. is not alone in its need to take a proactive approach in passing immigration reform while protecting the rights and safety of immigrants, the evidence for the detrimental effects of stereotype, prejudice, and hate speech is substantial (e.g., Hwang & Goto, 2008; Sue et al., 2007; Zick, Küpper, & Hovermann, 2011) and served as the impetus for the current study.

Researchers, media outlets, policymakers, and politicians from across the aisle have denounced the U.S. immigration system as dysfunctional and in need of reform; however, properly structured immigration reform has remained elusive. As described in a U.S. Chamber of Commerce (2015) report, “despite years of political debates, immigration reform remains unaddressed and the current system remains broken. This logjam in Congress is due to misconceptions about how immigration impacts the economy and our national security” (p. 6). The potential for common misconceptions about the impact of immigration on various segments of American life (e.g., economy, culture, security, crime) was an impetus for the current investigation of attitudes toward immigration and immigrants. The frequency and intensity of the social and political rhetoric surrounding immigration in general, and unauthorized immigration in particular, informed the methodological decision to select statements from popular and social media as the stimuli for the card-sorting task used in this study.

According to Linville (1982), social evaluation, which can be understood as favorable/unfavorable judgments, uniform bias, or both, results from “a process that is at

least partially determined by the way in which our information about social domains is structurally represented” (p. 194). Studies on media effects reveal frequent negative media framing of socially disadvantaged groups that can activate negative cognitive/affective responses among audience members (Yang, 2015). For example, research in this area has demonstrated that negative stereotypes in the media lead to viewers’ biased judgments, negative feelings (e.g., contempt, fear, dislike), and preference for distance (Yang, 2015). Media framing theories that highlight subtle messaging accomplished through visual elements, biased sources, and language (e.g., metaphors) describe the existence of *stereotypical frame genres* that provide the context for interpretation of information and influence viewers’ cognitive and affective responses. Frame genres that are especially applicable to media portrayal of immigrants include legitimate victimization and threatening typification. Legitimate victimization frames serve the function of internalizing responsibility for social problems within socially disadvantaged groups, and they can cause contempt or indifferent feelings toward marginalized groups. Threatening typification frames also imply that members of certain groups are dangerous or cause social problems and can trigger fear and antipathy toward outgroups (Yang, 2015). Ibrahim (2010) studied the specific effects of threat framing on immigrants and found that exposure to threat frames led to a significant increase in anti-immigration attitudes. Ibrahim (2010) also identified that research on attitude formation often reflects the categories of positive, negative, and neutral, especially in studies of bias. The current study, however, was designed to explore the breadth of possible dimensions underlying participants’ attitudes toward immigration, including valence as well as content. By using multidimensional scaling (MDS), this study allowed for such a

complex analysis, which is why MDS was selected as the primary method of data analysis.

The frequency of interaction between educators and students from different ethnicities and immigrant backgrounds (Maxwell, 2014; Pew Research Center, 2015), as well as the social push for greater cultural competence among those in the helping professions (e.g., Godsil, Tropp, Goff, & Powell, 2014; National Education Association, 2008), served as an impetus for this study to focus on attitude formation among those in the education field. The purposes of the current study were to 1) utilize multidimensional scaling (MDS) to uncover the dimensional structure underlying the patterns of characteristics attributed to unauthorized immigrants by individuals in the education field, 2) identify individual differences that contribute to variation in dimension salience, and 3) determine the extent to which MDS is an appropriate way of examining people's attitudes toward immigrants and immigration.

To address these purposes, participants completed a card-sorting task with statements about immigration that were written in the vernacular of popular and social media. Participants also indicated the extent to which the sorting task statements were true as well as their level of approval of President Obama's executive order on immigration. Data from the card-sorting task were analyzed using multidimensional scaling analysis (MDS), and questionnaire data were used to identify individual differences in participants' sorting behaviors, specifically their subject weights (i.e., the extent to which they found a dimension more or less salient than the other dimension and/or compared to other participants). Results of the current study extend previous

research on attitudes toward immigrants as well as the use of multidimensional scaling to examine attitudes toward social groups.

Preliminary Findings

This study was the first known investigation to generate cognitive maps of attitudes toward unauthorized immigrants among those in education. It was also the first known study to use the vernacular of media reports on immigration as stimuli for a card-sorting task. A key phase in answering this study's research questions was interpretation of the cognitive maps produced through the multidimensional scaling procedure and individual difference scaling analyses. As discussed, participants attended primarily to the valence of the statements presented during the card-sorting task and secondarily to the content of the statements, specifically topics relating to economy and culture. The salience of economic and cultural factors in attitudes toward immigration is extensively supported by the existing research literature (Berg, 2013; Meuleman & Billiet, 2012; Stephan & Renfro, 2002; Vala et al., 2006).

Following the identification of the dimensional structure underlying participants' attitudes toward immigration, individual differences in subject weights (i.e., the extent to which individual and/or subgroups of participants attended to each of the two identifying dimensions) were examined. The current study revealed moderate effects of multiple demographic variables (e.g., number of friends or their parents who are immigrants, frequency of contact with immigrants, political party) on dimension subject weights. These variables are known to inform attitudes toward immigration (e.g., Cosby et al., 2013; Stephan et al., 2009), which suggests that results of this study are consistent with the existing literature.

Another individual difference variable examined in the current study was participants' approval of President Obama's executive order on immigration (i.e., DACA and DAPA). As discussed, participants' approval ratings were overwhelmingly positive, which is not consistent with attitudes found within the general population, of whom 50% disapproved and 46% approved of the executive order (Pew Research Center, 2014a). There were no attitudinal differences between in-service teachers and pre-service education majors toward President Obama's executive order (i.e., DACA and DAPA).

Major Findings

This study examined individual differences of participants' attitudes toward immigration as reflected by their subject weights (i.e., salience attached). Results from this study indicated that a diversity of variables were associated with differences in subject weights, across all participants as well as within subgroups (e.g., in-service vs. pre-service teachers, participants who sorted stimuli into two piles or more than two piles), that appear to reflect differences in nuanced thinking about immigration.

Differential Attention to the Content Dimension

Comparison of the subject weights of participants grouped by occupation revealed that pre-service undergraduate students and in-service teachers invested approximately the same amount of attention to the valence dimension. In contrast, in-service teachers paid twice as much attention to the content dimension reflecting economic versus cultural issues, than their undergraduate counterparts. This finding suggests that in-service teachers formed more nuanced perceptions of immigrants based on the stimuli presented than were the undergraduate students, who attended more to whether immigration was framed in a positive or negative way in the stimuli statements. Based on the data

available, it is uncertain whether age, level of education, or amount or type of work experience contributes to this difference in complexity of perceptions and attitudes. Anecdotally and empirically (e.g., Pew Research Center, 2015), in-service teachers have increasingly greater opportunity in the workplace for face-to-face interactions with students from immigrant families. Thus, these opportunities increase each year one is in service. Also, there has been considerable emphasis on in-service multiculturalism and cultural competence training for teachers (NEA, 2008). Therefore, it is hypothesized that in-service teachers are better trained to think in a more nuanced ways about social issues such as immigration status.

In-service teachers may also have more nuanced attitudes if they have greater exposure to current events and to a greater diversity of responses to immigration controversies raised in public policy and political debate. According to a review of U.S. adults' access to news about the 2016 presidential campaign, approximately 91% of adults over the age 18 years learned about the election at some point within seven days leading up to the study (Pew Research Center, 2016). Younger Americans were slightly less tuned in to the news, with 83% of 18- to 29-year-olds learning about the election from at least one source of information. Further, 35% of 18- to 29-year-olds indicated that social networking sites were the most helpful source of presidential election news. In contrast, cable TV news was reported to be the most helpful news source by 21% of 30- to 49-year-olds and 25% of 50- to 64-year-olds. Younger Americans were 7 to 8% more likely to learn about the election from one source compared to 50- to 64-year-olds and 30- to 49-year-olds, respectively. Further, they were 9 to 11% less likely to get news from 3-4 source types compared to 30- to 49-year-olds and 50- to 64-year-olds, respectively.

However, they were approximately just as likely to learn about the election from two source types or 5-11 source types as their older counterparts. Based on these data, it is possible that in-service teachers may spend more time attending to media reports, especially from more than one source, and therefore develop more nuanced views of topics such as immigration.

Card-Sorting Variables

Number of piles sorted. As discussed, participants for whom the valence of the statements was more salient (i.e., higher Dimension 1 weights) created fewer piles than participants who attended less to valence of statement while sorting. Many participants sorted statements into only two piles based on valence alone (as reflected by their pile labels [e.g., “positive” and “negative”]), whereas other participants created multiple piles that divided statements based on valence plus content (e.g., “positive statements about Hispanic immigrants,” “negative statements about immigrants in general”). Therefore, number of piles sorted served as another indicator of the complexity of participants’ thinking about immigration during the sorting task. This is the first known study to specifically examine number of piles sorted as a variable regarding attitudes toward immigrants and immigration. As such, it is recommended that future studies investigate this association between number of piles sorted and participants’ nuanced attitudes toward any number of constructs or controversies.

