

12-13-2017

Perceptions of Nonnative Accented Speakers

Elif Ikizer

University of Connecticut - Storrs, elif.ikizer@uconn.edu

Follow this and additional works at: <https://opencommons.uconn.edu/dissertations>

Recommended Citation

Ikizer, Elif, "Perceptions of Nonnative Accented Speakers" (2017). *Doctoral Dissertations*. 1651.
<https://opencommons.uconn.edu/dissertations/1651>

Perceptions of Nonnative Accented Speakers

Elif G. Ikizer, PhD

University of Connecticut, 2017

During communication with a novel individual, nonnative accent can be one of the first factors that determine the course of the conversation. This dissertation aims to understand perceptions toward nonnative accented speakers. We aimed to understand the effect of the targets' accent, background, and race on the perceivers' perceptions.

In the first and second studies, we investigated the effect of nonnative accent and skin color in shaping stereotypes toward Latino and French-accented math TAs. In Study 1, we exposed White American college students to fictional Latino and White American teaching assistants. In Study 2, we exposed White American college students to fictional French and White American teaching assistants. In Study 3, we aimed to understand how individuals from diverse backgrounds perceive nonnative accented speakers. Therefore, in Study 3, we exposed White American, Latino, and other ethnicity perceivers to fictional Latino and White American teaching assistants.

Our findings show that perceivers did not report negative attitudes toward nonnative accented speakers. In fact, targets with a Latino or French accent or Latino background were perceived positively. In terms of behavioral intentions, White American perceivers across the 3 studies did not want to interact with the nonnative speakers in the professional domain whereas they did not demonstrate that aversion in the social domain. Nonnative accented speakers, both Latino and French, were perceived to be lower on conscientiousness by our college student samples. However, this finding was not replicated by our more diverse and older Mechanical

Turk sample, suggesting that this perception dissipates with exposure to nonnative accent over time.

Results of this dissertation have two main conclusions: First, perceivers' explicit attitudes did not align with their behavioral intentions. This may be explained by the system justifying functions of stereotypes. Perceivers may be utilizing the positive perceptions as a way to justify their negative views of the nonnative accented speakers. Second, negative perceptions toward nonnative accented speakers completely disappeared in the more diverse samples. Therefore, it is important to increase exposure to nonnative accented speakers via sources such as the media.

Perceptions of Nonnative Accented Speakers

Elif G. Ikizer

B.Sc., Bogazici University, 2010

M. A., Koc University, 2013

A Dissertation

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Philosophy

at the

University of Connecticut

2017

Copyright by
Elif G. Ikizer

2017

APPROVAL PAGE

Doctor of Philosophy Dissertation

Perceptions of Nonnative Accented Speakers

Presented by
Elif G. Ikizer, B.Sc., M.A.

Major Advisor

Nairán Ramírez-Esparza

Associate Advisor

Diane M. Quinn

Associate Advisor

Adam Sheya

University of Connecticut
2017

This dissertation is dedicated to Professor iğdem Kağıtçıbaşı.

Thank you for lighting the way for the rest of us.

Acknowledgements

First, I would like to thank the UConn faculty who helped make this dissertation possible. I would like to thank my Ph.D. advisor Nairán Ramírez-Esparza for taking a chance on me. Nairán, thank you for all that you taught, the countless drafts you marked in red, the many times you sat through my presentations, and all the endless meetings. Thank you for your warmth, all the support you gave, and all the lab brunches. Thank you for encouraging me to follow creativity and novelty in both research ideas and methods. I would like to thank my secondary advisor Diane Quinn for answering my many, many questions as well as raising the difficult questions to ponder. Diane, you have been so approachable. I would like to thank my committee member Adam Sheya not only for providing me the clarity I needed in my statistical questions, but also for pushing me to be more confident in my answers. I would like to thank my mentor Hart Blanton for showing me the value of a clear research idea. Hart, you have challenged me and I cannot thank you enough for that. I would also like to thank my examiners Vicki Magley and Blair Johnson for inspiring me to further investigate the applied aspects of my work. Vicki, thank you for all of your challenging questions and for setting an example that I can look up to. Blair, thank you for your careful feedback and uplifting attitude. I would also like to thank all of the professors at Koc and Bogazici Universities who gave me the passion for research.

Second, I would like to thank my amazing friends who have been extremely supportive during the writing of this dissertation. Gizem, you are the best friend anyone can ask for. Those who are far (especially Ece, Merve, Elif, Irem, Nur, Nihan, Inan) and those who are close, you make me feel lucky. Manya, thank you for all the joyful times and the sad times you shared with me, as well as the writing times that went until midnight. Glori, thank you for being there since the first day, and being an amazing lab mate and colleague. I am so glad we did this together; it would have been more difficult and more importantly, less fun without you. Atilla and Caner, thank you for the Turkish tea. Liz, thank you for giving me your insight on a wide range of topics, including research. Todd, thank you for all the joy, even during the most stressful of times. Ezgi, thank you for encouraging me to take this path and being a great collaborator.

Third, I would like to thank my army of research assistants. Shu, Tori, Ashlyn, Adedoyin, Tamsen, Sofia, Kayla, Halima, Livingston, you made this research possible. Thank you for your

hard work. Finally, I would like to thank Chris Burrows for all of his help with my research stimuli.

Fourth, I would like to thank my family. Annecim, none of this would be possible without you. Thank you for always encouraging me to push my limits and to do my best. Thank you for all the loving sacrifices you made. Thank you for giving me the courage to expand my horizons and follow my dreams, even when that meant being away for so long. Thank you for helping me in my transition to Connecticut as well as supporting me through the many ups and downs of this journey. Baba, thank you for all that you have done for me, being there when I excelled and when I failed, and for your positive attitude during difficult times. Knowing that I can always turn to you was priceless. Anane, thank you for being the most amazing example of a strong woman, and I know your love has been with me through this journey. I would also like to thank my extended family for their overseas calls that never ceased over the years. Finally, Ablacim, thank you for being my rock and confidant through this Ph.D. I cannot imagine a more selfless and supportive person than you. Your courage in exploring new horizons inspired me, and your support made it possible for me to take the risks I have taken. I simply don't know how I would do this without you.

Table of Contents

Introduction	1-19
Research Overview and Goals	2-3
Hypotheses	3-4
Theoretical Framework	4-6
Negative Stereotypes toward Nonnative Accented Speakers	6-8
Effect of Skin Color	9-11
Effect of Different Types of Accents	11-13
Perceptions of Nonnative Speaker Targets by Latinos and Other Ethnicity Individuals	13-15
Overview of the Current Studies	15-16
Control Variables	16-18
Pilot Study 1	19-22
Study 1: Effects of Latino Accent and Dark Skin Color	23-50
Pilot Study 2	51-54
Pilot Study 3	55-57
Study 2: Effects of French Accent and Dark Skin Color	58-81
Study 3: Perceptions of Accented Speakers by Ethnically Diverse Perceivers	82-140
General Discussion	141-156
References	157-162

Footnote	163
Appendix A: LinkedIn Profiles	164-165
Appendix B: Prescreening Questions for the Participant Pool	166-169
Appendix C: Survey Questions	170-198
Appendix D: Pilot Questions	190
Appendix E: Script for the Audio Recordings	191
Tables	192-193
Figures	194-227

Perceptions of Nonnative Accented Speakers

INTRODUCTION

During communication with a novel individual, there can be different marks or cues that signify stigma (Goffman, 1963). These cues convey information about that individual. Through these marks, individuals' cultural background can be communicated and stereotypes about people from that background will be activated. Nonnative accent can be such a cue. The interaction of this cue with other cues in creating stereotypes is important to investigate. It is possible that stereotypes about a certain accent can exacerbate or mitigate stereotypes about the individuals' cultural background. For example, it is possible that when a White-American is communicating with a Latino, stereotypes about Latinos will be activated and if that Latino has a nonnative accent, this can further emphasize the individual's Latino identity, which, in turn, will lead to more stereotyping toward that individual.

Past research has shown that individuals speaking with nonnative accents face stereotypes, discrimination, and stigma (Gluszek & Dovidio, 2010). Through these proposed studies, we aim to understand how the presence or absence of nonnative accent alters stereotypes toward a nonnative accented speaker. Nonnative accent is unique in the sense that it cues the perceiver two different pieces of information about a target: First, it cues that the target is an outgroup member. Second, it cues the specific culture the target belongs to. Therefore, positive or negative stereotypes toward that culture will be activated upon hearing the nonnative accent.

When a speaker has a nonnative accent, stereotypes regarding that specific accent will interact with other stereotypes regarding the speaker's different characteristics. For example, if a speaker has a dark skin color, negative stereotypes regarding skin color will be activated.

Nonnative accent can serve as a positive or a negative cue. Stereotypes regarding skin color and

nonnative accent can interact in different ways. There is a possibility that the effects are additive and every cue signaling outgroup membership will lead to increased stereotyping. For example, if there are stereotypes about Latinos, then a nonnative accent will exacerbate negative attitudes toward the speaker. There is also the possibility that stereotypes will depend on the specific accent. For example, if there are negative stereotypes regarding skin color, but positive stereotypes about French accent, a French accent will ameliorate the negative stereotypes toward the speaker. It may even be the case that if French accent is very positively stereotyped, effects can be reversed to lead a nonnative speaker to be more positively perceived than a native speaker.

Research Overview and Goals

Are all nonnative accents stereotyped negatively? What is the role different types of nonnative accent and skin color play in determining stereotypes toward an accented individual?

In exploring answers to these research questions, we chose to use teaching assistants (TAs) in the math domain as targets so we can employ different cultural backgrounds cued by the nonnative accent, and predict the direction of stereotyping. For example, Latinos are negatively stereotyped in the math domain (Gonzales, Blanton, & Williams, 2002). Therefore, the math domain gives us an opportunity to have Latino targets that could be negatively stereotyped, and French targets that may be positively stereotyped, and compare targets that do and do not have nonnative accents. Furthermore, skin color can increase stereotyping even more. In the first and second studies, we will investigate the effect of nonnative accent and skin color in shaping stereotypes toward Latino and French-accented math TAs. These studies will show whether there are boundary conditions to nonnative accent's negative effect on stereotyping and whether in some cases it can ameliorate other negatively perceived characteristics' effects on stereotyping.

How do different individuals stereotype a nonnative accented speaker differently? In the third study, we will investigate how other Latinos and nonnative accented speakers stereotype a nonnative accented speaker. Using this approach, will give us a chance to compare stereotyping toward a nonnative accented speaker by an ingroup member in comparison to by an outgroup member. This will give us an understanding into whether other nonnative accented individuals are more or less harsh in stereotyping a nonnative accented speaker.

An important note to make is that for the Latino accent, we chose a Puerto Rican accent. We are aware that Puerto Ricans are native to the United States and our goal is not to make a political claim against that. We chose the Puerto Rican accent because of the location of where our studies are conducted. In this area, Puerto Ricans represent the biggest group of Latino immigrants. If we included a Mexican accent, there would be the risk that the participants would fail to spot the accent. Therefore, we chose to use a Puerto Rican accent as a proxy for nonnative Latino accent in this research.

Hypotheses

We want to establish the overarching hypotheses we are testing in these three studies before going into the literature review, each study and the specific hypotheses pertaining to each study. In the current set of studies, we first hypothesize that targets with a nonnative accent will be perceived more negatively compared to targets with a standard American accent. Second, we hypothesize that a target from a Latino background will be perceived more negatively compared to a non-Latino target. Third, we hypothesize that a French target will be perceived more negatively compared to a (non-Latino) American target. Fourth, we hypothesize that a target with a dark skin color will be perceived more negatively compared to a target with a light skin color. We expect these hypotheses to unfold in terms of attitudes and behavioral intentions.

Furthermore, we aim to test how the effects of race, cultural background, and accent interact in an exploratory fashion. Finally, we aim to explore perceived personalities of targets based on their accent, cultural background, and skin color.

The literature review below will first focus on a broad theoretical framework on which the studies are based. Following the theoretical framework, we will focus on reviewing the previous literature on stereotypes toward accented speakers.

Theoretical framework

Allport explains in his seminal 1954 book *The Nature of Prejudice* that humans form loyalties to different groups in early childhood. He named any group where the members “use the word we with the same essential significance” (pg. 31) as the ingroup. Ingroups are explained to be essential to our survival and self-esteem. Furthermore, Allport stated that humans are able to perceive the existence of their ingroups only in contrast to outgroups, such that a common enemy ties and ingroup even closer. In relation to this, according to Allport, stereotypes serve functions such as making it possible to categorize members of ingroup and outgroup and form loyalties to our ingroup. Similarly, Tajfel (1969) posited that stereotypes serve cognitive functions that make having stereotypes evolutionarily adaptive.

According to Spears and Haslam (1997), stereotypes serve as psychological mechanisms that economize on time and effort spent on information processing by simplifying social reality. If stereotypes were not employed, individuals’ cognitive capacities would be overwhelmed by the social complexity of social reality. Similarly, the work on ego depletion and stereotyping has shown that depleting tasks increase stereotyping (Govorun & Payne, 2006). Especially in the context of a classroom, stereotypes may function to provide students with the cognitive capacity

needed for learning. Furthermore, classroom activities can be depleting. Therefore, in the context of teaching assistants, we may expect heightened possibility of detecting stereotypes.

Turner and Tajfel (1986) explained stereotyping as way to maintain a positive social identity about one's own identity. According to their social identity perspective, individuals aim to achieve or maintain a positive social identity which they base on how positively the ingroup is viewed compared to the outgroup. Therefore, group memberships are important for individuals because group memberships provide a positive social identity.