Reference to ethnicity. Similarly, participants who referenced ethnicity or country of origin in their pile labels attended less to the valence dimension and more to the content dimension than participants who did not reference ethnicity/country of origin. As discussed, only one quarter of participants included reference to ethnicity and/or

country of origin in their pile labels. Although it is possible that more participants noticed this difference in phrasing across statements (e.g., undocumented immigrant versus Hispanic immigrant) during the task, the large majority did not use this distinction to determine similarity among statements, as evidenced by their sorting practices. It is possible that some of the participants' emphasis on subtlety reflects more complex attitudes about the subject matter. There is an abundant research literature on implicit bias (e.g., Glock, Kneer, & Kovacs, 2013; Godsil, Tropp, Goff, & Powell, 2014; Staats, 2016), and it calls for a closer examination of the extent to which consumers of news and social media consciously and subconsciously attend to differences in language describing immigrants.

Strength of Truthfulness Ratings

As discussed, participants for whom the content dimension was more salient more likely rated in a neutral manner ('4' on a Likert scale from 1 to 7) than participants who attended less to the content dimension. It is hypothesized that more neutral raters identified and/or attended to more nuance among the statements and were less willing to classify the stimuli as very true or very false. This finding is consistent with the literature on the relation between complexity of attitudes toward an outgroup and the extremity of evaluations of that outgroup. Linville (1982) introduced the complexity-extremity effect, which posits that a person's evaluations of stimuli from a particular domain are more extreme when that person's representation of the stimuli is less complex. Complexity in representation is defined as the number of non-redundant aspects that a person uses to think about a domain. According to Linville, the greater the complexity, the less likely that person will perceive a given stimulus (e.g., an outgroup) as consistently good or bad

in all respects. In other words, individuals with complex representations are more likely to think flexibly instead of “black or white.” To illustrate the complexity-extremity effect, Linville found that undergraduate men demonstrated more extreme evaluations of older men than their same-age peers due to their simpler representation of older men than undergraduate men. Participants in that study did not include older men in addition to the undergraduate men; therefore, the extent to which age can influence adherence to the complexity-extremity effect is unknown, although other studies the extremity effect for outgroup members occurs across social groups. Importantly, results of the Linville (1982) study indicated that more favorable evaluations could be induced when participants are led to adopt a more complex orientation toward a set of stimuli than when they are led to adopt a simple orientation. This finding is directly applicable to individuals with simple understandings of immigration who tend to evaluate immigrants in an extremely negative way, at times reflecting stereotypical thinking and prejudice.

Summary and Implications

In summary, the results of the current study offer important methodological and theoretical implications. First, results indicated that MDS may be an appropriate and desirable way to investigate attitudes toward immigration. MDS allows researchers to uncover underlying dimensions in participants’ judgments (Rosenberg & Kim, 1975), analyze multiple levels of data measurement (Kruskal & Wish, 1978), and examine individual differences using all desired comparisons (Jaworska & Chupetlovska-Anastasova, 2009). In the current study, MDS allowed for a close examination of the salience of immigrant characteristics among participants’ perceptions. Specifically, MDS generated cognitive maps (i.e., derived stimulus configurations) that facilitated immediate

examination of the data and informed dimension interpretation. Dimension 1 was determined to represent the valence of the item stimuli, and Dimension 2 was determined to represent the economic and cultural issues reflected in the stimuli. In addition to facilitating a qualitative analysis of the data, MDS quantified the salience of each dimension to participants using subject weights. For example, results indicated that in-service teachers found economic and cultural issues to be twice as salient as did pre-service education majors. Thus, MDS was an effective way to indicate that not everybody had the same attitudinal response to the card-sorting stimuli.

Regarding theoretical implications and directions for future research, the current study highlighted a difference in nuanced thinking about immigration and immigrants across participants. As discussed, in-service educators were twice as likely to attend to specific statement content (i.e., Dimension 2) than pre-service education majors, for whom the valence dimension was more salient. The extent to which some participants may have rushed through the task instead of carefully reading and thoughtfully sorting the statements is unknown. Thus, it is possible that some participants have more complex attitudes toward immigration than those reflected by their card-sorting data. However, the rapidity with which some participants completed the task, especially those who sorted cards into two piles based on valence, may reflect their high *need for cognitive structure* (NCS; Bar-Tal & Guinote, 2002). Need for cognitive structure refers to the extent of preference to use cognitive structuring as a means to achieve certainty and is closely related to intolerance of ambiguity (Bar-Tal & Guinote, 2002). In other words, individuals with a high need for cognitive structure tend to crave familiarity, definiteness, and regularity, and they tend to develop and use stereotypical thinking to reduce

uncertainty and, thereby, use rapid processing. NCS is associated with the concept of social dominance orientation, which was previously discussed, and it has been shown to underlie stereotyping and prejudice. Research in this area has demonstrated that people vary in their dispositional motivation to structure their worlds in a simpler manner. That is, some individuals have a high need for cognitive structure whereas others have a low need. Bar-Tal and Guinote (2002) found that individuals with high NCS plus a strong ability to achieve that cognitive structure are more likely to perceive greater homogeneity among outgroup members as well as a more extreme view of the outgroup. Although NCS was not directly assessed in the current study, it is possible that NCS was an unexamined influence on the variation in complexity reflected in participants' attitudes toward immigration.

Although this study was exploratory in nature and purposefully designed to be a precursor to applied research, a few clinical implications can be gleaned. Current results suggest that pre-service teachers who have not yet entered the field may be less able to appreciate some of the nuances of immigration that could inform their thinking about students with immigration backgrounds. They may not be able to think in terms of multiple dimensions. Instead, they may have more dichotomous thinking about the issue of immigration, viewing immigration as all good or all bad instead of demonstrating flexible thinking about particular content areas (e.g., impacts on the economy, culture, security). Moreover, it is likely that pre-service teachers may be less critical of how information about immigration is presented to them in terms of media framing and the extent to which information presented in news and social media accurately reflects the experiences of their students. Associated risks of this simplistic thinking include the

perpetuation of stereotypical thinking and potential detrimental effects on the mental health of its targets, as well as contribution to the reported achievement gap between immigrant students and their native-born counterparts.

There is a need for empirical studies and an integrative review of the influence of stereotype threat theory (e.g., Appel, Weber, & Kronberger, 2015) on different immigrant groups in the U.S., as well as particular focus on attitudinal effects on children in school. Objectives of future research in this area would be to continue clarifying educators' attitudes toward immigration, refer first to needs assessment to determine focus of interventions, design interventions that provide counter evidence for inaccurate perceptions and biases reflected in participants' data, and teach educators how to reflect upon how their unique experiences and beliefs influence their attitudes toward immigration in the U.S. The long-term goal of these actions is to prevent educators from acting in ways that produce inequitable mental health and academic outcomes for students with immigrant backgrounds.

Limitations and Suggestions for Future Research

It is important to consider current results within the context of the study's limited generalizability and methodological limitations. First, participants were drawn from a convenience sample of undergraduate college students majoring in elementary education and in-service teachers, all of whom were living in central Illinois. Perceptions of immigrants evinced by participants may not reliably represent the perceptions of other individuals in the educational field due to the level of demographic homogeneity in this sample. As such, the extent to which the current findings generalize to groups in other regions of the country, groups from substantially lower or more diverse SES backgrounds,

or groups that are more racially, ethnically, and linguistically diverse is unknown. Given these effects, future investigations should replicate this analytic design study but draw from more diverse participant samples (e.g., regarding racial, ethnic, and linguistic backgrounds; geographical locations closer to the U.S.-Mexico border or with higher economic dependence on migrant workers).

It is also important to note that participants demonstrated a restricted range in attitudes toward immigration, as reflected by their overall approval of President Obama's executive order as well as their truthfulness ratings (i.e., the extent to which participants rated each stimuli statement as true). As discussed, participants who were more supportive of the executive order (i.e., DACA + DAPA) attended more to the content of statements (i.e., they had higher Dimension 2 subject weights) than participants who were less supportive. Although this finding was not statistically significant, its moderate effect suggests that it would be interesting to run this analysis with a larger participant pool with greater variability in their approval for the executive order. Moreover, participants were more likely to indicate that stimuli statements reflecting a positive attitude toward immigrants were true than statements reflecting a negative attitude. Therefore, it is also suggested that future investigations assemble participants with a greater diversity of opinion toward relevant immigration policy positions. It is important to acknowledge that participants' expressed level of positive attitude may also reflect socially desirable response bias due to the overt nature of the truthfulness scale and the rating of approval for DACA and DAPA. Therefore, administration of an implicit measure as well as the explicit ones presented here may provide researchers with a more accurate understanding of participants' attitudes toward immigration policy and media reports.

As discussed, there are multiple methods (e.g., subjective sorting, ranking or rating of items, item comparisons, or creating item hierarchies) that can generate proximity data appropriate for MDS (Jaworska & Chupetlovska-Anastasova, 2009). Therefore, the extent to which the particular methodology used (i.e., a free sort card-sorting task) influenced the results is unknown. Future studies may seek to utilize a different data collection methodology, especially one that may avoid the current study's hypothesized barrier of the dichotomous nature of data that results from card-sorting. These binary data precluded the sensitivity necessary to use the individually-weighted symmetric INDSCAL model. Results from the current study suggest that the INDSCAL model was more effective with subgroup-level versus participant-level data from the card-sorting task.