Recent work builds on Allport (1954) and Tajfel's (1969) conceptualization, and suggests more specific functions of stereotypes. For example, it has been suggested that stereotypes serve as an ideological function in maintaining the social system by justifying and rationalizing inequality (Jost & Banaji, 1994; Jost, Banaji, & Nosek, 2004; Jost, Kivetz, Rubini, Guermandi, & Mosso, 2005). Previous work showed that high and low-status groups are perceived to have different but complementary characteristics. For example, whereas men are found to be more agentic, women are found to be more communal (Conway, Pizzamiglio, & Mount, 1996). Furthermore, Jost et al. (2005) showed that high and low-status groups share a consensus in their perceptions of complimentary stereotypes. For example, high-status Northern Italians and low-status Southern Italians perceived that the high-status Northerners as higher on agentic traits and the low-status Southerners as higher on communal traits. Furthermore, Jost et al. (2005) demonstrated that these complimentary stereotypes serve the function to legitimize the existing social system.

Similarly, according to the stereotype content model, stereotypes contain two types of content: competence and warmth (Fiske et al., 2002). Groups of higher status are perceived as more competent and less warm. In contrast, groups of lower status are perceived of having less

competence yet being more warm. Subjectively positive stereotypes on the warmth dimension are functionally consistent with unflattering stereotypes on the agency dimension in justifying and maintaining the system with its existing inequalities (Fiske et al., 2012).

Negative stereotypes toward nonnative accented speakers

Previous research has shown that individuals speaking with nonnative accents are perceived as less credible when delivering trivia statements (Lev-Ari & Keysar, 2010). Lev-Ari and Keysar (2010) investigated credibility of accented and native speech in two studies. In the first study, the authors recorded native and nonnative accented speakers reciting trivia statements such as “A giraffe can go without water longer than a camel can” or “Ants don’t sleep.” They used native speaker judges to rate the heaviness of these nonnative accents and categorized the accented recordings into heavily and mildly accented categories. Native speakers of American English were recruited to listen to these statements and they were informed that the experiment was about intuition to knowledge. Participants were told they would be listening to statements given by the experimenter and recited by speakers. Participants were then asked to report how false or true they think each statement was. Results demonstrated that accented speech was perceived as significantly less truthful than native speech. Statements made by mild and heavily accented speakers were perceived at the same level of truthfulness, whereas statements by native speakers were perceived as more truthful.

In their second study, Lev-Ari and Keysar (2010) questioned whether highlighting accent as a source of difficulty in understanding would alter the effects and lead native speakers to correct for this difficulty. In this study, participants were told that the study was about whether the difficulty of understanding speech influences truth judgements. Results of this study showed that participants attempted to counteract the impact of processing difficulty, yet they were only

partially successful in doing so. Participants' ratings of truthfulness did not differ for the native and mildly accented speakers, whereas ratings of truthfulness was significantly lower for heavily accented speakers. Results showed that with prior notice, native speakers are able to correct for the difficulty of understanding only for mildly accented speech. These two studies show the effect accent can have on the perceptions of credibility in a laboratory setting. However, the external validity of the studies can be questioned because trivia statements are not critical in real life interactions.

Other studies that have looked at real life interactions found that accents can be important during eyewitness testimony (Frumkin, 2007). College students who participated in the study watched videos of accented and accent free speakers from various ethnic and national background giving the same eyewitness testimony. Afterwards, participants rated the testimony in four dimensions important for eyewitness; how credible the eyewitness is believed to be, how accurate the participant believes the eyewitness to be in relaying the evening's events, how deceptive the eyewitness is thought to be (deception being intentional), and how prestigious the participant believes the eyewitness to be. On all of these dimensions, accented speech was rated less favorably.

Nonnative accent's widespread effects also include teaching evaluation outcomes of teaching assistants. Previous work on how accent affects students' perceptions of teaching assistants showed that teaching assistants with nonnative accents are perceived as less competent and less attractive (Gill, 1994). College students were randomly assigned to North American, British, or Malaysian accent conditions. Participants listened to lectures in these three different accents and then gave evaluations. Students gave higher evaluations to the North American accented TA compared to the British or Malaysian accented TAs. Furthermore, students recalled

more information from the lecture given by the North American accented TA than the British or Malaysian accented TAs.

In line with these negative perceptions, individuals with nonnative accents report anticipating stigma and experiencing problems in communication. Gluszek and Dovidio surveyed individuals with native and nonnative accents across two studies (2010). In the first study, individuals with native and nonnative accents reported their levels of communication difficulties. Results showed that speakers with nonnative accents reported higher levels of communication difficulties compared to speakers with native accents. Moreover, individuals' communication difficulties correlated with their self-reported experiences of stigma. In a second study, Gluszek and Dovidio (2010) compared the feelings of belongingness in the United States across individuals with nonnative, regional, and standard American accents. Self-reported surveys showed that individuals with nonnative accents reported less belonging in the United States than individuals with regional and standard American accents. Furthermore, individuals with regional and standard American accents did not differ in their levels of belongingness in the United States.

Goal 1: Replicating the negative stereotypes toward nonnative accented speakers.

Based on previous work, we aim to replicate the negative stereotypes toward nonnative accented speakers. Therefore, we will compare nonnative (Latino) accented speakers to standard American accented speakers.

Hypothesis 1: Participants will demonstrate negative stereotypes toward the Latino-accented speakers compared to the standard American accented speakers.

Effect of skin color

Most literature on how accent and race shape perceptions has focused on each in isolation. For example, previous literature on nonnative accent demonstrated how accent leads to less credibility (Lev-Ari & Keysar, 2010), serves as a cue of one's social identity or outgroup membership (Gluszek & Dovidio, 2010) and leads to perceptions of teaching assistants as less competent and less attractive (Gill, 1994). Similarly, stereotypes White-Americans possess about African-Americans will cause the darker skinned teaching assistants to be more negatively perceived by White-Americans. For example, Jackson, Lewandowski, Ingram, and Hodge (1997) asked White-American college students to answer questions about how a typical African-American group member would be. Results revealed that African-Americans were described less favorably than White-Americans. Furthermore, less positive affect was reported about African-Americans compared to White-Americans.

In a similar vein, race can be an important indicator of deciding whether someone belongs to the ingroup or not. For example, Devos and Ma (2013) conducted a study on biases toward Barack Obama and the prime minister of U.K.(at the time of data collection, Tony Blair). Devos and Ma analyzed implicit associations of college students using an implicit association test and compared the associations between Obama as being American (as opposed to foreign) and Blair as being American (as opposed to foreign). Results demonstrated that when participants were categorizing based on race as part of the implicit association test, they associated Obama as less American than Blair. However, when explicitly asking participants who they thought is more American, they reported that Obama was more American than Blair. These results suggest that although participants are fully aware of the fact that Obama is more American than Blair, due to race, they might still have implicit associations of a white person as

being regarded as more American. Therefore, in our study, we believe that darker skinned targets will be perceived as more negatively than their lighter skinned counterparts by our White-American participants.

Despite the bulk of research looking at the negative aspects of having a nonnative accent or skin color differences between targets and perceivers on attitudes, nonnative accent's negative effects on perceptions has not been investigated in conjunction with skin color. To our knowledge, there is only one study that pitted accent and skin color against each other, which was conducted with 5 year-old children. Kinzler, Shutts, DeJesus, and Spelke (2009) demonstrated that when presented with novel friends, 5 year old children preferred native accented speaker children over nonnative accented children as friends. Similarly, 5 yearold children preferred same-race friends over different-race friends. Furthermore, when race and accent were pitted against each other, these children preferred to be friends with children from a different race and a nonnative accent rather than children within the same race but with no accent. We are expecting to find the reverse of this effect with adults. Socialization can change people's preferences and attitudes. Having a native accent can indicate a shared culture, which can be more important than being from the same race for adults.

Goal 2: Investigating the role of nonnative accent and race on stereotypes.

We first aim to replicate the previous work on the negative stereotypes toward dark skin colored targets. Therefore, our second hypothesis is as follows:

Hypothesis 2: Participants will demonstrate negative stereotypes toward targets with a dark skin color compared to targets with a light skin color.

Furthermore, we aim to understand which cue for stigma overrides when accent and race are pitted against each other. As the literature review above demonstrates, previous work is limited in this aspect. Therefore, we aim to fulfill this gap in the literature but we refrain from forming directional hypothesis. We will compare the stereotypes toward targets with a dark skin color and a standard American accent with the stereotypes toward targets with a light skin color and a nonnative accent.

Effect of different types of accents

Previous research showed that there are different expectations from high-and low-status individuals. For example, Tiedens, Ellsworth, and Mesquita (2000) demonstrated that people infer different status from different emotions. On the one hand, angry and proud people are thought of as high-status. On the other hand, sad, guilty, and appreciative people are considered low-status. Similarly, Fiske, Cuddy, Glick, and Xu (2002) showed in their stereotype content model that there are two dimensions of stereotypes; warmth and competence. Different status outgroups were stereotyped differently on these two dimensions. These studies show the importance of status in determining stereotypes. In terms of nonnative accent, it may be the case that a nonnative accent perceived as high-status (French accent) will create different stereotypes than a nonnative accent perceived as low-status (Latino accent).

Previous research did not focus specifically on the status of nonnative accent, yet showed the possibility that not only the presence of a nonnative accent, but also the type of nonnative accent is important. Gill demonstrated that accent affects how students rate teaching assistants (1994). Teaching assistants with American English accents were rated higher than those with a British accent, who were rated higher than those with a Malaysian accent in terms of

attractiveness and competence. This shows that in the context of a teaching assistant, although both British and Malaysian accents are nonnative accent, there is one accent that is viewed less negatively.

Another study that focused on a range of nonnative accents was on eyewitness testimony (Frumkin, 2007). This study demonstrated that nonnative accent affected important outcomes related to eyewitness testimony. Credibility, judgment of accuracy, deceptiveness, and prestige, as well as the relationship of the testimony to case disposition were all rated lower when the eyewitness had a nonnative accent. In terms of different types of accents, German accented eyewitness was perceived as more credible than the Mexican accented eyewitness, who in turn was perceived as more credible than the Lebanese accented eyewitness. This shows that there are different accents that lead to different attitudes. There are accents that are more positively viewed than other accents.

In this investigation, we propose a second study in which the math TA will be using French accent. We chose French accent because we are expecting French accent to have positive connotations. Although to our knowledge, there is no research on the perception of French accent by Americans, based on popular culture, we are expecting such an effect. For example, Hammond (2014) talks about French and Italian accents as the most attractive accents. Similarly, books about common practices in the French culture such as *Bringing Up Bébé* (Druckerman, 2013) about childrearing and *French Women Don't Get Fat* (Guiliano, 2005) which was about healthy lifestyles became bestsellers in the U.S., showing that it might be possible for the French to be perceived in a positive light by White-Americans.

Goal 3: Investigating how different types of accents are perceived.

Previous literature shows that nonnative accents are negatively stereotyped. However, the work on high-status accents are limited. Therefore, we aim to understand how a high-status accent such as the French accent is perceived. In our Study 2, we will compare perceptions toward French-accented speakers with those of standard American accented speakers. Based on previous work, our third hypothesis is as follows:

Hypothesis 3: Participants will demonstrate negative stereotypes toward the French-accented speakers compared to the standard American accented speakers.

Perceptions of nonnative speaker targets by Latinos and other ethnicity individuals

To our knowledge, previous research did not compare native and nonnative accented individuals' stereotyping of a nonnative accented speaker. It is more likely for a Latino or other ethnicity individual to have a native or nonnative accent. Therefore, on the one hand, there is a possibility that Latinos and other nonnative speakers can remember their own stereotype threat experiences upon hearing a nonnative accented speaker. Stereotype threat literature investigated such effects with other stereotyped identities than being an accented speaker. For example, Shapiro and Neuberg (2007) categorized the types of stereotype threat experiences that are possible. One type of stereotype threat individuals can experience is own-reputation threat, which is the fear that one's behavior will confirm in the minds of outgroup members, that the negative stereotypes held about one's group are true of one's self (Shapiro & Neuberg, 2007). Shapiro (2011) argued that for this kind of threat to occur, a) it is enough for individuals to worry about other outgroup members to view their performance through the lens of the negative stereotypes about the group and b) strong identification with the ingroup is not required. If nonnative accented individuals feel stereotype threat after hearing other nonnative accented

speakers, they should rate more harshly these nonnative speaker targets than White-Americans. If this is the case, Latino and other nonnative accented individuals should rate the nonnative targets even more negatively than White-American speakers do.

On the other hand, nonnative accented individuals and individuals from diverse ethnic backgrounds who have been exposed to a variety of identities can identify with their nonnative (or Latino) status more upon hearing nonnative accented speech. Therefore, they may react more positively toward the nonnative accented targets than White-Americans. According to the rejection-identification model (Branscombe, Schmitt, & Harvey, 1999), when members of minority groups are faced with prejudice, they increase their identification with their ingroup. Branscombe, et al. (1999) showed that prejudice has negative effects on well-being. However, identification with the ingroup alleviates this effect. Therefore, the model posits that following rejection from the outgroup, individuals identify further with their ingroup.

This model has received empirical support with data from groups such as African-Americans (Branscombe, Schmitt, & Harvey, 1999), women (Schmitt, Branscombe, Kobrynowicz, & Owen, 2002), and Mexican Americans (Schmitt & Branscombe, 2002). Similarly, Schmitt, Spears and Branscombe (2002) investigated this model with international students who were from non-European and non-English-speaking countries. The results of the survey demonstrated that international students that perceived more prejudice from the host community identified more with other international students, consistent with the rejection-identification model. In the current study, one possibility is that individuals from a Latino or other ethnicity background will identify strongly with the nonnative speaker targets. If this is the case, nonnative participants should react less harshly than native speakers toward nonnative

targets. In other words, Latinos and individuals from other ethnicities will not rate nonnative targets more negatively than native targets.