The current inquiry is also limited by its use of multidimensional scaling as the primary method for data analysis. Despite the strengths of MDS as a means of analyzing proximity data, it has inherent limitations. For example, interpretation of the dimensions yielded by MDS is subjective and not always straightforward (Kruskal & Wish, 1978). Dimension 2, for example, reflected clear themes of economy and culture at the ends of the dimension, but additional topics (e.g., crime, security, work ethic) were also reflected. Additionally, although statements about the economy were primarily clustered in the negative end of the dimension, they were also dispersed throughout the dimension. It is also important to acknowledge that conclusions cannot be drawn regarding participants' attitudes toward immigration in terms of themes or constructs that are not reflected in the item stimuli incorporated in the card-sorting task. Stimulus items in the current study were derived exclusively from the popular and social media within a specific temporal

context. As such, a future investigation using a card-sorting task and MDS analysis may first assemble focus groups to inform the selection of the item stimuli. The decision to reference ethnicity and country of origin in terms of Latino, Mexican, or Spanish-speaking immigrants was informed by the controversy surrounding DACA and DAPA, which has been primarily framed as impacting the Latino community. Other immigrant, cultural, and religious groups have also been a frequent target of controversy in political discourse and media reports (e.g., Syrian refugees). Future studies should also incorporate statements referencing immigrants from Muslim countries, especially given the general increase in verbal and physical attacks on Muslim Americans that were publicized in the news and through social media throughout 2015-2016 and the spike in these incidents in the week following the election of Donald Trump (Lichtblau, 2016), as well as Trump's issue of Executive Order 13780 that attempted to effect a travel ban to the U.S. from certain Muslim countries (Office of the Press Secretary, 2017).

As the information above suggests, it is important to interpret the findings of this study not only in the context of the participants and stimuli used, but also the temporal context of the data collection. Participants completed this study in April 2016, which was during President Obama's second term and before Donald Trump obtained the Republican nomination (on May 26, 2016). It would be interesting to replicate this study with the same materials and similar participants in a different political climate than currently exists.

In summary, MDS was a suitable way of examining educators' attitudes toward immigrants and immigration. This investigation also found that in-service teachers may evince a more nuanced distinction in their attitudinal thinking than pre-service educators.

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APPENDIX A
STIMULI QUESTIONNAIRE

Instructions: Please read the following statements about immigration that were gathered from different media sources. On a scale from 1 (completely false) to 7 (completely true), please rate the extent to which *each* of the following statements is true.

	Statements	Completely false			Neither true nor false			Completely true
1	Undocumented immigrants are honest men and women who just want to work.	1	2	3	4	5	6	7
2	Our borders, our culture, our language and our traditions must be preserved. Allowing undocumented immigrants to enter the U.S. and run over these things is wrong.	1	2	3	4	5	6	7
3	Undocumented immigrants constitute a net benefit to our economy, based on their contributions to Social Security, taxes, and work in the agricultural and service sectors.	1	2	3	4	5	6	7
4	Undocumented immigrants use more public services than they pay for in taxes.	1	2	3	4	5	6	7
5	English must be encouraged as the main language for general communication in the U.S., even among undocumented immigrants We have enough economic, cultural, racial, religious, and geographic divisions in the country as is.	1	2	3	4	5	6	7
6	The majority of undocumented immigrants come from Mexico's criminal class and are the least educated and most poverty prone.	1	2	3	4	5	6	7
7	Hispanic immigrants are over three times more likely to be on welfare than native-born whites.	1	2	3	4	5	6	7
8	The influx of undocumented immigrants is threatening the health of many Americans. Highly-contagious diseases are now crossing the border decades after those diseases had been eradicated in this country.	1	2	3	4	5	6	7
9	Undocumented immigrants often pay little or no taxes because many of them are working under the table in the underground, cash-based economy.	1	2	3	4	5	6	7
10	A large percentage of federal prisoners in the U.S. are Hispanic, most of them undocumented and guilty of multiple previous crimes.	1	2	3	4	5	6	7
11	Determined and daring undocumented immigrants come here to reinvent themselves and, in the process, wind up remaking and revitalizing the country.	1	2	3	4	5	6	7
12	Undocumented immigrants come here to create a better life for themselves. They work hard for everything. They don't just expect money or food to be handed to them.	1	2	3	4	5	6	7

	Statements	Completely false		Neither true nor false			Completely true	
13	Undocumented immigrants threaten traditional U.S. beliefs and customs.	1	2	3	4	5	6	7
14	The work of undocumented immigrants in the U.S. adds value and contributes to the economy.	1	2	3	4	5	6	7
15	Cities of concentrated immigration are some of the safest places around.	1	2	3	4	5	6	7
16	Hispanics want what all Americans want: quality education, economic opportunity, affordable homes, strong and safe communities, good government and access to health care.	1	2	3	4	5	6	7
17	Today's undocumented immigrants do not want to blend in and become Americanized.	1	2	3	4	5	6	7
18	Undocumented immigrants come to work, and they do work that Americans won't do for the little pay they get.	1	2	3	4	5	6	7
19	Hispanic immigrants come in search for a better life through jobs, not welfare.	1	2	3	4	5	6	7
20	Mexican immigrants are not making an effort to learn to speak English like most other immigrants.	1	2	3	4	5	6	7
21	Hispanic culture is having a profound effect on American food, music, sports, beauty products, fashion, politics and much more.	1	2	3	4	5	6	7
22	What Hispanics really want is more opportunity: the freedom to work, leave poverty behind, and rise into the ranks of the middle class and beyond.	1	2	3	4	5	6	7
23	Spanish is becoming a crucial second language to have in the U.S. Those who fail to acknowledge this do so at their own peril.	1	2	3	4	5	6	7
24	Undocumented immigrants don't pay taxes but still get benefits, including free education for their children.	1	2	3	4	5	6	7
25	Hispanics come to America to deliver their babies because they automatically become American citizens.	1	2	3	4	5	6	7
26	Undocumented immigrants wanted a better life, and with hard work, they found it. That should not be stripped away from them.	1	2	3	4	5	6	7
27	The U.S. is paying for the births and healthcare of millions of children of undocumented immigrants, who are exploiting the loophole that their children will become citizens.	1	2	3	4	5	6	7

	Statements	Completely false			Neither true nor false			Completely true
28	Hispanic success and advancement no longer solely affects Hispanics. With the growing size and scope of the Hispanic population, Hispanic success will ensure the future competitiveness and success of the United States as a whole.	1	2	3	4	5	6	7
29	The current flow of undocumented immigrants has made it extremely difficult for our border enforcement agencies to focus on the terrorists, organized criminals, and violent felons who benefit from the current chaotic situation.	1	2	3	4	5	6	7
30	Many undocumented immigrants have lived and worked hard in the U.S. for years but are considered violent and treated like criminals.	1	2	3	4	5	6	7
31	Most Hispanic immigrants do not learn English within a reasonable amount of time.	1	2	3	4	5	6	7
32	Undocumented immigrants have contributed \$100 billion to Social Security over a decade without any intention of collecting benefits.	1	2	3	4	5	6	7
33	Strong opinions against undocumented immigration are being fueled by an emotional response to the way Hispanic immigration is affecting the American culture.	1	2	3	4	5	6	7
34	When Mexico sends its people, they're not sending their best. They're sending people that have lots of problems, and they're bringing those problems to the U.S.	1	2	3	4	5	6	7
35	The federal government won't stop undocumented immigrants at the border, yet requires its citizens to pay billions to take care of them.	1	2	3	4	5	6	7
36	Undocumented immigrants create demand that leads to new jobs. They buy food and cars and cell phones, they get haircuts and go to restaurants. On average, there is close to no net impact on the unemployment rate.	1	2	3	4	5	6	7
37	It is no secret that most Americans can speak only English. In an age of increasing globalization and immigration, such monolingualism can be a big disadvantage.	1	2	3	4	5	6	7
38	Undocumented immigrants tend to arrive in the U.S. tired and dehydrated, not with dangerous diseases.	1	2	3	4	5	6	7
39	Every kid, regardless of who they are, what language they speak, where their parents are from, or their immigration status, deserves a fair shot to make it here.	1	2	3	4	5	6	7

	Statements	Completely false		Neither true nor false		Completely true	
40	We need to protect our borders to prevent criminals and terrorists from entering the country. Undocumented immigration is a serious threat to our national security.	1	2	3	4	5	6 7
41	Hispanics work hard and are willing to make tremendous sacrifices for the next generation.	1	2	3	4	5	6 7
42	The undocumented immigrants who are here have already shown disrespect for this nation by coming into the country illegally or by remaining here after their visas expired.	1	2	3	4	5	6 7
43	New immigrants—including undocumented immigrants—are actually less likely to commit crime, not more.	1	2	3	4	5	6 7
44	Undocumented immigrants are not a liability. They're an asset.	1	2	3	4	5	6 7
45	Being bilingual in English and Spanish gives people an advantage in the job market.	1	2	3	4	5	6 7
46	Undocumented immigrants who chose to leave their ancestral homeland to come to America are a self-selected group—bold and adventurous. And those who were forced to leave their countries bring with them the same intense drive to stand on their own two feet.	1	2	3	4	5	6 7
47	Unless we stop the influx of undocumented immigrants, we are likely to continue seeing segregated cultural communities throughout America.	1	2	3	4	5	6 7
48	Undocumented immigrants broke the law and need to face swift prosecution and deportation.	1	2	3	4	5	6 7
49	The influx of undocumented immigrants holds down salaries, keeps unemployment high, and makes it difficult for poor and working class Americans to earn a middle class wage.	1	2	3	4	5	6 7
50	Politicians and the media have managed to stir up hostility towards immigrants, legal and undocumented, and therefore create a connection between immigration and terrorism.	1	2	3	4	5	6 7
51	Today's undocumented immigrants threaten the national culture because they are not assimilating.	1	2	3	4	5	6 7
52	It is in no one's interest for undocumented immigrants and their families to live in the shadows. We need everyone to participate in the mainstream economy, to pay taxes, to participate openly in their communities, to be willing to report crimes.	1	2	3	4	5	6 7

	Statements	Completely false		Neither true nor false			Completely true	
53	With nearly one million new undocumented immigrants arriving each year, the potential for terrorists entering the U.S. undetected is high.	1	2	3	4	5	6	7
54	Hispanics occupy jobs from top to bottom. They're so critical to our country.	1	2	3	4	5	6	7
55	The reasons undocumented immigrants leave their own soil is because they are looking for more opportunities they cannot find in their homeland. This means they represent the more ambitious, entrepreneurial, hard-working segments of the society they left.	1	2	3	4	5	6	7
56	Mexicans come across the border to the U.S. to bring their kids to U.S. schools, for which they pay nothing.	1	2	3	4	5	6	7
57	Hispanics represent an increasingly vital segment of the American economy.	1	2	3	4	5	6	7
58	Mexican immigrants do not assimilate; instead, they send billions back into the Mexican economy while costing Americans billions of dollars annually.	1	2	3	4	5	6	7
59	Americans deserve more control over what kind of people are let into this country. The U.S. is allowing criminals to cross its borders unchecked.	1	2	3	4	5	6	7
60	Undocumented immigration is not a victimless crime.	1	2	3	4	5	6	7
61	Undocumented immigrants replenish the American spirit with hope and optimism, and often raise good kids with a work ethic and strong traditional values.	1	2	3	4	5	6	7
62	There is a positive impact of undocumented immigrants on consumer pricing, job creation, and innovation.	1	2	3	4	5	6	7

APPENDIX B
MEASURE OF ATTITUDES TOWARD OBAMA'S EXECUTIVE ACTIONS ON
IMMIGRATION

Attitudes toward the President's Executive Actions on Immigration

Please read the following information and respond to the two items.

President Barack Obama issued an executive action in November 2014 that increases the number of undocumented immigrants who are allowed to stay and work in the country. There were two main executive actions.

1. One executive action is known as Deferred Action for Childhood Arrivals (DACA). In this policy, unauthorized immigrants who were brought to the U.S. as children by their parents can apply for permission to not be deported.

Please circle the degree to which you approve or disapprove of this executive action on immigration issued by President Obama:

Strongly Disapprove	Disapprove	Approve	Strongly Approve
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2. The other executive action is known as Deferred Action for Parents of Americans and Lawful Permanent Residents (DAPA), or Deferred Action for Parental Accountability (DAPA). In this policy, unauthorized immigrants who give birth to children in the U.S. can apply for permission to not be deported and to work legally in the U.S.

Please circle the degree to which you approve or disapprove of this executive action on immigration issued by President Obama:

Strongly Disapprove	Disapprove	Approve	Strongly Approve
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APPENDIX C

PERSONAL CHARACTERISTICS AND BELIEFS QUESTIONNAIRE

Personal Characteristics and Beliefs Questionnaire

Age: _____ Race: _____

Gender: _____ Ethnicity: _____

What is the highest grade of school you have completed, or the highest degree you have received?

- Nursery, kindergarten, and elementary (grades 1-8)
- High school (grades 9-12, no degree)
- High school graduate (or equivalent)
- Some college (1-4 years, no degree)
- Associate's degree (including occupational or academic degrees)
- Bachelor's degree (BA, BS, AB, etc)
- Master's degree (MA, MS, MENG, MSW, etc)
- Professional school degree (MD, DDC, JD, etc)
- Doctorate degree (PhD, EdD, etc)

What is the highest grade of school your parent/guardian completed, or the highest degree your parent/guardian has received?

- Nursery, kindergarten, and elementary (grades 1-8)
- High school (grades 9-12, no degree)
- High school graduate (or equivalent)
- Some college (1-4 years, no degree)
- Associate's degree (including occupational or academic degrees)
- Bachelor's degree (BA, BS, AB, etc)
- Master's degree (MA, MS, MENG, MSW, etc)
- Professional school degree (MD, DDC, JD, etc)
- Doctorate degree (PhD, EdD, etc)

What is the current size of the undocumented Hispanic population in the U.S.?

- < 1 million
- 1-3 million
- 3-5 million
- 5-7 million
- 7-9 million
- 9-11 million

- 11–13 million
- 13-15 million
- > 15 million

Are any of your close friends, or their parents, immigrants to the United States?

- Yes, several or more than several
- Yes, a few
- No, none at all

How often do you have contact (verbal or non-verbal) with people who immigrated to the United States?

- Never
- Less than once a month
- Once a month
- Several times a month
- Once a week
- Several times a week
- Every day

If you answered yes, how would you describe your contact with immigrants?

- Extremely good
- Good
- Neutral
- Bad
- Extremely bad

As of today, do you tend to agree more with the Republican Party or the Democratic Party?

- Republican Party
- Democratic Party

APPENDIX D
STUDY INSTRUCTIONS

(Researcher gives participant Informed Consent Form, and, once it is signed, collects it and places it in a large white envelope that is kept separate from the other data.)

Researcher: “Your name/signature will never be tied to your responses.”

Practice Card-Sorting Task

Researcher: “You are participating in a study about public opinion on the issue of U.S. immigration policy. The first component of the study is a card-sorting task. To make sure the task is clear, you will first complete a practice card-sorting activity.”

(Researcher lays out practice cards randomly in 3 X 3 matrix.)

Researcher: “Look at the nine practice cards in front of you. Please sort the cards into piles, placing similar cards in the same pile and dissimilar cards in a different pile(s). At least two piles must be created.”

(Researcher waits for participant to sort the cards. If the participant does not follow the instructions, the researcher repeats them. When the participant understands, continue.)

Researcher: “Thank you. Tell me, how did you sort the cards?”

(Researcher waits for response, such as “by color/size/shape.”)

Researcher: “Nice job. You followed the directions of creating at least two piles and sorting the cards based on similarities. You could have sorted them in a different way, such as (by color/size/shape). Both are perfectly acceptable ways of sorting because there are no right or wrong ways to sort. You should sort the cards however *you* perceive them to be similar.”

(Researcher collects practice cards, then places pile of index cards in front of participant.)

Card-Sorting Task

Researcher: “Now that you understand how a card-sorting task works, please look at this pile of index cards in front of you. Each index card has a statement written on it related to immigration that was gathered from different media sources. They are arranged in no particular order. Please read each statement carefully. Your task is to sort the statements into piles based on how similar the statements are to each other. That is, statements you believe to be similar to each other in some way should be placed in the same pile. Statements you believe to be different from each other should not be placed in the same pile. The number of cards in a pile can be as few as one, but at least two piles must be created. There is no upper limit to the # of piles you create. There are no right or wrong ways to sort the cards.”

Researcher: “Remember: It is important that you focus only on the conceptual similarity of statements, *not* the extent to which you agree or disagree with each statement. Go ahead.”

(When participant is done sorting, researcher hands over a stack of post-it notes and a pen.)

Researcher: “Now, take a post-it note and a pen to assign a label, any label, to each of your piles.”

(Researcher waits as participant completes labeling.)

Researcher: “You now have an opportunity to determine whether you are satisfied with your groupings having written labels for each pile. Remember, there are no right or wrong groupings of cards, and many people do not change their groupings, but you are welcome to do so. Whenever you are done, bind the cards within each pile with a rubber band to ensure your responses remain sorted. Thank you for completing that step of the study.”

(Researcher gathers all card-sorting materials and sets them aside.)

Questionnaires

Researcher: “Now I would like you to complete a few questionnaires.”

(Researcher gives the participant the questionnaire packet.)

Researcher: “Please read the following statements about immigration that were gathered from different media sources. On a scale from 1 (completely false) to 7 (completely true), please rate the extent to which *each* of the following statements is true. Remember, none of your responses will be tied to your name, and they will be analyzed as part of a group of data.”
(Researcher waits for participant to complete the Stimuli Questionnaire and then prompts participant to flip to the ‘Attitudes toward the President’s Executive Actions on Immigration’ scale.)

Researcher: “Please read the following information and respond to the two items.”

(Researcher waits for participant to complete the Attitudes Scale and then prompts participant to flip to the Personal Characteristics and Beliefs Questionnaire.)