Goal 4: Investigating the impact of perceivers' background.

To our knowledge, there is no previous work that directly investigates how the perceivers' background affect their perception of accented speakers. Therefore, in Study 3, we aim to investigate whether individuals from White, Latino, or other ethnicity backgrounds demonstrate different patterns when reacting to accented speakers.

Overview of the current studies

In order to accomplish the goal of understanding how accented speakers are perceived, we ran three studies. The first goal of the current studies is to replicate the findings in the literature by investigating the additional negative effects of speaking with a nonnative accent to the prejudices about a cultural group. The second goal is to understand the effects of accent when the accented speaker has a darker skin color. The third goal is to understand the effects of an accent that is more positively perceived but still nonnative, the French accent. The fourth and final goal is to understand how other nonnative speakers perceive accented speakers.

In the current set of studies, we aim to replicate the previous findings on how accent can influence attitudes negatively. We employed a paradigm similar to Gill's (1994) where college students listen to accented and accent free lectures of math teaching assistants and report their attitudes. We believe this paradigm has external validity because college students are accustomed to give teaching evaluations. We also asked participants to report the personality they guess the TA has. These studies are novel in the sense that we will use Latino and we will manipulate skin color. We believe that the Latinos will be negatively stereotyped in the math domain. We have this expectation based on the stereotype threat literature (Gonzales, Blanton,

Williams, 2002). Gonzales et al. (2002) conducted a study on stereotype threat in math with Latino and White participants. Results demonstrated that Latino participants in the stereotype threat condition performed significantly worse than all other participants in a challenging math test. This research shows that Latinos have the fear of confirming the negative group stereotypes about their ethnic group in the math domain. This shows that stereotypes about Latinos in the math domain are prevalent in the society that these stereotypes can affect Latinos' performance.

Another novelty of the proposed studies is that we included a positively perceived accent (French). The final novelty of the study is that we aimed to replicate the studies using a Mechanical Turk sample, whereas previous studies were limited only to college student samples. Within the Mechanical Turk sample, we will also recruit Latino and other nonnative speaker participants. To our knowledge, this is the first study investigating the attitudes of nonnative speakers toward other nonnative speakers.

In our procedure across the three studies, we will provide participants with a LinkedIn profile of a math TA. The profile will include a computer generated image that is either made to look lighter or darker. Pictures of speaker was created using FaceResearch.org, all via averaging three pictures. Afterwards, dark skin and light skin versions of the picture were created using image altering software (See Fig. 1, See Appendix A for examples of the LinkedIn profiles). Afterwards, participants will be asked to listen to a math class by this TA. We conducted pilot studies to understand whether the math TAs are perceived to be equally positive, and whether the recordings are intelligible.

Control variables

Across the 3 studies, the same variables were statistically controlled for. First, we controlled for political attitudes. It is possible for conservatives to stereotype the targets with a

nonnative accent more than liberals. Specifically, their views on immigration may be different, confounding their attitudes toward the nonnative accents employed in the studies. Furthermore, previous research shows that conservatives tend to assign greater responsibility and blame to members of disadvantaged groups for their circumstances (Christopher et al., 2008; Ikizer & Blanton, 2016). In a similar vein, it is possible for conservatives to blame nonnative accented speakers for not adapting their accents to the standard American accent and therefore stereotype them more harshly.

Second, we controlled for math identification. The rationale behind controlling for math identification was that individuals highly identified with math would be more invested in having a good experience in a math class. For example, if these participants believe understanding nonnative accented speakers would require more effort as the class progresses, they would not want these speakers as their TA.

Third, we controlled for identification with being American. The rationale for controlling for this variable was similar to that of controlling for political identification. Specifically, White American participants identified highly with being American may be more “protective” attitudes about the standard American accent. These individuals may react more harshly to nonnative accented speakers.

Fourth, we controlled for demographic variables such as age, gender, and SES to minimize the potential effect of these variables that we are not interested in. It is possible for age to affect stereotyping such that younger individuals may demonstrate harsher stereotypes due to less exposure to nonnative accented speaker. Similarly, females and males might demonstrate different attitudes toward nonnative accented speakers. Finally, individuals from high and low SES may be exposed to different types of nonnative accented speakers in the past. For example,

whereas an individual from a high SES background might have been exposed to a language teachers with nonnative accents in English, an individual from a low SES background might have been exposed to immigrants in disadvantaged conditions. It is possible for such experiences to affect attitudes toward nonnative accented speakers.

PILOT STUDY 1

In this pilot study, we sought to verify the study materials for Study 1 and Study 3. The same photo was altered into a lighter or a darker skinned target. These targets were presented without background information and with a Latino name and light skin color, Latino name and a dark skin color, (non-Latino) American name and a light skin color, and (non-Latino) American name with a dark skin color to see if participants react to each similarly. This was necessary to ensure a possible confounding effect where a lighter or a darker skin colored target to be perceived as more attractive. We further aimed to understand if the audio recordings are difficult to understand or intelligible.

Method

Participants

In order to recruit White-American monolingual and monocultural participants without revealing the aims of the study, we screened participants previous to the studies. In a mass prescreening session week of the semester during introductory psychology classes at the University of Connecticut, participants were asked whether they identified as White-American, whether they were bilingual or monolingual and whether they were bicultural or monocultural. Afterwards, the study was made available for those participants who stated in the mass prescreening that they were White-American, monolingual, and monocultural. The same prescreening was employed in both pilots and Study 1 and Study 2.

Participants were 80 undergraduate students. In line with the University of Connecticut IRB protocol, participants received 1 course credit for their participation.

Procedure

The study was announced to potential participants via the University of Connecticut Psychology Participant pool system, through which participants could sign up for the study. Participants came to the laboratory, consented and partook in the experiment wearing headphones. Participants were randomly assigned by Qualtrics into the 4 different experimental groups with a different kind of target, a target with a Latino name and light skin color, Latino name and a dark skin color, (non-Latino) American name and a light skin color, and (non-Latino) American name with a dark skin color. After seeing the target, participants answered questions about their attitudes toward these targets. In a separate task, participants were assigned to either the standard American or Latino-accented recording and rated the intelligibility of the recordings.

Materials and measures

Targets. In this and the following studies, we did not use actual faces as stimuli. We created a biracial male face through an online face research system. Afterwards, we used the same face and made it lighter to create the stimulus for light skinned targets and made it darker to create the stimulus for dark skinned targets. The targets for all studies are men only not to have a confounding effect of gender.

Math classes. A script of a first Introduction to math class was created. A White-American male and a Puerto Rican male recorded the same script in their natural voice and tone, pretending they were teaching this in a classroom. The Puerto Rican male was chosen from someone with a light accent so that the recording is intelligible. Our goal was to have intelligible speech so that we can test for stereotypes toward accented speakers rather than the effects of

the difficulty of understanding accented speech. Professional actors were not used to achieve more realistic stimuli.

Attitudes toward targets. Participants were asked to rate the target in terms of a set of adjectives such as credibility, smartness, competency, being hardworking, being interesting, friendliness, attractiveness, and sociability on semantic differential scales from 1-7. Attitude dimensions created by Ambady and Rosenthal (1993) were used. Additional adjectives were also added to the measure. Ratings of attractiveness and mean of all ratings were used.

Difficulty and intelligibility of audio recordings. Participants were asked to rate how difficult it was to understand the speaker and how intelligible the speaker was. Each recording took about 2 minutes.

Results

Attitudes toward targets. A one-way between subjects ANOVA demonstrated no significant differences in the average attitudes toward the targets across the four experimental conditions (a target with a Latino name and light skin color condition, $M = 4.12$, $SD = .85$; Latino name and a dark skin color condition, $M = 4.03$, $SD = .66$, (non-Latino) American name and a light skin color condition, $M = 3.84$, $SD = .65$; and (non-Latino) American name with a dark skin color condition, $M = 4.01$, $SD = .57$; $F = .67$, $p = .57$, $\eta_p^2 = .02$). Similarly, a one-way between subjects ANOVA demonstrated no significant differences in the attractiveness ratings of the targets across the four experimental conditions (a target with a Latino name and light skin color condition, $M = 3.14$, $SD = 1.39$; Latino name and a dark skin color condition, $M = 3.72$, $SD = 1.21$, (non-Latino) American name and a light skin color condition, $M = 3.63$, $SD = 1.10$, and

(non-Latino) American name with a dark skin color condition, $M = 3.68$, $SD = 1.07$), $F = 1.18$, $p = .32$, $\eta_p^2 = .04$.

Difficulty and intelligibility of audio recordings. An independent samples t -test demonstrated that the Latino-accented recording ($M = 3.86$, $SD = 1.52$) was rated as significantly more difficult to understand than the standard American accented recording ($M = 2.02$, $SD = 1.31$), $t = 6.35$, $p < .01$, $r = .54$. However, a one-sample t -test comparing the difficulty level of the Latino-accented recording to the middle value of the Likert scale (4) showed no significant differences, $t = .60$, $p = .55$, 95 % $CI = -.61-.33$. An independent samples t -test demonstrated no differences in intelligibility between the Latino-accented recording ($M = 5.42$, $SD = 1.16$) and the standard American accented recording ($M = 5.35$, $SD = 1.45$), $t = 0.27$, $p = .79$, $r = .03$.

Discussion

The goal of Pilot Study 1 was to verify our materials for Study 1 and Study 3. The first goal was to compare the attitudes toward each target, a target with a Latino name and light skin color; Latino name and a dark skin color, (non-Latino) American name and a light skin color, and an (non-Latino) American name with a dark skin color. Results showed no differences in average attitudes toward these targets. Similarly, there were no differences in the perceived attractiveness levels of the targets. These results confirmed our target materials for the following studies.

The second goal of Pilot 1 was to see if the recordings were difficult to understand or intelligible. The results demonstrated that the Latino-accented was perceived as more difficult to understand than the standard American accented recording. This may seem cautionary; however, further analyses revealed that the Latino-accented recording was perceived to have medium

difficulty. Furthermore, there were no differences in the intelligibility ratings between the Latino and standard American recordings. These results showed that the recordings are suitable for the following studies.

STUDY 1: EFFECTS OF LATINO ACCENT AND DARK SKIN COLOR

The goal of Study 1 was to investigate White-American college students' perceptions of Latino-accented teaching assistants. In Study 1, we showed participants Latino and non-Latino TAs with varying skin color and background information in the form of bogus LinkedIn profiles. Participants listened to an audio lecture of the relevant TA. Participants then expressed their attitudes and stereotypes toward these TAs. It was hypothesized that Latino targets, targets with a Latino accent, and targets with a darker skin color would be perceived more negatively compared to their non-Latino counterparts.

Method

Participants

Participants were 257 White-American, monolingual, and monocultural undergraduate students prescreened (See Pilot 1 for details of the prescreening) and recruited from the University of Connecticut Psychology Participant pool. In line with the University of Connecticut IRB protocol, participants received one course credit for their participation. Data from 53 participants were omitted due to failing attention checks (19 participants spent less than 10 seconds on the LinkedIn profile and 11 participants didn't stay on the recording page long enough to listen to the full recording) or reporting suspicion that the experiment was about accent, skin color, and background (26 participants). Data from 204 participants were analyzed.

Procedure

The study was announced to potential participants via the University of Connecticut Psychology Participant pool system, through which participants could sign up for the study. Participants came to the laboratory, consented and partook in the experiment wearing headphones. Participants first saw a bogus spinning wheel including multiple bogus targets with varying age, gender, and ethnicities, to ensure credibility in the study. Participants were randomly assigned by Qualtrics into the 6 different experimental groups (See Table 1). Participants were then shown LinkedIn profiles of different TAs depending on the experimental group they were assigned to, and afterwards listened to the related audio recording of the mock math class. For example, a participant in the first experimental condition would see the LinkedIn profile of a TA named Rafael Sanchez, who has light skin, and then listen to his math class with Latino accent. Afterwards, participants rated the TAs on attitudes and multiple other dimensions (See Fig.1. for the pictures of the targets and Appendix A for the LinkedIn profiles). Participants were asked about the purpose of the experiment as a suspicion check at the very end.

Materials and measures

Targets. Photos piloted in Pilot 1 were used to create the TA profiles. Both the Latino and the non-Latino targets had LinkedIn profiles with equivalent features and merits, except for background. The Latino targets were presented as Puerto Rican. We chose Puerto Rican because it would be an option that would lead to less suspicion among the participants. It can be easier for participants not to question computerized facial characteristics if the target is Puerto Rican. Some other possible Latino targets could lead to suspicion. There is a big Puerto Rican population in the urban areas of Connecticut; therefore, it may be easier for them to expect a

Puerto Rican TA rather than another Latino background. Furthermore, we gave participants information on the TAs' previous teaching performances. Participants were shown good teaching evaluation ratings of the teaching assistants from previous years, so that participants could be inclined to believe they would be able to understand a lecture delivered by the accented teaching assistants.

Audio recording. Recordings piloted in Pilot 1 were used.

Prescreening questions

Measures that could potentially prime participants, such as political attitudes, math identification, and some subscales of identification with being American were included in the prescreening. The other measures were included in the lab study.

Political attitudes. Participants were asked to indicate their political attitudes. Participants answered the question "To what extent do you view yourself as Democrat/Republican?" on a 7-point Likert scale ranging from 1=extremely democrat to 7=extremely republican. Participants answered the questions "In terms of social policies, where do you place yourself on this scale?", "In terms of economic policies, where do you place yourself on this scale?" and "When it comes to politics in general, where do you place yourself on this scale?" on a 7-point Likert scale ranging from 1=extremely liberal to 7=extremely conservative ($\alpha = .92$).