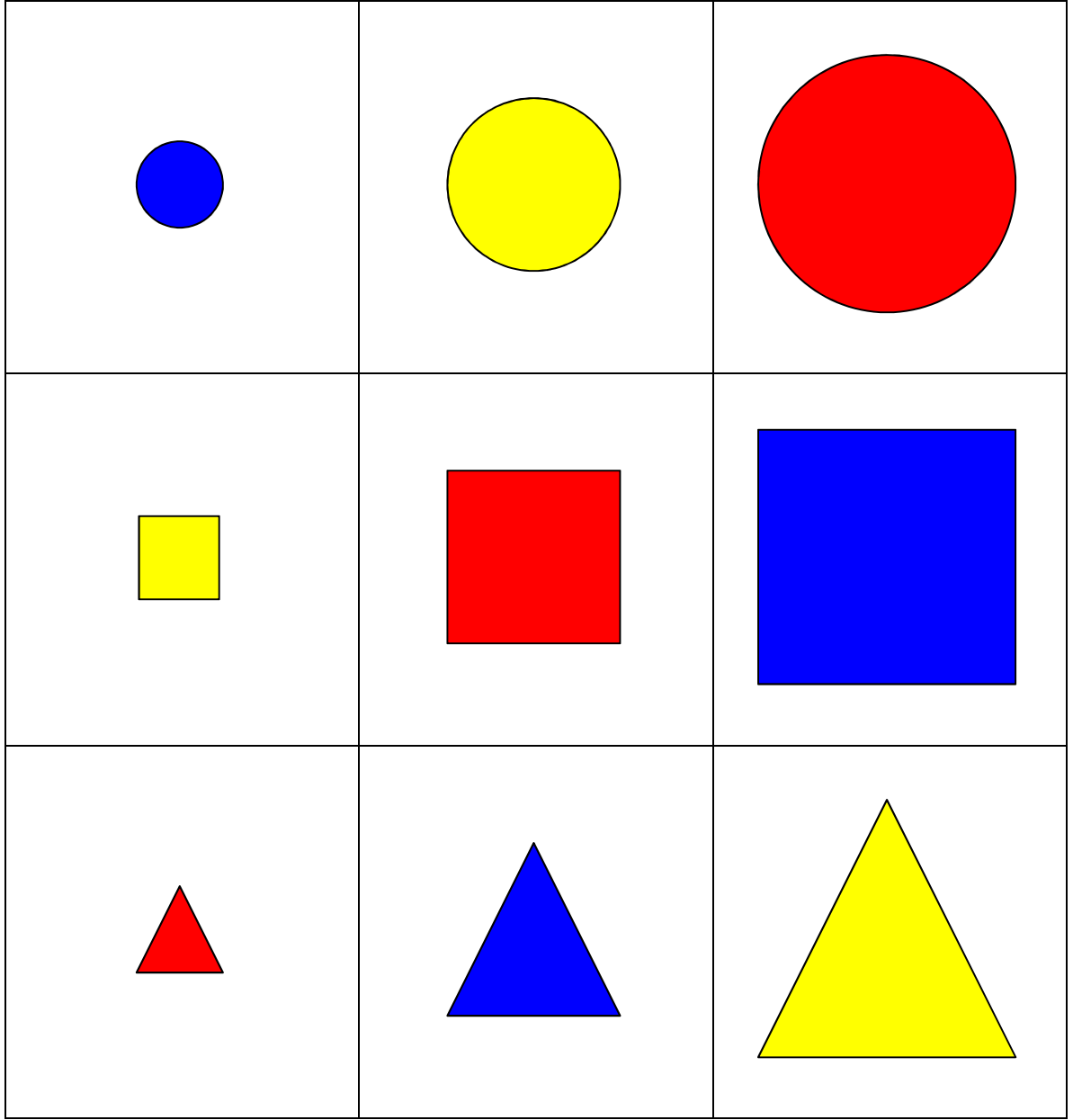
Researcher: “Please complete the following questionnaire that gathers some information about you.”

(After the participant completes the final questionnaire, the researcher collects the packet and provides the participant with a blank copy of the consent form.)

Researcher: “Thank you for your participation. If you have any questions, contact Kerry Pecho, whose name is on the copy of the consent form.”

APPENDIX E

PRACTICE CARD-SORTING ACTIVITY CARDS



APPENDIX F

ALL PARTICIPANTS' SIMILARITY RATINGS OF 62 STATEMENTS

APPENDIX G
SIMILARITY RATINGS OF 62 STATEMENTS AGGREGATED ACROSS
IN-SERVICE TEACHERS

APPENDIX H
SIMILARITY RATINGS OF 62 STATEMENTS AGGREGATED ACROSS
PRE-SERVICE EDUCATION MAJORS

APPENDIX I

MDSCAL CONFIGURATION DERIVED IN TWO DIMENSIONS:

DIMENSION 1 RANKING

Card #	Stimulus	Dim. 1	Dim. 2
13	Undocumented immigrants threaten traditional U.S. beliefs and customs.	-1.470	0.080
59	Americans deserve more control over what kind of people are let into this country. The U.S. is allowing criminals to cross its borders unchecked.	-1.470	-0.050
42	The undocumented immigrants who are here have already shown disrespect for this nation by coming into the country illegally or by remaining here after their visas expired.	-1.460	-0.260
48	Undocumented immigrants broke the law and need to face swift prosecution and deportation.	-1.460	-0.300
2	Our borders, our culture, our language and our traditions must be preserved. Allowing undocumented immigrants to enter the U.S. and run over these things is wrong.	-1.450	0.050
40	We need to protect our borders to prevent criminals and terrorists from entering the country. Undocumented immigration is a serious threat to our national security.	-1.440	-0.350
53	With nearly one million new undocumented immigrants arriving each year, the potential for terrorists entering the U.S. undetected is high.	-1.440	-0.240
6	The majority of undocumented immigrants come from Mexico's criminal class and are the least educated and most poverty prone.	-1.430	-0.130
10	A large percentage of federal prisoners in the U.S. are Hispanic, most of them undocumented and guilty of multiple previous crimes.	-1.430	-0.150
29	The current flow of undocumented immigrants has made it extremely difficult for our border enforcement agencies to focus on the terrorists, organized criminals, and violent felons who benefit from the current chaotic situation.	-1.430	-0.280
24	Undocumented immigrants don't pay taxes but still get benefits, including free education for their children.	-1.410	-0.320
27	The U.S. is paying for the births and healthcare of millions of children of undocumented immigrants, who are exploiting the loophole that their children will become citizens.	-1.410	-0.330
34	When Mexico sends its people, they're not sending their best. They're sending people that have lots of problems, and they're bringing those problems to the U.S.	-1.400	-0.240
49	The influx of undocumented immigrants holds down	-1.400	-0.230

Card #	Stimulus	Dim. 1	Dim. 2
	salaries, keeps unemployment high, and makes it difficult for poor and working class Americans to earn a middle class wage.		
8	The influx of undocumented immigrants is threatening the health of many Americans. Highly-contagious diseases are now crossing the border decades after those diseases had been eradicated in this country.	-1.390	-0.340
35	The federal government won't stop undocumented immigrants at the border, yet requires its citizens to pay billions to take care of them.	-1.390	-0.350
51	Today's undocumented immigrants threaten the national culture because they are not assimilating.	-1.390	-0.040
4	Undocumented immigrants use more public services than they pay for in taxes. ^a	-1.380	-0.440
58	Mexican immigrants do not assimilate; instead, they send billions back into the Mexican economy while costing Americans billions of dollars annually.	-1.380	0.160
9	Undocumented immigrants often pay little or no taxes because many of them are working under the table in the underground, cash-based economy.	-1.360	-0.260
7	Hispanic immigrants are over three times more likely to be on welfare than native-born whites.	-1.350	-0.040
56	Mexicans come across the border to the U.S. to bring their kids to U.S. schools, for which they pay nothing.	-1.350	0.150
17	Today's undocumented immigrants do not want to blend in and become Americanized.	-1.300	0.240
20	Mexican immigrants are not making an effort to learn to speak English like most other immigrants.	-1.290	0.700
25	Hispanics come to America to deliver their babies because they automatically become American citizens.	-1.240	0.680
31	Most Hispanic immigrants do not learn English within a reasonable amount of time. ^b	-1.180	0.830
5	English must be encouraged as the main language for general communication in the U.S., even among undocumented immigrants We have enough economic, cultural, racial, religious, and geographic divisions in the country as is. ^b	-1.110	1.020
47	Unless we stop the influx of undocumented immigrants, we are likely to continue seeing segregated cultural communities throughout America.	-0.980	-0.060
60	Undocumented immigration is not a victimless crime. ^a	-0.880	-0.430
50	Politicians and the media have managed to stir up hostility towards immigrants, legal and undocumented, and therefore create a connection between immigration and terrorism. ^a	-0.710	-0.660

Card #	Stimulus	Dim. 1	Dim. 2
33	Strong opinions against undocumented immigration are being fueled by an emotional response to the way Hispanic immigration is affecting the American culture. ^b	-0.660	0.950
52	It is in no one's interest for undocumented immigrants and their families to live in the shadows. We need everyone to participate in the mainstream economy, to pay taxes, to participate openly in their communities, to be willing to report crimes. ^a	0.340	-0.840
23	Spanish is becoming a crucial second language to have in the U.S. Those who fail to acknowledge this do so at their own peril. ^b	0.640	1.560
37	It is no secret that most Americans can speak only English. In an age of increasing globalization and immigration, such monolingualism can be a big disadvantage. ^b	0.660	1.450
32	Undocumented immigrants have contributed \$100 billion to Social Security over a decade without any intention of collecting benefits. ^a	0.960	-0.580
30	Many undocumented immigrants have lived and worked hard in the U.S. for years but are considered violent and treated like criminals.	1.040	-0.390
28	Hispanic success and advancement no longer solely affects Hispanics. With the growing size and scope of the Hispanic population, Hispanic success will ensure the future competitiveness and success of the United States as a whole.	1.150	0.210
21	Hispanic culture is having a profound effect on American food, music, sports, beauty products, fashion, politics and much more. ^b	1.250	0.750
38	Undocumented immigrants tend to arrive in the U.S. tired and dehydrated, not with dangerous diseases. ^a	1.250	-0.410
45	Being bilingual in English and Spanish gives people an advantage in the job market. ^b	1.270	0.950
18	Undocumented immigrants come to work, and they do work that Americans won't do for the little pay they get.	1.300	-0.330
3	Undocumented immigrants constitute a net benefit to our economy, based on their contributions to Social Security, taxes, and work in the agricultural and service sectors. ^a	1.310	-0.420
54	Hispanics occupy jobs from top to bottom. They're so critical to our country.	1.370	0.310
19	Hispanic immigrants come in search for a better life through jobs, not welfare.	1.380	0.390
44	Undocumented immigrants are not a liability. They're an asset.	1.390	0.060
36	Undocumented immigrants create demand that leads to new jobs. They buy food and cars and cell phones, they get	1.400	-0.290

Card #	Stimulus	Dim. 1	Dim. 2
	haircuts and go to restaurants. On average, there is close to no net impact on the unemployment rate.		
11	Determined and daring undocumented immigrants come here to reinvent themselves and, in the process, wind up remaking and revitalizing the country.	1.450	-0.280
62	There is a positive impact of undocumented immigrants on consumer pricing, job creation, and innovation.	1.450	-0.280
57	Hispanics represent an increasingly vital segment of the American economy.	1.460	0.040
14	The work of undocumented immigrants in the U.S. adds value and contributes to the economy.	1.470	-0.290
41	Hispanics work hard and are willing to make tremendous sacrifices for the next generation.	1.470	0.190
43	New immigrants—including undocumented immigrants—are actually less likely to commit crime, not more.	1.470	-0.190
16	Hispanics want what all Americans want: quality education, economic opportunity, affordable homes, strong and safe communities, good government and access to health care.	1.480	0.340
46	Undocumented immigrants who chose to leave their ancestral homeland to come to America are a self-selected group—bold and adventurous. And those who were forced to leave their countries bring with them the same intense drive to stand on their own two feet.	1.480	-0.270
61	Undocumented immigrants replenish the American spirit with hope and optimism, and often raise good kids with a work ethic and strong traditional values.	1.480	-0.220
22	What Hispanics really want is more opportunity: the freedom to work, leave poverty behind, and rise into the ranks of the middle class and beyond.	1.490	0.210
39	Every kid, regardless of who they are, what language they speak, where their parents are from, or their immigration status, deserves a fair shot to make it here.	1.490	0.100
15	Cities of concentrated immigration are some of the safest places around.	1.500	-0.140
26	Undocumented immigrants wanted a better life, and with hard work, they found it. That should not be stripped away from them.	1.500	-0.190
55	The reasons undocumented immigrants leave their own soil is because they are looking for more opportunities they cannot find in their homeland. This means they represent the more ambitious, entrepreneurial, hard-working segments of the society they left.	1.500	-0.230
1	Undocumented immigrants are honest men and women who just want to work.	1.520	-0.240

Card #	Stimulus	Dim. 1	Dim. 2
12	Undocumented immigrants come here to create a better life for themselves. They work hard for everything. They don't just expect money or food to be handed to them.	1.520	-0.290

Note: To view all statements as sorted by Dimension 2, see Appendix J.

^a Statements with the lowest value on Dimension 2.

^b Statements with the highest value on Dimension 2.

APPENDIX J

MDSCAL CONFIGURATION DERIVED IN TWO DIMENSIONS:

DIMENSION 2 RANKING

Card #	Stimulus	Dim. 1	Dim. 2
52	It is in no one's interest for undocumented immigrants and their families to live in the shadows. We need everyone to participate in the mainstream economy, to pay taxes, to participate openly in their communities, to be willing to report crimes.	0.340	-0.840
50	Politicians and the media have managed to stir up hostility towards immigrants, legal and undocumented, and therefore create a connection between immigration and terrorism.	-0.710	-0.660
32	Undocumented immigrants have contributed \$100 billion to Social Security over a decade without any intention of collecting benefits.	0.960	-0.580
4	Undocumented immigrants use more public services than they pay for in taxes.	-1.380	-0.440
60	Undocumented immigration is not a victimless crime.	-0.880	-0.430
3	Undocumented immigrants constitute a net benefit to our economy, based on their contributions to Social Security, taxes, and work in the agricultural and service sectors.	1.310	-0.420
38	Undocumented immigrants tend to arrive in the U.S. tired and dehydrated, not with dangerous diseases.	1.250	-0.410
30	Many undocumented immigrants have lived and worked hard in the U.S. for years but are considered violent and treated like criminals.	1.040	-0.390
35	The federal government won't stop undocumented immigrants at the border, yet requires its citizens to pay billions to take care of them.	-1.390	-0.350
40	We need to protect our borders to prevent criminals and terrorists from entering the country. Undocumented immigration is a serious threat to our national security.	-1.440	-0.350
8	The influx of undocumented immigrants is threatening the health of many Americans. Highly-contagious diseases are now crossing the border decades after those diseases had been eradicated in this country.	-1.390	-0.340
18	Undocumented immigrants come to work, and they do work that Americans won't do for the little pay they get.	1.300	-0.330
27	The U.S. is paying for the births and healthcare of millions of children of undocumented immigrants, who are exploiting the loophole that their children will become citizens.	-1.410	-0.330

Card #	Stimulus	Dim. 1	Dim. 2
24	Undocumented immigrants don't pay taxes but still get benefits, including free education for their children.	-1.410	-0.320
48	Undocumented immigrants broke the law and need to face swift prosecution and deportation.	-1.460	-0.300
12	Undocumented immigrants come here to create a better life for themselves. They work hard for everything. They don't just expect money or food to be handed to them.	1.520	-0.290
14	The work of undocumented immigrants in the U.S. adds value and contributes to the economy.	1.470	-0.290
36	Undocumented immigrants create demand that leads to new jobs. They buy food and cars and cell phones, they get haircuts and go to restaurants. On average, there is close to no net impact on the unemployment rate.	1.400	-0.290
11	Determined and daring undocumented immigrants come here to reinvent themselves and, in the process, wind up remaking and revitalizing the country.	1.450	-0.280
29	The current flow of undocumented immigrants has made it extremely difficult for our border enforcement agencies to focus on the terrorists, organized criminals, and violent felons who benefit from the current chaotic situation.	-1.430	-0.280
62	There is a positive impact of undocumented immigrants on consumer pricing, job creation, and innovation.	1.450	-0.280
46	Undocumented immigrants who chose to leave their ancestral homeland to come to America are a self-selected group—bold and adventurous. And those who were forced to leave their countries bring with them the same intense drive to stand on their own two feet.	1.480	-0.270
9	Undocumented immigrants often pay little or no taxes because many of them are working under the table in the underground, cash-based economy.	-1.360	-0.260
42	The undocumented immigrants who are here have already shown disrespect for this nation by coming into the country illegally or by remaining here after their visas expired.	-1.460	-0.260
1	Undocumented immigrants are honest men and women who just want to work.	1.520	-0.240
34	When Mexico sends its people, they're not sending their best. They're sending people that have lots of problems, and they're bringing those problems to the U.S.	-1.400	-0.240
53	With nearly one million new undocumented immigrants arriving each year, the potential for terrorists entering the U.S. undetected is high.	-1.440	-0.240
49	The influx of undocumented immigrants holds down salaries, keeps unemployment high, and makes it difficult for poor and working class Americans to earn a middle class wage.	-1.400	-0.230

Card #	Stimulus	Dim. 1	Dim. 2
55	The reasons undocumented immigrants leave their own soil is because they are looking for more opportunities they cannot find in their homeland. This means they represent the more ambitious, entrepreneurial, hard-working segments of the society they left.	1.500	-0.230
61	Undocumented immigrants replenish the American spirit with hope and optimism, and often raise good kids with a work ethic and strong traditional values.	1.480	-0.220
26	Undocumented immigrants wanted a better life, and with hard work, they found it. That should not be stripped away from them.	1.500	-0.190
43	New immigrants—including undocumented immigrants—are actually less likely to commit crime, not more.	1.470	-0.190
10	A large percentage of federal prisoners in the U.S. are Hispanic, most of them undocumented and guilty of multiple previous crimes.	-1.430	-0.150
15	Cities of concentrated immigration are some of the safest places around.	1.500	-0.140
6	The majority of undocumented immigrants come from Mexico's criminal class and are the least educated and most poverty prone.	-1.430	-0.130
47	Unless we stop the influx of undocumented immigrants, we are likely to continue seeing segregated cultural communities throughout America.	-0.980	-0.060
59	Americans deserve more control over what kind of people are let into this country. The U.S. is allowing criminals to cross its borders unchecked.	-1.470	-0.050
7	Hispanic immigrants are over three times more likely to be on welfare than native-born whites.	-1.350	-0.040
51	Today's undocumented immigrants threaten the national culture because they are not assimilating.	-1.390	-0.040
57	Hispanics represent an increasingly vital segment of the American economy.	1.460	0.040
2	Our borders, our culture, our language and our traditions must be preserved. Allowing undocumented immigrants to enter the U.S. and run over these things is wrong.	-1.450	0.050
44	Undocumented immigrants are not a liability. They're an asset.	1.390	0.060
13	Undocumented immigrants threaten traditional U.S. beliefs and customs.	-1.470	0.080
39	Every kid, regardless of who they are, what language they speak, where their parents are from, or their immigration status, deserves a fair shot to make it here.	1.490	0.100
56	Mexicans come across the border to the U.S. to bring their kids to U.S. schools, for which they pay nothing.	-1.350	0.150