Math identification. To measure math identification, two items used by Markus (1977) and adapted by Spencer, Steele, and Quinn (1999) were used. Participants were asked to indicate the extent to which they agree with the statements "I am good at math" and "It is important to me that I am good at math." on a 11-point Likert scale anchored by 1=strongly disagree to 11=strongly agree ($\alpha = .82$).

Identification with being American. To measure participants' identification with being American, solidarity and satisfaction subscales of the ingroup identification scale devised by Leach et al. (2008) was used. This scale allows adaptation for various ingroups. We adapted the scale by inserting "American" for every space for "ingroup." After the adaptation, sample items from the solidarity subscale include "I feel a bond with Americans." and "I feel solidarity with Americans." ($\alpha = .85$).

Sample items from the satisfaction subscale include "It is pleasant to be American." and "Being American gives me a good feeling." Participants indicated the rate which they agree with the items on a 5-point Likert scale ranging from 1=strongly disagree to 5=strongly agree ($\alpha = .88$). Due to space limitations in the mass prescreening, only these two subscales were included. The other subscales were included in the main study. Prescreening questions can be found in Appendix B.

The lab study questionnaires

Attitudes. Participants were asked to rate the TA in terms of credibility, smartness, competency, being hardworking, being interesting, friendliness, attractiveness, and sociability on semantic differential scales from 1-7. Along with attitude dimensions we created, attitude dimensions used by Ambady and Rosenthal (1993) were used (Appendix C). To obtain a score of overall attitudes, all the items were averaged after the reverse item was reverse coded ($\alpha = .93$).

Afterwards, attitude items were separated depending on their content. Items pertaining the social domain such as interesting, friendly, and social were averaged to create a social attitudes score. Items pertaining the professional domain such as credible, smart, and hardworking were averaged to create a professional attitude score.

Social attitudes. The following adjectives were used to create an average on social attitudes: interesting, friendly, social, enthusiastic, likeable, optimistic, and warm ($\alpha = .88$).

Professional attitudes. The following adjectives were used to create an average on professional attitudes: credible, smart, hardworking, intelligent, attentive, competent, confident, and professional ($\alpha = .86$).

Behavioral intentions. As a proxy for behavioral intentions in a professional domain, participants were asked to indicate the extent to which they agree with whether they would like to take that TA's class on a 1-7 Likert scale. As a proxy for behavioral intentions in a social domain, participants were asked to indicate the extent to which they would like to have lunch with the target if the target was not their TA (Appendix C).

Perceived personality. Using the scale devised by Wood, Harms, and Vazire (2010), participants were given 54 adjective pairs describing dimensions of the Big-Five personality dimensions agreeableness ($\alpha = .70$), emotional stability ($\alpha = .78$), openness to experience ($\alpha = .70$), conscientiousness ($\alpha = .73$), and extraversion ($\alpha = .27$). Sample adjective pairs are enthusiastic/excited (that taps into the extraversion dimension) and calm/relaxed (that taps into the emotional stability dimension). For each adjective pair, participants were asked to rate the TA on a Likert scale from 1 (=not at all) to 7 (=extremely) (Appendix C).

Demographics. Demographic questions included gender, age, and socio-economic status, along with the prescreening questions. Prescreening data can be linked to the experiment data through the experimental data through the participant identification number the University of Connecticut participant pool system provides each student; therefore assuring anonymity of the responses (Appendix C).

Results

Control variables

The first control variable was political attitudes. The four political attitude items were averaged to obtain a political attitude score, with high scores representing conservative attitudes. The second control variable was math identification and the two math items were averaged to obtain a math identification score. The third control variable was identification with being American. Although this scale has five components, due to the limited number of questions that can be included in the prescreening survey, only two components, the solidarity, and the satisfaction subscales could be included in the prescreening survey. Items in the solidarity subscale were averaged to create a solidarity score and items in the satisfaction subscale were averaged to create a satisfaction score. The solidarity subscale score and the satisfaction subscale score were used as control variables. Finally, gender, age, and self-reported social class were also controlled. All the analyses regarding mean comparisons were first conducted without control variables and then with control variables as reported below.

Data analytic strategy

To investigate differences that stem from the effect of accent and race, the non-Latino targets were excluded from the analyses. The reason for this exclusion was to understand the effect of accent and race without a confounding factor. For example, if the only differing factor between targets are accent, then comparisons of how targets would shed light on the effect of accent. If the non-Latino targets were to be included in the analyses, this would confound the results because they are different both in their accent and background. Therefore, two-way ANCOVAs were conducted within the Latino targets. With a similar logic, to investigate differences that stem from the effect of background and race, the Latino-accented speakers were

excluded from the analyses. Again, excluding the Latino-accented targets allowed us to see the effect of background without the confounding effect of accent. Therefore, two-way ANCOVAs were conducted within the American accented targets. Finally, to understand whether nonnative accent or dark skin color is a more impactful cue, one-way ANCOVAs were conducted to compare perceptions toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent.

Attitudes toward nonnative accented speakers

Overall attitudes.

It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a Latino accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to overall attitudes, we excluded the non-Latino targets and focused on the Latino targets. A two-way ANCOVA was conducted to examine the effect of accent and race on overall attitudes, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on average attitudes, $F(1, 113) = 2.75, p = .10, \eta_p^2 = .02$. There was no significant main effect of race on average attitudes, $F(1, 113) = 1.19, p = .28, \eta_p^2 = .01$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 113) = .67, p = .41, \eta_p^2 = .006$. The covariates did not have a significant effect on overall attitudes. Mean overall attitude scores can be found in Figure 2.¹

It was hypothesized that the targets with a non-Latino background would be perceived more positively compared to the targets with a Latino background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to overall attitudes, we excluded the Latino-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on overall attitudes, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on average attitudes, $F(1, 132) = .41, p = .52, \eta_p^2 = .003$. There was no significant main effect of race on average attitudes, $F(1, 132) = .04, p = .84, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 132) = 2.32, p = .13, \eta_p^2 = .02$. The covariates did not have a significant effect on overall attitudes. Mean overall attitude scores can be found in Figure 2.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare attitudes toward these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of average attitudes, $F(1, 57) = .47, p = .50, \eta_p^2 = .008$. The covariates did not have a significant effect on overall attitudes, except for social class, $p = .02, \eta_p^2 = .09$. Individuals who had higher self-reported social class reported more negative overall attitudes. Mean overall attitude scores can be found in Figure 2.

Social attitudes.

It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a Latino accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to social attitudes, we excluded the non-Latino targets and focused on the Latino targets. A two-way ANCOVA was conducted to examine the effect of accent and race on social attitudes, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was a significant main effect of accent on social attitudes, $F(1, 113) = 7.03, p = .009, \eta_p^2 = .06$. Figure 3 shows that Latino-accented targets were evaluated higher on social attitudes. There was no significant main effect of race on social attitudes, $F(1, 113) = .64, p = .43, \eta_p^2 = .006$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 113) = .58, p = .45, \eta_p^2 = .005$. None of the covariates had a significant effect on social attitudes. Mean social attitude scores can be found in Figure 3.

It was hypothesized that the targets with a non-Latino background would be perceived more positively compared to the targets with a Latino background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to social attitudes, we excluded the Latino-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on social attitudes, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on social attitudes, $F(1, 132) = .07, p = .80, \eta_p^2 = .001$. There was no

significant effect of accent and none for race on average attitudes, $F(1, 132) = .01, p = .94, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 132) = .72, p = .40, \eta_p^2 = .005$. The covariates did not have a significant effect on social attitudes. Mean social attitude scores can be found in Figure 3.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare social attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare attitudes toward these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of social attitudes, $F(1, 57) = 2.93, p = .09, \eta_p^2 = .05$. Among the covariates, only social class, $p = .01, \eta_p^2 = .11$ and political attitudes, $p = .04, \eta_p^2 = .07$ had significant effects on social attitudes. Perceivers higher on social class reported more negative social attitudes. Perceivers who were more conservative reported more positive social attitudes. Mean social attitude scores can be found in Figure 3.

Professional attitudes.

It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a Latino accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to professional attitudes, we excluded the non-Latino targets and focused on the Latino targets. A two-way ANCOVA was conducted to examine the effect of accent and race on professional attitudes, controlling for participants' age,

gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on professional attitudes, $F(1, 113) = .06, p = .82, \eta_p^2 = .001$. There was no significant main effect of race on professional attitudes, $F(1, 113) = 2.03, p = .16, \eta_p^2 = .02$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 113) = .64, p = .42, \eta_p^2 = .006$. None of the covariates had a significant effect on professional attitudes. Mean professional attitude scores can be found in Figure 4.

It was hypothesized that the targets with a non-Latino background would be perceived more positively compared to the targets with a Latino background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to professional attitudes, we excluded the Latino-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on professional attitudes, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on professional attitudes, $F(1, 132) = .67, p = .42, \eta_p^2 = .005$. There was no significant main effect of race on average attitudes, $F(1, 132) = .01, p = .95, \eta_p^2 = .001$. There was a significant interaction effect between background and race, $F(1, 132) = 4.10, p = .05, \eta_p^2 = .03$. Figure 4 shows that for Latino targets, light skin color leads to more positive professional attitudes, whereas for the non-Latino targets, dark skin color leads to more positive professional attitudes. None of the covariates had a significant effect on professional attitudes. Mean professional attitude scores can be found in Figure 4. The interaction can be found in Figure 5.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare professional attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare attitudes toward these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of professional attitudes, $F(1, 57) = .09, p = .77, \eta_p^2 = .001$. The covariates did not have a significant effect on professional attitudes except for social class, $p = .03, \eta_p^2 = .08$. Perceivers higher on social class reported more negative professional attitudes. Mean professional attitude scores can be found in Figure 4.

Behavioral intentions toward nonnative accented speakers

Likelihood of taking a future class.

Participants' evaluation of their likelihood of taking a future class with the target TA was used as a proxy for behavioral intentions in the professional domain. It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a Latino accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to likelihood of taking a future class, we excluded the non-Latino targets and focused on the Latino targets. A two-way ANCOVA was conducted to examine the effect of accent and race on the likelihood of taking a future class, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on the likelihood of taking a future class, $F(1, 113) = .55, p = .46, \eta_p^2 = .005$. There was no significant

main effect of race on the likelihood of taking a future class, $F(1, 113) = 1.96, p = .16, \eta_p^2 = .02$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 113) = .87, p = .35, \eta_p^2 = .008$. None of the covariates had a significant effect on the likelihood of taking a future class. Mean likelihood of taking a future class scores can be found in Figure 6.

It was hypothesized that the targets with a non-Latino background would be perceived more positively compared to the targets with a Latino background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to likelihood of taking a future class, we excluded the Latino-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on the likelihood of taking a future class, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on the likelihood of taking a future class, $F(1, 132) = .48, p = .49, \eta_p^2 = .004$. There was no significant main effect of race on the likelihood of taking a future class, $F(1, 132) = .01, p = .99, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 132) = 3.71, p = .06, \eta_p^2 = .03$. None of the covariates had a significant effect on the likelihood of taking a future class. Mean likelihood of taking a future class scores can be found in Figure 6.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare likelihood of taking a future class from the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare likelihood of taking a future class ratings about these two targets, controlling for participants'

age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of likelihood of taking a future class, $F(1, 57) = .10, p = .76, \eta_p^2 = .002$. None of the covariates had a significant effect on the likelihood of taking a future class. Mean likelihood of taking a future class scores can be found in Figure 6.

Likelihood of a social interaction.

Participants' evaluation of their likelihood of having lunch with the target TA (if the target was not their TA) was used as a proxy for behavioral intentions in the social domain. It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a Latino accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to the likelihood of having lunch, we excluded the non-Latino targets and focused on the Latino targets. A two-way ANCOVA was conducted to examine the effect of accent and race on the likelihood of having lunch, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on the likelihood of having lunch, $F(1, 113) = .87, p = .35, \eta_p^2 = .008$. There was a significant main effect of race on the likelihood of having lunch, $F(1, 113) = 5.32, p = .02, \eta_p^2 = .05$. Figure 7 shows that participants reported higher likelihood of having lunch with the targets with a light skin color (not denoted in Fig. 7). There was no significant interaction effect between accent and race, $F(1, 113) = .01, p = .94, \eta_p^2 = .001$. None of the covariates had a significant effect on the likelihood of having lunch. Mean likelihood of having lunch scores can be found in Figure 7.

It was hypothesized that the targets with a non-Latino background would be perceived more positively compared to the targets with a Latino background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to likelihood of having lunch, we excluded the Latino-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on the likelihood of having lunch, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on the likelihood of having lunch, $F(1, 132) = .46, p = .50, \eta_p^2 = .003$. There was no significant main effect of race on the likelihood of having lunch, $F(1, 132) = 1.40, p = .24, \eta_p^2 = .01$. Furthermore, there was no significant interaction effect between background and race, $F(1, 132) = 1.74, p = .19, \eta_p^2 = .01$. None of the covariates had a significant effect on the likelihood of having lunch. Mean likelihood of having lunch scores can be found in Figure 7.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare likelihood of having lunch with the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare likelihood of having lunch ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of likelihood of having lunch, $F(1, 57) = 2.99, p = .09, \eta_p^2 = .05$. None of the covariates had a

significant effect on the likelihood of having lunch. Mean likelihood of having lunch scores can be found in Figure 7.

Perceived personality

Participants' perceptions of the personality of the TAs were investigated on the Big-Five dimensions of extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience. We did not formulate ad-hoc hypotheses on these personality dimensions. We investigated these in an exploratory fashion.

Extraversion.

We investigated in an exploratory fashion whether the targets with a standard American accent were perceived differently than the targets with a Latino accent in terms of extraversion. To answer this question in interaction with race, we excluded the non-Latino targets and focused on the Latino targets. A two-way ANCOVA was conducted to examine the effect of accent and race on extraversion, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on extraversion, $F(1, 113) = 1.40, p = .24, \eta_p^2 = .01$. There was no significant main effect of race on extraversion, $F(1, 113) = .02, p = .88, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 113) = .11, p = .74, \eta_p^2 = .001$. Among the covariates, only political attitudes had a significant effect on extraversion. Perceivers with more conservative political attitudes perceived the targets as more extraverted, $p = .04, \eta_p^2 = .04$. Mean extraversion scores can be found in Figure 8.

We investigated in an exploratory fashion whether the targets with a non-Latino background were perceived differently than the targets with a Latino background in terms of

extraversion. To answer this question in interaction with race, we excluded the Latino-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on extraversion, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on extraversion, $F(1, 132) = .03, p = .87, \eta_p^2 = .001$. There was no significant main effect of race on extraversion, $F(1, 132) = .46, p = .50, \eta_p^2 = .003$. Furthermore, there was no significant interaction effect between background and race, $F(1, 132) = 1.71, p = .19, \eta_p^2 = .01$. Among the covariates, only the satisfaction subscale of the identification with being American had a significant effect on extraversion. Perceivers who reported less satisfaction perceived the targets to be less extraverted, $p = .03, \eta_p^2 = .03$. Mean extraversion scores can be found in Figure 8.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare extraversion ratings toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare extraversion ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of extraversion, $F(1, 57) = 3.44, p = .07, \eta_p^2 = .06$. None of the covariates had a significant effect on extraversion. Mean extraversion scores can be found in Figure 8.

Agreeableness.

We investigated in an exploratory fashion whether the targets with a standard American accent were perceived differently than the targets with a Latino accent in terms of agreeableness. To answer this question in interaction with race, we excluded the non-Latino targets and focused on the Latino targets. A two-way ANCOVA was conducted to examine the effect of accent and race on agreeableness, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on agreeableness, $F(1, 113) = .76, p = .39, \eta_p^2 = .007$. There was no significant main effect of race on agreeableness, $F(1, 113) = .11, p = .75, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 113) = 1.59, p = .21, \eta_p^2 = .01$. Among the covariates, only solidarity subscale of the identification with being American scale had a significant effect on agreeableness, $p = .001, \eta_p^2 = .09$. Perceivers who reported higher solidarity also perceived the targets to be more agreeable. Mean agreeableness scores can be found in Figure 9.

We investigated in an exploratory fashion whether the targets with a non-Latino background were perceived differently than the targets with a Latino background in terms of agreeableness. To answer this question in interaction with race, we excluded the Latino-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on agreeableness, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on agreeableness, $F(1, 132) = 2.49, p = .12, \eta_p^2 = .02$. There was no significant main effect of race on agreeableness, $F(1, 132) = .45, p = .50, \eta_p^2 = .003$. Furthermore, there

was no significant interaction effect between background and race, $F(1, 132) = .27, p = .60, \eta_p^2 = .002$. None of the covariates had a significant effect on agreeableness. Mean agreeableness scores can be found in Figure 9.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare agreeableness ratings toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare agreeableness ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was a significant difference between the two targets in terms of agreeableness, $F(1, 57) = 3.97, p = .05, \eta_p^2 = .06$, with the Latino target with a light skin color and a Latino accent ($M = 5.79, SD = .79$) being perceived as significantly more agreeable compared to the non-Latino target with a dark skin color and a standard American accent ($M = 5.50, .72$). Among the covariates, only gender had a significant effect on agreeableness, $p = .05, \eta_p^2 = .07$, with women reporting higher perceived agreeableness than men. Mean agreeableness scores can be found in Figure 9.

Conscientiousness.

We investigated in an exploratory fashion whether the targets with a standard American accent were perceived differently than the targets with a Latino accent in terms of conscientiousness. To answer this question in interaction with race, we excluded the non-Latino targets and focused on the Latino targets. A two-way ANCOVA was conducted to examine the effect of accent and race on conscientiousness, controlling for participants' age, gender, SES,

identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was a significant main effect of accent on conscientiousness, $F(1, 113) = 4.35, p = .04, \eta_p^2 = .04$. Figure 10 demonstrates that Latino-accented targets were perceived as less conscientious compared to the standard American accented targets. There was no significant main effect of race on conscientiousness, $F(1, 113) = .94, p = .34, \eta_p^2 = .008$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 113) = .06, p = .82, \eta_p^2 = .001$. Among the covariates, only the solidarity subscale of the identification with being American had a significant effect on conscientiousness, $p = .003, \eta_p^2 = .07$. Perceivers who reported higher solidarity also reported higher perceived conscientiousness. Mean conscientiousness scores can be found in Figure 10.

We investigated in an exploratory fashion whether the targets with a non-Latino background were perceived differently than the targets with a Latino background in terms of conscientiousness. To answer this question in interaction with race, we excluded the Latino-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on conscientiousness, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on conscientiousness, $F(1, 132) = .08, p = .77, \eta_p^2 = .001$. There was no significant main effect of race on conscientiousness, $F(1, 132) = .67, p = .41, \eta_p^2 = .005$. Furthermore, there was no significant interaction effect between background and race, $F(1, 132) = .07, p = .80, \eta_p^2 = .001$. Among the covariates, only the solidarity subscale of the identification with being American scale had an effect on perceived conscientiousness, $p = .02, \eta_p^2 = .04$. Perceivers who

reported higher solidarity also reported higher perceived conscientiousness. Mean conscientiousness scores can be found in Figure 10.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare conscientiousness ratings toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare conscientiousness ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of conscientiousness, $F(1, 57) = .16, p = .69, \eta_p^2 = .003$. None of the covariates had a significant effect on conscientiousness. Mean conscientiousness scores can be found in Figure 10.

Emotional stability.

We investigated in an exploratory fashion whether the targets with a standard American accent were perceived differently than the targets with a Latino accent in terms of emotional stability. To answer this question in interaction with race, we excluded the non-Latino targets and focused on the Latino targets. A two-way ANCOVA was conducted to examine the effect of accent and race on emotional stability, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on emotional stability, $F(1, 113) = .70, p = .41, \eta_p^2 = .006$. There was no significant main effect of race on emotional stability, $F(1, 113) = 1.38, p = .24, \eta_p^2 = .12$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 113) = .01, p = .93, \eta_p^2 = .001$. None of the covariates had a

significant effect on perceived emotional stability. Mean emotional stability scores can be found in Figure 11.

We investigated in an exploratory fashion whether the targets with a non-Latino background were perceived differently than the targets with a Latino background in terms of emotional stability. To answer this question in interaction with race, we excluded the Latino-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on emotional stability, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on emotional stability, $F(1, 132) = .006, p = .94, \eta_p^2 = .001$. There was no significant main effect of race on emotional stability, $F(1, 132) = 1.27, p = .26, \eta_p^2 = .01$. Furthermore, there was no significant interaction effect between background and race, $F(1, 132) = .60, p = .44, \eta_p^2 = .005$. None of the covariates had a significant effect on emotional stability. Mean emotional stability scores can be found in Figure 11.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare emotional stability ratings toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare emotional stability ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was a significant difference between the two targets in terms of emotional stability, $F(1, 57) = 5.37, p = .02, \eta_p^2 = .09$, with the Latino target with a light skin color and a Latino accent being evaluated as more emotionally stable ($M = 5.54, SD = .96$).

compared to the non-Latino target with a dark skin color and a standard American accent ($M = 5.03$, $SD = 1.00$). None of the covariates had a significant effect on perceived emotional stability. Mean emotional stability scores can be found in Figure 11.

Openness to experience.

We investigated in an exploratory fashion whether the targets with a standard American accent were perceived differently than the targets with a Latino accent in terms of openness to experience. To answer this question in interaction with race, we excluded the non-Latino targets and focused on the Latino targets. A two-way ANCOVA was conducted to examine the effect of accent and race on openness to experience, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on openness to experience, $F(1, 113) = .64$, $p = .43$, $\eta_p^2 = .006$. There was no significant main effect of race on openness to experience, $F(1, 113) = .83$, $p = .37$, $\eta_p^2 = .007$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 113) = .66$, $p = .42$, $\eta_p^2 = .006$. Mean openness to experience scores can be found in Figure 12.

We investigated in an exploratory fashion whether the targets with a non-Latino background were perceived differently than the targets with a Latino background in terms of openness to experience. To answer this question in interaction with race, we excluded the Latino-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on openness to experience, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main

effect of background on openness to experience, $F(1, 132) = .15, p = .70, \eta_p^2 = .001$. There was no significant main effect of race on openness to experience, $F(1, 132) = .01, p = .98, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 132) = .05, p = .83, \eta_p^2 = .001$. Among the covariates, only the solidarity subscale of the identification with being American scale, $p = .003, \eta_p^2 = .08$ had significant effects on perceived openness to experience. Perceivers who reported higher solidarity also reported higher openness to experience. Mean openness to experience scores can be found in Figure 12.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare openness to experience ratings toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare openness to experience ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of openness to experience, $F(1, 57) = 5.37, p = .02, \eta_p^2 = .003$. None of the covariates had a significant effect on perceived openness to experience. Mean openness to experience scores can be found in Figure 12.

Discussion

The goal of Study 1 was to investigate White-American college students' perceptions of Latino-accented teaching assistants. We exposed participants to an audio recording of a fake Math class by a teaching assistant with a Latino/ standard American accent paired with a Latino/ non-Latino background, and light/ dark skin color. Following the audio recording, participants stated their evaluations of and their attitudes toward the targets.

Attitudes

First, it was hypothesized that participants would demonstrate a more positive attitude toward standard American accented targets compared to Latino-accented targets. Second, it was hypothesized that participants would demonstrate a more positive attitude toward non-Latino targets compared to Latino targets. Third, it was hypothesized that participants would demonstrate a more positive attitude toward a target with a light skin color compared to a target with a dark skin color. Fourth, we aimed to understand whether participants would demonstrate a more positive attitude toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent, to understand whether nonnative accent or dark skin color leads to more negative attitudes. We investigated attitudes as overall attitudes, social attitudes, and professional attitudes. In terms of overall attitudes, our hypotheses were rejected and no differences were found between the experimental groups.

In terms of social attitudes, our hypotheses were rejected, as well. However, our results showed an effect opposite to the hypothesized effect. We found that targets with a Latino accent were perceived more positively on social attitudes compared to the targets with a standard American accent. In other words, contrary to our hypotheses, Latino accent served as a cue of sociability. This finding is novel for two reasons: First, we demonstrated a non-native accent to be a positive cue in this context. Second, we demonstrated that accent, and not the information of cultural background, served as the crucial cue that signaled sociability. Previous research showed Latinos to be more sociable (Ramírez-Esparza, Mehl, Álvarez-Bermúdez, Pennebaker, 2009). In this study, we confirm this work by showing the importance of accent. This finding aligns with previous work in the sense that we also found that Latino accent is a cue for sociability. Our

results also imply that in cases where Latinos do not have a Latino accent, they may not be perceived as high in sociability.

In terms of professional attitudes, our hypotheses were rejected. However, we found a significant interaction effect between Latino background and race such that for Latino targets, light skin color leads to more positive professional attitude ratings, whereas for non-Latino targets, dark skin leads to more positive professional attitude ratings. These findings can also be interpreted in light of the optimum distinctiveness theory. The optimum distinctiveness theory posits that individuals have opposing needs to belonging and differentiation (Brewer, 1999; Brewer, 2003). In light of this theory, these results show that individuals report higher professional attitudes to others who differ from themselves on some traits yet are similar to them on other traits.

Regarding overall, social, or professional attitudes, we did not find any differences between attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent.

Behavioral intentions toward nonnative accented speakers

We used participants' evaluation of their likelihood of taking a future class with the target TA was used as a proxy for their behavioral intentions in the professional domain. Similarly, we used participants' evaluation of their likelihood of having lunch with the targets (if the targets were not their TA) as a proxy for their behavioral intentions in the social domain.

It was hypothesized that participants would want to interact with the targets with a standard American accent compared to the targets with a Latino accent. Both in terms of professional and social behavioral intentions, this hypothesis was rejected. Results failed to show

an effect of non-native accent. Similarly, it was hypothesized that participants would want to interact less with targets with a Latino background compared to targets with a non-Latino background. These hypotheses were also rejected both in terms of professional and social behavioral interaction intentions.

It was hypothesized that participants would want to interact with the targets with a light skin color compared to the targets with a dark skin color. Results showed that our hypothesis was supported in terms of social behavioral intentions. Participants reported higher likelihood of having lunch with the targets with a light skin color compared to the targets with a dark skin color. This is a novel finding of our study. In the professional interaction, target's race was not a predictor of behavioral intentions; however, it was a predictor in the social interaction. These findings demonstrate that individuals focus on race in their social behaviors more than in their professional behaviors.

Finally, when we pitted nonnative accent against skin color, we failed to find differences. Participants did not report different behavioral interaction interactions regarding the nonnative accented target with a light skin color in comparison to the native accented target with a dark skin color.