Card #	Stimulus	Dim. 1	Dim. 2
58	Mexican immigrants do not assimilate; instead, they send billions back into the Mexican economy while costing Americans billions of dollars annually.	-1.380	0.160
41	Hispanics work hard and are willing to make tremendous sacrifices for the next generation.	1.470	0.190
22	What Hispanics really want is more opportunity: the freedom to work, leave poverty behind, and rise into the ranks of the middle class and beyond.	1.490	0.210
28	Hispanic success and advancement no longer solely affects Hispanics. With the growing size and scope of the Hispanic population, Hispanic success will ensure the future competitiveness and success of the United States as a whole.	1.150	0.210
17	Today's undocumented immigrants do not want to blend in and become Americanized.	-1.300	0.240
54	Hispanics occupy jobs from top to bottom. They're so critical to our country.	1.370	0.310
16	Hispanics want what all Americans want: quality education, economic opportunity, affordable homes, strong and safe communities, good government and access to health care.	1.480	0.340
19	Hispanic immigrants come in search for a better life through jobs, not welfare.	1.380	0.390
25	Hispanics come to America to deliver their babies because they automatically become American citizens.	-1.240	0.680
20	Mexican immigrants are not making an effort to learn to speak English like most other immigrants.	-1.290	0.700
21	Hispanic culture is having a profound effect on American food, music, sports, beauty products, fashion, politics and much more.	1.250	0.750
31	Most Hispanic immigrants do not learn English within a reasonable amount of time.	-1.180	0.830
33	Strong opinions against undocumented immigration are being fueled by an emotional response to the way Hispanic immigration is affecting the American culture.	-0.660	0.950
45	Being bilingual in English and Spanish gives people an advantage in the job market.	1.270	0.950
5	English must be encouraged as the main language for general communication in the U.S., even among undocumented immigrants We have enough economic, cultural, racial, religious, and geographic divisions in the country as is.	-1.110	1.020
37	It is no secret that most Americans can speak only English. In an age of increasing globalization and immigration, such monolingualism can be a big disadvantage.	0.660	1.450

Card #	Stimulus	Dim. 1	Dim. 2
23	Spanish is becoming a crucial second language to have in the U.S. Those who fail to acknowledge this do so at their own peril.	0.640	1.560

APPENDIX K

INDSCAL CONFIGURATION DERIVED IN TWO DIMENSIONS:

DIMENSION 1 RANKING

Card #	Stimulus	Dim. 1	Dim. 2
13	Undocumented immigrants threaten traditional U.S. beliefs and customs.	-1.153	-0.456
42	The undocumented immigrants who are here have already shown disrespect for this nation by coming into the country illegally or by remaining here after their visas expired.	-1.134	0.585
2	Our borders, our culture, our language and our traditions must be preserved. Allowing undocumented immigrants to enter the U.S. and run over these things is wrong.	-1.128	-0.595
48	Undocumented immigrants broke the law and need to face swift prosecution and deportation.	-1.122	0.668
51	Today's undocumented immigrants threaten the national culture because they are not assimilating.	-1.121	-0.577
49	The influx of undocumented immigrants holds down salaries, keeps unemployment high, and makes it difficult for poor and working class Americans to earn a middle class wage.	-1.117	0.651
10	A large percentage of federal prisoners in the U.S. are Hispanic, most of them undocumented and guilty of multiple previous crimes.	-1.110	0.679
6	The majority of undocumented immigrants come from Mexico's criminal class and are the least educated and most poverty prone.	-1.105	0.710
53	With nearly one million new undocumented immigrants arriving each year, the potential for terrorists entering the U.S. undetected is high.	-1.102	0.748
7	Hispanic immigrants are over three times more likely to be on welfare than native-born whites.	-1.101	0.646
34	When Mexico sends its people, they're not sending their best. They're sending people that have lots of problems, and they're bringing those problems to the U.S.	-1.100	0.702
40	We need to protect our borders to prevent criminals and terrorists from entering the country. Undocumented immigration is a serious threat to our national security.	-1.098	0.760
59	Americans deserve more control over what kind of people are let into this country. The U.S. is allowing criminals to cross its borders unchecked.	-1.093	-0.766
27	The U.S. is paying for the births and healthcare of millions of children of undocumented immigrants, who are exploiting the loophole that their children will become	-1.093	0.752

Card #	Stimulus	Dim. 1	Dim. 2
	citizens.		
8	The influx of undocumented immigrants is threatening the health of many Americans. Highly-contagious diseases are now crossing the border decades after those diseases had been eradicated in this country.	-1.089	0.790
29	The current flow of undocumented immigrants has made it extremely difficult for our border enforcement agencies to focus on the terrorists, organized criminals, and violent felons who benefit from the current chaotic situation.	-1.087	0.781
4	Undocumented immigrants use more public services than they pay for in taxes.	-1.079	0.810
24	Undocumented immigrants don't pay taxes but still get benefits, including free education for their children.	-1.072	0.843
35	The federal government won't stop undocumented immigrants at the border, yet requires its citizens to pay billions to take care of them.	-1.071	0.808
58	Mexican immigrants do not assimilate; instead, they send billions back into the Mexican economy while costing Americans billions of dollars annually.	-1.045	-0.922
56	Mexicans come across the border to the U.S. to bring their kids to U.S. schools, for which they pay nothing.	-1.037	-0.919
17	Today's undocumented immigrants do not want to blend in and become Americanized.	-1.017	-0.956
9	Undocumented immigrants often pay little or no taxes because many of them are working under the table in the underground, cash-based economy. ^b	-1.009	0.878
20	Mexican immigrants are not making an effort to learn to speak English like most other immigrants.	-0.911	-1.270
25	Hispanics come to America to deliver their babies because they automatically become American citizens.	-0.881	-1.310
31	Most Hispanic immigrants do not learn English within a reasonable amount of time. ^a	-0.841	-1.403
5	English must be encouraged as the main language for general communication in the U.S., even among undocumented immigrants We have enough economic, cultural, racial, religious, and geographic divisions in the country as is. ^a	-0.797	-1.481
60	Undocumented immigration is not a victimless crime. ^b	-0.646	1.297
47	Unless we stop the influx of undocumented immigrants, we are likely to continue seeing segregated cultural communities throughout America.	-0.645	-1.360
50	Politicians and the media have managed to stir up hostility towards immigrants, legal and undocumented, and therefore create a connection between immigration and terrorism. ^a	-0.273	-1.550

Card #	Stimulus	Dim. 1	Dim. 2
33	Strong opinions against undocumented immigration are being fueled by an emotional response to the way Hispanic immigration is affecting the American culture. ^a	-0.232	-1.665
52	It is in no one's interest for undocumented immigrants and their families to live in the shadows. We need everyone to participate in the mainstream economy, to pay taxes, to participate openly in their communities, to be willing to report crimes. ^b	0.259	1.560
23	Spanish is becoming a crucial second language to have in the U.S. Those who fail to acknowledge this do so at their own peril. ^a	0.583	-1.728
37	It is no secret that most Americans can speak only English. In an age of increasing globalization and immigration, such monolingualism can be a big disadvantage. ^a	0.685	-1.635
32	Undocumented immigrants have contributed \$100 billion to Social Security over a decade without any intention of collecting benefits. ^b	0.755	1.211
21	Hispanic culture is having a profound effect on American food, music, sports, beauty products, fashion, politics and much more.	0.865	-1.360
38	Undocumented immigrants tend to arrive in the U.S. tired and dehydrated, not with dangerous diseases. ^b	0.870	1.146
45	Being bilingual in English and Spanish gives people an advantage in the job market. ^a	0.881	-1.421
28	Hispanic success and advancement no longer solely affects Hispanics. With the growing size and scope of the Hispanic population, Hispanic success will ensure the future competitiveness and success of the United States as a whole.	0.897	-1.180
30	Many undocumented immigrants have lived and worked hard in the U.S. for years but are considered violent and treated like criminals. ^b	0.916	1.073
18	Undocumented immigrants come to work, and they do work that Americans won't do for the little pay they get. ^b	0.988	0.993
54	Hispanics occupy jobs from top to bottom. They're so critical to our country.	1.006	-1.001
19	Hispanic immigrants come in search for a better life through jobs, not welfare.	1.015	-1.060
39	Every kid, regardless of who they are, what language they speak, where their parents are from, or their immigration status, deserves a fair shot to make it here.	1.028	-1.055
16	Hispanics want what all Americans want: quality education, economic opportunity, affordable homes, strong and safe communities, good government and access to health care.	1.043	-1.026

Card #	Stimulus	Dim. 1	Dim. 2
22	What Hispanics really want is more opportunity: the freedom to work, leave poverty behind, and rise into the ranks of the middle class and beyond.	1.043	-1.010
43	New immigrants—including undocumented immigrants—are actually less likely to commit crime, not more.	1.061	0.876
36	Undocumented immigrants create demand that leads to new jobs. They buy food and cars and cell phones, they get haircuts and go to restaurants. On average, there is close to no net impact on the unemployment rate.	1.061	0.865
41	Hispanics work hard and are willing to make tremendous sacrifices for the next generation.	1.070	-0.899
57	Hispanics represent an increasingly vital segment of the American economy.	1.074	-0.865
3	Undocumented immigrants constitute a net benefit to our economy, based on their contributions to Social Security, taxes, and work in the agricultural and service sectors.	1.086	0.726
15	Cities of concentrated immigration are some of the safest places around.	1.088	0.784
12	Undocumented immigrants come here to create a better life for themselves. They work hard for everything. They don't just expect money or food to be handed to them.	1.090	0.790
26	Undocumented immigrants wanted a better life, and with hard work, they found it. That should not be stripped away from them.	1.094	0.767
44	Undocumented immigrants are not a liability. They're an asset.	1.094	0.663
46	Undocumented immigrants who chose to leave their ancestral homeland to come to America are a self-selected group—bold and adventurous. And those who were forced to leave their countries bring with them the same intense drive to stand on their own two feet.	1.095	0.785
11	Determined and daring undocumented immigrants come here to reinvent themselves and, in the process, wind up remaking and revitalizing the country.	1.097	0.725
14	The work of undocumented immigrants in the U.S. adds value and contributes to the economy.	1.099	0.734
1	Undocumented immigrants are honest men and women who just want to work.	1.109	0.704
55	The reasons undocumented immigrants leave their own soil is because they are looking for more opportunities they cannot find in their homeland. This means they represent the more ambitious, entrepreneurial, hard-working segments of the society they left.	1.114	0.701
62	There is a positive impact of undocumented immigrants on consumer pricing, job creation, and innovation.	1.118	0.663

Card #	Stimulus	Dim. 1	Dim. 2
61	Undocumented immigrants replenish the American spirit with hope and optimism, and often raise good kids with a work ethic and strong traditional values.	1.124	0.596

Note: To view all statements as sorted by Dimension 2, see Appendix L.