Perceived personality

We investigated in an exploratory fashion how the participants perceived the personalities of the targets. Results did not reveal differences between experimental groups in terms of extraversion and openness to experience. In terms of conscientiousness, results showed that targets with a standard American accent were perceived as more conscientious compared to the targets with a Latino accent. This is a novel finding that has not been shown in previous work. This finding fits in with previous work that shows that non-native accented teaching

assistant receive lower teaching evaluations compared to standard American accented teaching assistant. This finding has been replicated across studies in previous work (Gill, 1994); however, to our knowledge, a mechanism for the effect has not been shown. Our finding that non-native accent signifies a lack of conscientiousness can be used to explain this finding. If a teaching assistant is perceived as lacking the trait of conscientiousness by students that may result in students giving low teaching evaluations to that teaching assistant.

In terms of agreeableness, results showed that the Latino target with a light skin color and a Latino accent was perceived as more agreeable compared to the non-Latino target with a dark skin color and a standard American accent. Similarly, the Latino target with a light skin color and a Latino accent was evaluated as more emotionally stable compared to the non-Latino target with a dark skin color and a standard American accent. Since both agreeableness and emotional stability as positive personality characteristics, these findings are important. These findings show that dark skin color served as more important cue in leading to negative evaluations compared to nonnative accent. Therefore, we can argue that although when explicitly asked about attitudes, participants do not show differences between these two targets, when asked about perceived personality, they assigned more positive characteristics to the nonnative accented target with a light skin color instead of the native accented target with a dark skin color.

PILOT STUDY 2

Similar to Pilot Study 1, in this pilot study, we sought to verify the study materials for Study 2. The same photo was altered into a lighter or a darker skinned target. These targets were presented without background information and with a French name and light skin color, French name and a dark skin color, (non-Latino) American name and a light skin color, and (non-Latino) American name with a dark skin color to see if participants react to each similarly. This was necessary to ensure a possible confounding effect where a lighter or a darker skin colored target to be perceived as more attractive. We further aimed to understand if the audio recordings are difficult to understand or intelligible.

Method

Participants

Similar to Pilot Study 1, in order to recruit White-American monolingual and monocultural participants without revealing the aims of the study, we screened participants previous to the studies. In a mass prescreening session week of the semester during introductory psychology classes at the University of Connecticut, participants were asked whether they identified as White-American, whether they were bilingual or monolingual and whether they were bicultural or monocultural. Afterwards, the study was made available for those participants who stated in the mass prescreening that they were White-American, monolingual, and monocultural.

Participants were 84 undergraduate students. One participant's data were omitted due to a technological problem. In line with the University of Connecticut IRB protocol, participants received one course credit for their participation.

Procedure

The study was announced to potential participants via the University of Connecticut Psychology Participant pool system, through which participants could sign up for the study. Participants came to the laboratory, consented and partook in the experiment wearing headphones. Participants were randomly assigned by Qualtrics into the 4 different experimental groups with a different kind of target, a target with a French name and light skin color, French name and a dark skin color, American (non-Latino) name and a light skin color, and American (non-Latino) name with a dark skin color. After seeing the target, participants answered questions about their attitudes toward these targets. In a separate task, participants were assigned to either the standard American or French-accented recording and rated the intelligibility of the recordings.

Materials and measures

Targets. The same faces used in previous studies were used as targets.

Math classes. The Introduction to math class script used in previous studies were used. The same recording from Pilot 1 were used for the White-American targets. A French male recorded the recording for the French targets. Similar to Pilot 1, the French male was chosen from someone with a light accent so that the recording is intelligible. Our goal was to have intelligible speech so that we can test for stereotypes toward accented speakers rather than the effects of the difficulty of understanding accented speech. Professional actors were not used to achieve stimuli as close to actual math classes as possible.

Attitudes toward targets. Participants were asked to rate the target in terms of a set of adjectives such as credibility, smartness, competency, being hardworking, being interesting,

friendliness, attractiveness, and sociability on semantic differential scales from 1-7. Attitude dimensions created by Ambady and Rosenthal (1993) were used and new adjectives were added to the measure. Ratings of attractiveness and mean of all ratings were used.

Intelligibility of audio recordings. Participants were asked to rate how difficult it was to understand the speaker and how intelligible the speaker was. Each recording took about 2 minutes.

Results

Attitudes toward targets. A one-way between subjects ANOVA demonstrated no significant differences in the average attitudes toward the targets across the four experimental conditions (a target with a French name and light skin color condition, $M = 3.87$, $SD = .82$; French name and a dark skin color condition, $M = 3.96$, $SD = .49$, American name and a light skin color condition, $M = 4.00$, $SD = .71$, and American name with a dark skin color condition, $M = 3.79$, $SD = .71$), $F = .40$, $p = .76$, $\eta_p^2 = .02$. Similarly, a one-way between subjects ANOVA demonstrated no significant differences in the attractiveness ratings of the targets across the four experimental conditions (a target with a French name and light skin color condition, $M = 3.37$, $SD = 1.46$; French name and a dark skin color condition, $M = 3.80$, $SD = 1.54$, American name and a light skin color condition, $M = 3.59$, $SD = .73$, and American name with a dark skin color condition, $M = 3.30$, $SD = 1.34$), $F = .61$, $p = .61$, $\eta_p^2 = .02$.

Difficulty and intelligibility of audio recordings. An independent samples t -test demonstrated that the French-accented recording ($M = 5.26$, $SD = 1.19$) was rated as significantly more difficult to understand than the standard American accented recording ($M = 2.14$, $SD = 1.53$), $t = 10.27$, $p < .001$, $r = .75$. Furthermore, a one-sample t -test comparing the

difficulty level of the French-accented recording to the middle value of the Likert scale (4) showed that the French-accented recording was reported as significantly more difficult to understand than the mid point, $t = 6.62, p < .001, 95 \% CI = .87-1.64$. Furthermore, an independent samples t -test demonstrated that the French-accented recording ($M = 4.77, SD = 1.14$) was perceived to be significantly less intelligible compared to the American accented recording ($M = 5.89, SD = .84$), $t = 5.13, p < .001, r = .49$. Furthermore, a one-sample t -test comparing the intelligibility level of the French-accented recording to the middle value of the Likert scale (4) showed that the French-accented recording was reported as significantly less intelligible than the mid point, $t = 4.23, p < .001, 95 \% CI = .40-1.14$.

Discussion

The goal of Pilot Study 2 was to verify our materials for Study 2. The first goal was to compare the attitudes toward each target, a target with a French name and light skin color; French name and a dark skin color, American name and a light skin color, and an American name with a dark skin color. Results showed no differences in average attitudes toward these targets. Similarly, there were no differences in the perceived attractiveness levels of the targets. These results confirmed our target materials for Study 2.

The second goal of Pilot 2 was to see if the recordings were difficult to understand or intelligible. The results demonstrated that the French-accented recording was perceived as more difficult and less intelligible compared to the American accented recording. Furthermore, the French accent was perceived to be significantly more difficult and less intelligible than medium level. Therefore, while our results confirmed the visual materials for Study 2, they failed to confirm the audio recordings. Therefore, we carried on another pilot only to verify another French recording for Study 2.

PILOT STUDY 3

The goal of Pilot Study 3 was only to verify another French recording for Study 2. We aimed to understand if the new audio recording was perceived as not difficult to understand or intelligible compared to the American accent recording from Pilot Study 2.

Method

Participants

Similar to Pilot Study 1 and Pilot Study 2, in order to recruit White-American monolingual and monocultural participants without revealing the aims of the study, we screened participants previous to the studies. In a mass prescreening session week of the semester during introductory psychology classes at the University of Connecticut, participants were asked whether they identified as White-American, whether they were bilingual or monolingual and whether they were bicultural or monocultural. Afterwards, the study was made available for those participants who stated in the mass prescreening that they were White-American, monolingual, and monocultural.

Participants were 23 undergraduate students. In line with the University of Connecticut IRB protocol, participants received one course credit for their participation.

Procedure

Following the procedure of the previous pilots, the study was announced to potential participants via the University of Connecticut Psychology Participant pool system, through which participants could sign up for the study. Participants came to the laboratory, consented and partook in the experiment wearing headphones. To keep the procedure constant and avoid any

confounding effects, participants were exposed to the targets present in Study 2, yet we only focused on data about the recordings. Consistent with the procedure of the previous pilots, following the targets, as a separate task, participants were assigned to either the standard American or French-accented recording and rated the intelligibility of the recordings.

Materials and measures

Targets. The same faces used in previous studies were used as targets.

Math classes. The Introduction to math class script used in previous studies were used. A new French male recorded the recording for the French targets. Similar to Pilots 1 and 2, the French male was chosen from someone with a light accent so that the recording is intelligible. Our goal was to have intelligible speech so that the we can test for stereotypes toward accented speakers rather than the effects of the difficulty of understanding accented speech. Professional actors were not used to achieve stimuli as close to actual math classes as possible.

Intelligibility of audio recordings. Participants were asked to rate how difficult it was to understand the speaker and how intelligible the speaker was. Each recording took about 2 minutes.

Results

Difficulty and intelligibility of audio recordings. An independent samples *t*-test demonstrated that the new French-accented recording ($M = 4.48$, $SD = 1.56$) was rated as significantly more difficult to understand than the standard American accented recording from Pilot Study 2 ($M = 2.14$, $SD = 1.53$), $t = 5.90$, $p < .001$, $r = .60$. However, a one-sample *t*-test comparing the difficulty level of the French-accented recording to the middle value of the Likert

scale (4) showed that the French-accented recording was not significantly more difficult to understand than the mid point, $t = 1.47$, $p = .16$, 95 % $CI = -.20-1.15$.

An independent samples t -test demonstrated that the French-accented recording ($M = 5.23$, $SD = 1.45$) was perceived to be significantly less intelligible compared to the American accented recording ($M = 5.89$, $SD = .84$), $t = 2.34$, $p = .02$, $r = .27$. However, a one-sample t -test comparing the intelligibility level of the French-accented recording to the middle value of the Likert scale (4) showed that the French-accented recording was reported as significantly more intelligible to understand than the mid point, $t = 3.98$, $p = .001$, 95 % $CI = .59-1.87$.

Discussion

The goal of Pilot Study 3 was to verify our new French-accented recording for Study 2. The results demonstrated that the new French-accented recording was perceived as more difficult and less intelligible compared to the American accented recording. However, the new French-accented recording was perceived to be of medium difficulty. Furthermore, the new French-accented recording was perceived to be more intelligible than the medium level. Therefore, our new French-accented recording is verified to be used in Study 2.

STUDY 2: EFFECTS OF FRENCH ACCENT AND DARK SKIN COLOR

The goal of Study 2 was to investigate White American college students' perceptions of French-accented teaching assistants. In Study 2, we showed participants French and American (non-Latino) TAs with varying skin color and background information in the form of bogus LinkedIn profiles. Participants listened to an audio lecture of the relevant TA. Participants then expressed their attitudes and stereotypes toward these TAs. It was hypothesized that French targets, targets with a French accent, and targets with a darker skin color would be perceived more negatively compared to their counterparts.

Method

Participants

Participants were 269 White-American, monolingual, and monocultural undergraduate students prescreened (See Pilot 1 for details of the prescreening) and recruited from the University of Connecticut Psychology Participant pool. In line with the University of Connecticut IRB protocol, participants received 1 course credit for their participation. Data from 53 participants were omitted due to failing attention checks (19 participants spent less than 10 seconds on the LinkedIn profile and 17 participants did not stay on the recording page long enough to hear the entire recording) or reporting suspicion that the experiment was about accent, skin color, and background (41 participants). Data from 212 participants were analyzed.

Procedure

The study was announced to potential participants via the University of Connecticut Psychology Participant pool system, through which participants could sign up for the study. Participants came to the laboratory, consented and partook in the experiment wearing

headphones. Participants first saw a bogus spinning wheel including multiple bogus targets with varying age, gender, and ethnicities, to ensure credibility in the study. Participants were randomly assigned by Qualtrics into the 6 different experimental groups (See Table 2). Participants were then shown LinkedIn profiles of different TAs depending on the experimental group they were assigned to, and afterwards listened to the related audio recording of the mock math class.

Materials and measures

Targets. Photos piloted in Pilot 1 were used to create the TA profiles. Similar to Study 1, both the French and the American targets had LinkedIn profiles with equivalent features and merits, except for background. The same background information on the TAs' previous teaching performances was included to create the impression that the TAs could deliver a lecture that can easily be understood.

Audio recording. Recordings piloted in Pilot 2 were used.

Similar to Study 1, measures that could potentially prime participants, such as political attitudes, math identification, and some subscales of identification with being American were included in the prescreening. The other measures were included in the lab study.

Prescreening questions.

The same questions used in Study 1 for measuring political attitudes, math identification, and identification with being American were used (See Study 1 and Appendix B for the details of these questions).

The lab study.

The same questions used in Study 1 on attitudes, personality descriptions, behavioral intentions, and demographic characteristics were used. Suspicion checks used in Study 1 were included in Study 2, as well (See Study 1 and Appendix C).

Results**Control variables**

In line with Study 1, we controlled for the following variables in our analyses: political attitudes, math identification, identification with being American (the solidarity and satisfaction subscales), gender, age, and self-reported social class. All the analyses regarding mean comparisons were first conducted without control variables and then with control variables as reported below.

Data analytic strategy

To investigate differences that stem from the effect of accent and race, the American targets were excluded from the analyses. Two-way ANCOVAs were conducted within the French targets. To investigate differences that stem from the effect of background and race, the French-accented speakers were excluded from the analyses. Two-way ANCOVAs were conducted within the standard American accented targets. One-way ANCOVAs were conducted to compare the target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent.

Attitudes toward nonnative accented speakers**Overall attitudes.**

It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a French accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to overall attitudes, we excluded the American targets and focused on the French targets. A two-way ANCOVA was conducted to examine the effect of accent and race on overall attitudes, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on average attitudes, $F(1, 131) = .01, p = .96, \eta_p^2 = .001$. There was no significant main effect of race on average attitudes, $F(1, 131) = .61, p = .44, \eta_p^2 = .005$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 131) = 2.05, p = .16, \eta_p^2 = .02$. None of the covariates had a significant effect on overall attitudes. Mean overall attitude scores can be found in Figure 13.

It was hypothesized that the targets with an American background would be perceived more positively compared to the targets with a French background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test this hypotheses with respect to overall attitudes, we excluded the French-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on overall attitudes, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main

effect of background on average attitudes, $F(1, 130) = .19, p = .67, \eta_p^2 = .001$. There was no significant main effect of race on average attitudes, $F(1, 130) = .34, p = .57, \eta_p^2 = .003$.

Furthermore, there was no significant interaction effect between background and race, $F(1, 130) = 2.91, p = .09, \eta_p^2 = .02$. None of the covariates had a significant effect on overall attitudes. Mean overall attitude scores can be found in Figure 13.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare overall attitudes toward the French target with a light skin color and a French accent and the American target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare attitude ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of attitudes, $F(1, 61) = 2.29, p = .14, \eta_p^2 = .04$. None of the covariates had a significant effect on overall attitudes. Mean overall attitude scores can be found in Figure 13.

Social attitudes.

It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a French accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to social attitudes, we excluded the American targets and focused on the French targets. A two-way ANCOVA was conducted to examine the effect of accent and race on social attitudes, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on social

attitudes, $F(1, 131) = .79, p = .38, \eta_p^2 = .006$. There was no significant main effect of race on average attitudes, $F(1, 131) = .37, p = .55, \eta_p^2 = .003$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 131) = 1.36, p = .25, \eta_p^2 = .01$. None of the covariates had a significant effect on social attitudes. Mean social attitude scores can be found in Figure 14.

It was hypothesized that the targets with an American background would be perceived more positively compared to the targets with a French background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test this hypotheses with respect to social attitudes, we excluded the French-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on social attitudes, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on social attitudes, $F(1, 130) = .44, p = .51, \eta_p^2 = .003$. There was no significant main effect of race on social attitudes, $F(1, 130) = .97, p = .33, \eta_p^2 = .007$. Furthermore, there was no significant interaction effect between background and race, $F(1, 130) = 3.41, p = .07, \eta_p^2 = .03$. None of the covariates had a significant effect on social attitudes. Mean social attitude scores can be found in Figure 14.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare social attitudes toward the French target with a light skin color and a French accent and the American target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare social attitude ratings about these two targets, controlling for participants' age, gender, SES, identification with

being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was a significant difference between the two targets in terms of social attitudes, $F(1, 61) = 6.25, p = .02, \eta_p^2 = .09$, with the French target with a light skin color and a French accent ($M = 4.84, SD = .89$) being perceived more positively compared to the American target with a dark skin color and a standard American accent ($M = 4.17, SD = 1.15$). None of the covariates had a significant effect on social attitudes. Mean social attitude scores can be found in Figure 14.

Professional attitudes.

It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a French accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to professional attitudes, we excluded the American targets and focused on the French targets. A two-way ANCOVA was conducted to examine the effect of accent and race on professional attitudes, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on professional attitudes, $F(1, 131) = .41, p = .52, \eta_p^2 = .003$. There was no significant main effect of race on professional attitudes, $F(1, 131) = 2.15, p = .15, \eta_p^2 = .02$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 131) = 1.08, p = .30, \eta_p^2 = .008$. None of the covariates had a significant effect on professional attitudes. Mean professional attitude scores can be found in Figure 15.

It was hypothesized that the targets with an American background would be perceived more positively compared to the targets with a French background. It was also hypothesized that

the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to professional attitudes, we excluded the French-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on professional attitudes, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on professional attitudes, $F(1, 130) = .04, p = .83, \eta_p^2 = .001$. There was no significant main effect of race on professional attitudes, $F(1, 130) = .73, p = .39, \eta_p^2 = .006$. Furthermore, there was no significant interaction effect between background and race, $F(1, 130) = .93, p = .34, \eta_p^2 = .007$. None of the covariates had a significant effect on professional attitudes. Mean professional attitude scores can be found in Figure 15.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare professional attitudes toward the French target with a light skin color and a French accent and the American target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare professional attitude ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of professional attitudes, $F(1, 61) = .52, p = .47, \eta_p^2 = .008$. None of the covariates had a significant effect on professional attitudes. Mean professional attitude scores can be found in Figure 15.

Behavioral intentions toward nonnative accented speakers**Likelihood of taking a future class.**

Participants' evaluation of their likelihood of taking a future class with the target TA was used as a proxy for behavioral intentions in the professional domain. It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a French accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to likelihood of taking a future class, we excluded the American targets and focused on the French targets. A two-way ANCOVA was conducted to examine the effect of accent and race on the likelihood of taking a future class, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was a significant main effect of accent on the likelihood of taking a future class, $F(1, 131) = 6.36, p = .01, \eta_p^2 = .05$. Figure 16 demonstrates that participants reported higher likelihood of taking a future class from a TA with a standard American accent compared to a TA with a French accent. There was no significant main effect of race on the likelihood of taking a future class, $F(1, 131) = 1.93, p = .17, \eta_p^2 = .02$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 131) = .32, p = .57, \eta_p^2 = .002$. None of the covariates had a significant effect. Mean likelihood of taking a future class scores can be found in Figure 16.

It was hypothesized that the targets with an American background would be perceived more positively compared to the targets with a French background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to likelihood of taking a future class,

we excluded the French-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on the likelihood of taking a future class, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on the likelihood of taking a future class, $F(1, 130) = 3.44, p = .07, \eta_p^2 = .03$. There was no significant main effect of race on the likelihood of taking a future class, $F(1, 130) = 2.29, p = .13, \eta_p^2 = .02$. Furthermore, there was no significant interaction effect between background and race, $F(1, 130) = .06, p = .80, \eta_p^2 = .001$. None of the covariates had a significant effect. Mean likelihood of taking a future class scores can be found in Figure 16.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare likelihood of taking a future class from the French target with a light skin color and a French accent and the American target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare likelihood of taking a future class ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of likelihood of taking a future class, $F(1, 61) = .43, p = .52, \eta_p^2 = .007$. None of the covariates had a significant effect except for gender, with females reporting higher likelihood of taking a future class than males. Mean likelihood of taking a future class scores can be found in Figure 16.

Likelihood of a social interaction.

Participants' evaluation of their likelihood of having lunch with the target (if the target was not their TA) was used as a proxy for behavioral intentions in the social domain. It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a French accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to likelihood of having lunch, we excluded the American targets and focused on the French targets. A two-way ANCOVA was conducted to examine the effect of accent and race on the likelihood of having lunch, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on the likelihood of having lunch, $F(1, 131) = .40, p = .53, \eta_p^2 = .003$. There was no significant main effect of race on the likelihood of taking a future class, $F(1, 131) = .18, p = .68, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 131) = .66, p = .42, \eta_p^2 = .005$. None of the covariates had a significant effect. Mean likelihood of having lunch scores can be found in Figure 17.

It was hypothesized that the targets with an American background would be perceived more positively compared to the targets with a French background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses with respect to likelihood of having lunch, we excluded the French-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on the likelihood of having lunch, controlling for participants' age, gender, SES, identification with

being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on the likelihood of having lunch, $F(1, 130) = 1.22, p = .27, \eta_p^2 = .009$. There was no significant main effect of race on the likelihood of having lunch, $F(1, 130) = .09, p = .77, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 130) = .90, p = .35, \eta_p^2 = .007$. None of the covariates had a significant effect. Mean likelihood of having lunch scores can be found in Figure 17.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare likelihood of having lunch with the French target with a light skin color and a French accent and the American target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare likelihood of having lunch ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of likelihood of having lunch, $F(1, 61) = 1.33, p = .25, \eta_p^2 = .02$. None of the covariates had a significant effect. Mean likelihood of having lunch scores can be found in Figure 17.

Perceived personality

Participants' perceptions of the personality of the TAs were investigated on the Big-Five dimensions of extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience. We did not formulate ad-hoc hypotheses on these personality dimensions. We investigated these in an exploratory fashion.

Extraversion.

We investigated in an exploratory fashion whether the targets with a standard American accent were perceived differently than the targets with a French accent in terms of extraversion. To answer this question in interaction with race, we excluded the American targets and focused on the French targets. A two-way ANCOVA was conducted to examine the effect of accent and race on extraversion, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on extraversion, $F(1, 131) = .01, p = .92, \eta_p^2 = .001$. There was a significant main effect of race on extraversion, $F(1, 131) = 4.13, p = .04, \eta_p^2 = .03$. Figure 18 shows that targets with a light skin color were evaluated higher on extraversion compared to participants with a dark skin color (not denoted in Fig.18). There was no significant interaction effect between accent and race, $F(1, 131) = .11, p = .74, \eta_p^2 = .001$. None of the covariates had a significant effect. Mean extraversion scores can be found in Figure 18.

We investigated in an exploratory fashion whether the targets with an American background were perceived differently than the targets with a French background in terms of extraversion. To answer this question in interaction with race, we excluded the French-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on extraversion, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on extraversion, $F(1, 130) = .21, p = .65, \eta_p^2 = .002$. There was no significant main effect of race on extraversion, $F(1, 130) = .85, p = .36, \eta_p^2 = .006$. Furthermore, there was no significant interaction effect between background and race, $F(1, 130) = .37, p = .55, \eta_p^2 = .003$.

None of the covariates had a significant effect. Mean extraversion scores can be found in Figure 18.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare extraversion ratings toward the French target with a light skin color and a French accent and the American target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare extraversion ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of extraversion, $F(1, 61) = .73, p = .40, \eta_p^2 = .01$. None of the covariates had a significant effect except for age, $p = .03, \eta_p^2 = .08$. Older participants reported decreased perceived extraversion. Mean extraversion scores can be found in Figure 18.

Agreeableness.

We investigated in an exploratory fashion whether the targets with a standard American accent were perceived differently than the targets with a French accent in terms of agreeableness. To answer this question in interaction with race, we excluded the American targets and focused on the French targets. A two-way ANCOVA was conducted to examine the effect of accent and race on agreeableness, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on agreeableness, $F(1, 131) = .01, p = .95, \eta_p^2 = .001$. There was no significant main effect of race on agreeableness, $F(1, 131) = .02, p = .90, \eta_p^2 = .001$. There was no significant interaction effect between accent and race, $F(1, 131) = .07, p =$

.80, $\eta_p^2 = .001$. None of the covariates had a significant effect. Mean agreeableness scores can be found in Figure 19.

We investigated in an exploratory fashion whether the targets with an American background were perceived differently than the targets with a French background in terms of agreeableness. To answer this question in interaction with race, we excluded the French-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on agreeableness, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on agreeableness, $F(1, 130) = 1.42, p = .24, \eta_p^2 = .01$. There was no significant main effect of race on agreeableness, $F(1, 130) = .96, p = .33, \eta_p^2 = .007$. Furthermore, there was no significant interaction effect between background and race, $F(1, 130) = 1.24, p = .27, \eta_p^2 = .009$. None of the covariates had a significant effect. Mean agreeableness scores can be found in Figure 19.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare agreeableness ratings toward the French target with a light skin color and a French accent and the American target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare agreeableness ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of agreeableness, $F(1, 61) = .06, p = .82, \eta_p^2 = .001$. None of the covariates had a significant effect except for

political attitudes, $p = .05$, $\eta_p^2 = .06$. More conservative perceivers reported higher agreeableness. Mean agreeableness scores can be found in Figure 19.

Conscientiousness.

We investigated in an exploratory fashion whether the targets with a standard American accent were perceived differently than the targets with a French accent in terms of conscientiousness. To answer this question in interaction with race, we excluded the American targets and focused on the French targets. A two-way ANCOVA was conducted to examine the effect of accent and race on conscientiousness, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on conscientiousness, $F(1, 131) = 3.75$, $p = .06$, $\eta_p^2 = .03$. There was no significant main effect of race on conscientiousness, $F(1, 131) = .71$, $p = .40$, $\eta_p^2 = .005$. There was no significant interaction effect between accent and race, $F(1, 131) = .30$, $p = .59$, $\eta_p^2 = .002$. None of the covariates were significant except for political attitudes, $p = .04$, $\eta_p^2 = .03$. More conservative perceivers reported less perceived conscientiousness. Mean conscientiousness scores can be found in Figure 20.

We investigated in an exploratory fashion whether the targets with an American background were perceived differently than the targets with a French background in terms of conscientiousness. To answer this question in interaction with race, we excluded the French-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on conscientiousness, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of

background on conscientiousness, $F(1, 130) = 1.78, p = .19, \eta_p^2 = .01$. There was no significant main effect of race on conscientiousness, $F(1, 130) = .70, p = .40, \eta_p^2 = .005$. Furthermore, there was no significant interaction effect between background and race, $F(1, 130) = .10, p = .75, \eta_p^2 = .001$. None of the covariates were significant except for political attitudes, $p = .04, \eta_p^2 = .03$. More conservative perceivers reported less perceived conscientiousness. Mean conscientiousness scores can be found in Figure 20.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare conscientiousness ratings toward the French target with a light skin color and a French accent and the American target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare conscientiousness ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of conscientiousness, $F(1, 61) = 2.37, p = .13, \eta_p^2 = .04$. None of the covariates had a significant effect. Mean conscientiousness scores can be found in Figure 20.

Emotional stability.