^a Statements with the lowest value on Dimension 2.

^b Statements with the highest value on Dimension 2.

APPENDIX L

INDSCAL CONFIGURATION DERIVED IN TWO DIMENSIONS:

DIMENSION 2 RANKING

Card #	Stimulus	Dim. 1	Dim. 2
23	Spanish is becoming a crucial second language to have in the U.S. Those who fail to acknowledge this do so at their own peril.	0.583	-1.728
33	Strong opinions against undocumented immigration are being fueled by an emotional response to the way Hispanic immigration is affecting the American culture.	-0.232	-1.665
37	It is no secret that most Americans can speak only English. In an age of increasing globalization and immigration, such monolingualism can be a big disadvantage.	0.685	-1.635
50	Politicians and the media have managed to stir up hostility towards immigrants, legal and undocumented, and therefore create a connection between immigration and terrorism.	-0.273	-1.550
5	English must be encouraged as the main language for general communication in the U.S., even among undocumented immigrants We have enough economic, cultural, racial, religious, and geographic divisions in the country as is.	-0.797	-1.481
45	Being bilingual in English and Spanish gives people an advantage in the job market.	0.881	-1.421
31	Most Hispanic immigrants do not learn English within a reasonable amount of time.	-0.841	-1.403
21	Hispanic culture is having a profound effect on American food, music, sports, beauty products, fashion, politics and much more.	0.865	-1.360
47	Unless we stop the influx of undocumented immigrants, we are likely to continue seeing segregated cultural communities throughout America.	-0.645	-1.360
25	Hispanics come to America to deliver their babies because they automatically become American citizens.	-0.881	-1.310
20	Mexican immigrants are not making an effort to learn to speak English like most other immigrants.	-0.911	-1.270
28	Hispanic success and advancement no longer solely affects Hispanics. With the growing size and scope of the Hispanic population, Hispanic success will ensure the future competitiveness and success of the United States as a whole.	0.897	-1.180
19	Hispanic immigrants come in search for a better life through jobs, not welfare.	1.015	-1.060

Card #	Stimulus	Dim. 1	Dim. 2
39	Every kid, regardless of who they are, what language they speak, where their parents are from, or their immigration status, deserves a fair shot to make it here.	1.028	-1.055
16	Hispanics want what all Americans want: quality education, economic opportunity, affordable homes, strong and safe communities, good government and access to health care.	1.043	-1.026
22	What Hispanics really want is more opportunity: the freedom to work, leave poverty behind, and rise into the ranks of the middle class and beyond.	1.043	-1.010
54	Hispanics occupy jobs from top to bottom. They're so critical to our country.	1.006	-1.001
17	Today's undocumented immigrants do not want to blend in and become Americanized.	-1.017	-0.956
58	Mexican immigrants do not assimilate; instead, they send billions back into the Mexican economy while costing Americans billions of dollars annually.	-1.045	-0.922
56	Mexicans come across the border to the U.S. to bring their kids to U.S. schools, for which they pay nothing.	-1.037	-0.919
41	Hispanics work hard and are willing to make tremendous sacrifices for the next generation.	1.070	-0.899
57	Hispanics represent an increasingly vital segment of the American economy.	1.074	-0.865
59	Americans deserve more control over what kind of people are let into this country. The U.S. is allowing criminals to cross its borders unchecked.	-1.093	-0.766
2	Our borders, our culture, our language and our traditions must be preserved. Allowing undocumented immigrants to enter the U.S. and run over these things is wrong.	-1.128	-0.595
51	Today's undocumented immigrants threaten the national culture because they are not assimilating.	-1.121	-0.577
13	Undocumented immigrants threaten traditional U.S. beliefs and customs.	-1.153	-0.456
42	The undocumented immigrants who are here have already shown disrespect for this nation by coming into the country illegally or by remaining here after their visas expired.	-1.134	0.585
61	Undocumented immigrants replenish the American spirit with hope and optimism, and often raise good kids with a work ethic and strong traditional values.	1.124	0.596
7	Hispanic immigrants are over three times more likely to be on welfare than native-born whites.	-1.101	0.646
49	The influx of undocumented immigrants holds down salaries, keeps unemployment high, and makes it difficult for poor and working class Americans to earn a middle class wage.	-1.117	0.651

Card #	Stimulus	Dim. 1	Dim. 2
44	Undocumented immigrants are not a liability. They're an asset.	1.094	0.663
62	There is a positive impact of undocumented immigrants on consumer pricing, job creation, and innovation.	1.118	0.663
48	Undocumented immigrants broke the law and need to face swift prosecution and deportation.	-1.122	0.668
10	A large percentage of federal prisoners in the U.S. are Hispanic, most of them undocumented and guilty of multiple previous crimes.	-1.110	0.679
55	The reasons undocumented immigrants leave their own soil is because they are looking for more opportunities they cannot find in their homeland. This means they represent the more ambitious, entrepreneurial, hard-working segments of the society they left.	1.114	0.701
34	When Mexico sends its people, they're not sending their best. They're sending people that have lots of problems, and they're bringing those problems to the U.S.	-1.100	0.702
1	Undocumented immigrants are honest men and women who just want to work.	1.109	0.704
6	The majority of undocumented immigrants come from Mexico's criminal class and are the least educated and most poverty prone.	-1.105	0.710
11	Determined and daring undocumented immigrants come here to reinvent themselves and, in the process, wind up remaking and revitalizing the country.	1.097	0.725
3	Undocumented immigrants constitute a net benefit to our economy, based on their contributions to Social Security, taxes, and work in the agricultural and service sectors.	1.086	0.726
14	The work of undocumented immigrants in the U.S. adds value and contributes to the economy.	1.099	0.734
53	With nearly one million new undocumented immigrants arriving each year, the potential for terrorists entering the U.S. undetected is high.	-1.102	0.748
27	The U.S. is paying for the births and healthcare of millions of children of undocumented immigrants, who are exploiting the loophole that their children will become citizens.	-1.093	0.752
40	We need to protect our borders to prevent criminals and terrorists from entering the country. Undocumented immigration is a serious threat to our national security.	-1.098	0.760
26	Undocumented immigrants wanted a better life, and with hard work, they found it. That should not be stripped away from them.	1.094	0.767
29	The current flow of undocumented immigrants has made it extremely difficult for our border enforcement agencies to	-1.087	0.781

Card #	Stimulus	Dim. 1	Dim. 2
	focus on the terrorists, organized criminals, and violent felons who benefit from the current chaotic situation.		
15	Cities of concentrated immigration are some of the safest places around.	1.088	0.784
46	Undocumented immigrants who chose to leave their ancestral homeland to come to America are a self-selected group—bold and adventurous. And those who were forced to leave their countries bring with them the same intense drive to stand on their own two feet.	1.095	0.785
8	The influx of undocumented immigrants is threatening the health of many Americans. Highly-contagious diseases are now crossing the border decades after those diseases had been eradicated in this country.	-1.089	0.790
12	Undocumented immigrants come here to create a better life for themselves. They work hard for everything. They don't just expect money or food to be handed to them.	1.090	0.790
35	The federal government won't stop undocumented immigrants at the border, yet requires its citizens to pay billions to take care of them.	-1.071	0.808
4	Undocumented immigrants use more public services than they pay for in taxes.	-1.079	0.810
24	Undocumented immigrants don't pay taxes but still get benefits, including free education for their children.	-1.072	0.843
36	Undocumented immigrants create demand that leads to new jobs. They buy food and cars and cell phones, they get haircuts and go to restaurants. On average, there is close to no net impact on the unemployment rate.	1.061	0.865
43	New immigrants—including undocumented immigrants—are actually less likely to commit crime, not more.	1.061	0.876
9	Undocumented immigrants often pay little or no taxes because many of them are working under the table in the underground, cash-based economy.	-1.009	0.878
18	Undocumented immigrants come to work, and they do work that Americans won't do for the little pay they get.	0.988	0.993
30	Many undocumented immigrants have lived and worked hard in the U.S. for years but are considered violent and treated like criminals.	0.916	1.073
38	Undocumented immigrants tend to arrive in the U.S. tired and dehydrated, not with dangerous diseases.	0.870	1.146
32	Undocumented immigrants have contributed \$100 billion to Social Security over a decade without any intention of collecting benefits.	0.755	1.211
60	Undocumented immigration is not a victimless crime.	-0.646	1.297
52	It is in no one's interest for undocumented immigrants and their families to live in the shadows. We need everyone to	0.259	1.560

Card #	Stimulus	Dim. 1	Dim. 2
	participate in the mainstream economy, to pay taxes, to participate openly in their communities, to be willing to report crimes.		