We investigated in an exploratory fashion whether the targets with a standard American accent were perceived differently than the targets with a French accent in terms of emotional stability. To answer this question in interaction with race, we excluded the American targets and focused on the French targets. A two-way ANCOVA was conducted to examine the effect of accent and race on emotional stability, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification,

and political attitudes. There was no significant main effect of accent on emotional stability, $F(1, 131) = .80, p = .37, \eta_p^2 = .006$. There was no significant main effect of race on emotional stability, $F(1, 131) = .09, p = .77, \eta_p^2 = .001$. There was no significant interaction effect between accent and race, $F(1, 131) = .09, p = .77, \eta_p^2 = .001$. None of the covariates had a significant effect. Mean emotional stability scores can be found in Figure 21.

We investigated in an exploratory fashion whether the targets with an American background were perceived differently than the targets with a French background in terms of emotional stability. To answer this question in interaction with race, we excluded the French-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on emotional stability, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on emotional stability, $F(1, 130) = .87, p = .35, \eta_p^2 = .007$. There was no significant main effect of race on emotional stability, $F(1, 130) = .26, p = .61, \eta_p^2 = .002$. Furthermore, there was no significant interaction effect between background and race, $F(1, 130) = .03, p = .87, \eta_p^2 = .001$. None of the covariates had a significant effect. Mean emotional stability scores can be found in Figure 21.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare emotional stability ratings toward the French target with a light skin color and a French accent and the American target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare emotional stability ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification,

and political attitudes. There was no significant difference between the two targets in terms of emotional stability, $F(1, 61) = .004, p = .95, \eta_p^2 = .001$. None of the covariates had a significant effect. Mean emotional stability scores can be found in Figure 21.

Openness to experience.

We investigated in an exploratory fashion whether the targets with a standard American accent were perceived differently than the targets with a French accent in terms of openness to experience. To answer this question in interaction with race, we excluded the American targets and focused on the French targets. A two-way ANCOVA was conducted to examine the effect of accent and race on openness to experience, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of accent on openness to experience, $F(1, 131) = 1.26, p = .26, \eta_p^2 = .01$. There was no significant main effect of race on openness to experience, $F(1, 131) = .26, p = .61, \eta_p^2 = .002$. There was no significant interaction effect between accent and race, $F(1, 131) = .18, p = .67, \eta_p^2 = .001$. None of the covariates had a significant effect except for age, $p = .03, \eta_p^2 = .03$. Older perceivers reported higher perceived openness to experience. Mean openness to experience scores can be found in Figure 22.

We investigated in an exploratory fashion whether the targets with an American background were perceived differently than the targets with a French background in terms of openness to experience. To answer this question in interaction with race, we excluded the French-accented targets and focused on the standard American accented targets. A two-way ANCOVA was conducted to examine the effect of background and race on openness to experience, controlling for participants' age, gender, SES, identification with being American

(solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant main effect of background on openness to experience, $F(1, 130) = 1.38, p = .24, \eta_p^2 = .01$. There was no significant main effect of race on openness to experience, $F(1, 130) = .96, p = .33, \eta_p^2 = .007$. Furthermore, there was no significant interaction effect between background and race, $F(1, 130) = .50, p = .48, \eta_p^2 = .004$. None of the covariates had a significant effect. Mean openness to experience scores can be found in Figure 22.

To understand whether nonnative accent or dark skin color is a more impactful cue, a one-way ANCOVA was conducted to compare openness to experience ratings toward the French target with a light skin color and a French accent and the American target with a dark skin color and a standard American accent. A one-way ANCOVA was conducted to compare openness to experience ratings about these two targets, controlling for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes. There was no significant difference between the two targets in terms of openness to experience, $F(1, 61) = .31, p = .58, \eta_p^2 = .005$. None of the covariates had a significant effect. Mean openness to experience scores can be found in Figure 22.

Discussion

The goal of Study 2 was to investigate White-American college students' perceptions of French-accented teaching assistants. We exposed participants to an audio recording of a fake math class by a teaching assistant with a French/ standard American accent paired with a French/ American background, and light/ dark skin color. Following the audio recording, participants stated their evaluations of and their attitudes toward the targets.

Attitudes

First, it was hypothesized that participants would demonstrate a more positive attitude toward standard American accented targets compared to French-accented targets. Second, it was hypothesized that participants would demonstrate a more positive attitude toward American targets compared to French targets. Third, it was hypothesized that participants would demonstrate a more positive attitude toward a target with a light skin color compared to a target with a dark skin color. Fourth, we compared perceptions toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent in order to understand whether nonnative accent or dark skin color is a more impactful cue. We investigated attitudes as overall attitudes, social attitudes, and professional attitudes.

In terms of overall, social, or professional attitudes, our hypotheses were rejected; our results failed to show a difference between our experimental groups. However, we found that participants reported more positive social attitudes toward the French target with a light skin color and a French accent compared to the American target with a dark skin color and a standard American accent, which is in line with our Study 1 findings. There, we demonstrated that a non-native accent was a positive cue in terms of social attitudes; that is, targets with a Latino accent were perceived more positively compared to targets with a standard American accent. In this study, we failed to replicate that effect, but we demonstrated a similar effect, where nonnative accent and not a light skin color, leads to positive social attitudes. Our finding is novel because it shows a positive impact of having a nonnative accent.

Behavioral intentions toward nonnative accented speakers

We used participants' evaluation of their likelihood of taking a future class with the target TA as a proxy for their behavioral intentions in the professional domain. Similarly, we used participants' evaluation of their likelihood of having lunch with the targets (if the targets were not their TA) as a proxy for their behavioral intentions in the social domain.

In terms of professional behavioral intentions, we hypothesized that participants would want to interact less with targets with a French accent compared to targets with a standard American accent. This hypothesis was supported. This result may also be useful in explaining lower teaching evaluations non-native accented teaching assistants receive (Gill, 1994). Although participants did not report lower attitudes or drastically different personality evaluations of the French-accented target, participants reported lower conscientiousness and lower intentions to take the French accent target's future class. If a TA is perceived as low on conscientiousness, that could explain the lower intentions to take that TA's future class. It was also hypothesized that participants would not want to take a class from the targets with a French background. This hypothesis was also supported.

Results show that both nonnative accent and background were crucial in determining professional behavioral intentions. However, these are not the findings we had in Study 1. In Study 1, we failed to find an effect of accent or background on professional or social interaction intentions. This may again be explained by the fact that the French accent or background are a less familiar; therefore, it might have an impact on the participants, whereas the Latino accent or background are more familiar.

It was hypothesized that participants would want to interact with the targets with a standard American accent compared to the targets with a French accent. In terms of social

behavioral intentions, this hypothesis was rejected. Results failed to show an effect of non-native accent. It was also hypothesized that participants would want to interact with the targets from an American background compared to a French background. In terms social behavioral intentions, this hypothesis was rejected. This was in line with Study 1 findings.

Finally, when we compared the French target with a light skin color and a French accent compared to the American target with a dark skin color and a standard American accent, we failed to find any differences in terms of professional or social behavioral intentions. This was in line with Study 1 findings, as well.

Perceived personality

We investigated in an exploratory fashion how the participants perceived the personalities of the targets. Results did not reveal differences between experimental groups in terms of agreeableness, emotional stability, and openness to experience.

In terms of extraversion, results showed that targets with a light skin color were evaluated higher on extraversion compared to targets with a dark skin color. This is a novel finding that we found only in Study 2. This finding is consistent with our behavioral intention finding in Study 1. In Study 1, we showed that participants reported higher likelihood of social interactions with a target with a light skin color compared to a target with a dark skin color. In Study 2, we fail to replicate that finding; however, we find that targets with a light skin color were rated higher on extraversion compared to targets with a dark skin color.

In terms of conscientiousness, consistent with Study 1, results showed that targets with a standard American accent were perceived as more conscientious compared to the targets with a French accent. This is a novel finding that has not been shown in previous work. This finding fits in with previous work that shows that non-native accented teaching assistant receive lower

teaching evaluations compared to standard American accented teaching assistant. This finding has been replicated across studies in previous work (Gill, 1994); however, to our knowledge, a mechanism for the effect has not been shown. Our finding that non-native accent signifies a lack of conscientiousness can be used to explain this finding. If a teaching assistant is perceived as lacking the trait of conscientiousness by students, that may result in students giving low teaching evaluations to that teaching assistant.

When we compared the French target with a light skin color and a French accent compared to the American target with a dark skin color and a standard American accent, we failed to find any differences in terms of perceived personality. In Study 1, we found that the Latino target with a light skin color and a Latino accent was perceived as more agreeable and emotionally stable compared to the non-Latino target with a dark skin color and a standard American accent. We failed to replicate this effect in Study 2, which may be attributed to the French accent's unfamiliarity to the perceivers. Although we chose French accent because it is a higher status accent, it is a less familiar accent than Latino accent. Therefore, it may not have the same effect with the Latino accent.

STUDY 3: PERCEPTIONS OF ACCENTED SPEAKERS BY ETHNICALLY DIVERSE PERCEIVERS

The goal of Study 3 was to replicate our results from Study 1 using a Mechanical Turk sample. The Mechanical Turk sample was employed to test the effects from Study 1 in a sample that is more diverse in ethnicity, age, and background. White-American participants were recruited to replicate the previous effects. Participants who are Latino and from other ethnicities were also recruited to explore the effects with participants who can identify more with the Latino targets.

Participants

Data were collected from 784 participants. Participants received one USD for their participation in the study. Data from 53 participants were omitted due to failing attention checks (61 participants spent less than 10 seconds on the LinkedIn profile and 7 participants didn't stay on the recording page long enough to listen to the full recording) or reporting suspicion that the experiment was about accent, skin color, and background (62 participants) and not indicating ethnicity (7 participants). Data from 654 participants were analyzed (247 White, 207 Latino, and 200 other ethnicity).

Procedure

Potential participants from the Mechanical Turk that live in America, who have been approved 95 % of the time in their potential participations (HIT approval rate) and who had a minimum of 1000 approved Mechanical Turk participations before (Number of HITs approved) were able to see the announcement of the experiment. Participants clicked on the Qualtrics link and opened the survey. Participants consented to the study via clicking on the "next" button after

the information sheet. The study procedure was identical with Study 1 except for the fact that in Study 3, participants received all the questions in one session.

Participants were randomly assigned to each of the six experimental conditions or the control group that were identical to the experimental groups in Study 1 (see Table 1 for the experimental groups). Attention checks were included to ensure participants were paying attention, because unlike the previous laboratory experiments, control over the participants were minimal. Participants who spent less than 10 seconds on the LinkedIn profile were directed to the end of the survey and were asked to return the HIT. Similarly, participants who spent less than 1 minute and 40 seconds on the audio recording (time equivalent to the shortest recording) were directed to the end of the survey and asked to return the HIT. Once participants finished the survey, they received a computer generated code. Participants entered this code to the Mechanical Turk to give indicate participation anonymously to receive payment. White-American participants responded more to the survey. Therefore, once we reached 240 White-American participants, White-Americans were asked to not complete the survey and return the HIT.

Materials and measures

Targets. The same targets from Study 1 were used.

Audio recording. The same audio recordings from Study 1 were used.

The same questions used in Study 1 for measuring political attitudes, math identification, and identification with being American, attitudes, personality ratings, behavioral intentions, identification with being American and demographic characteristics were used. Suspicion checks used in Study 1 were included in Study 3, as well (See Study 1 and Appendix C for the details).

Results

Control variables

In line with Studies 2 and 3, we controlled for the following variables in our analyses: political attitudes, math identification, identification with being American (the solidarity and satisfaction subscales), gender, age, and self-reported social class. All the analyses regarding mean comparisons were first conducted without control variables and then with control variables as reported below.

Data analytic strategy

Data from White, Latino, and other ethnicity participants was analyzed separately. To investigate differences that stem from the effect of accent and race, the American targets were excluded from the analyses. Two-way ANCOVAs were conducted within the French targets. To investigate differences that stem from the effect of background and race, the French-accented speakers were excluded from the analyses. Two-way ANCOVAs were conducted within the standard American accented targets. One-way ANCOVAs were conducted to compare the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent.

Attitudes toward nonnative accented speakers

Overall attitudes. In Studies 1 and 2, we only had 1 type of participant (White American, monocultural, monolingual participants). In Study 3; however, we have three types of participants; White American, Latino, and other ethnicity participants. To differentiate between the type of participants, in Study 3, we will refer to them as perceivers. In the analyses of this study, we first focused on the perceptions of White perceivers, then on the Latino perceivers, and

finally, on the other ethnicity perceivers. In each section below, we will present results in that specific order.

The effects of accent and race of the target on overall attitudes. It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a Latino accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses, similar to Studies 1 and 2, in our analyses, we first excluded the non-Latino targets and focused on the Latino targets. We compared the attitudes toward the remaining targets with regards to the targets' accent and race. By excluding the non-Latino targets, we controlled for the confounding factor of background and only focused on differences in overall attitudes stemming only from the accent and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on White American perceivers' overall attitudes. For White American perceivers, there was no significant main effect of accent on average attitudes, $F(1, 158) = .19, p = .67, \eta_p^2 = .001$. There was no significant main effect of race on average attitudes, $F(1, 158) = .10, p = .75, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 158) = .03, p = .87, \eta_p^2 = .001$. Among the covariates, solidarity subscale of the identification with being American scale, $p = .02, \eta_p^2 = .01$ and gender, $p = .05, \eta_p^2 = .03$ had significant effects on overall attitudes. Perceivers who reported higher solidarity reported more positive overall attitudes. Female perceivers reported more positive perceptions than male perceivers. Mean overall attitude scores can be found in Figure 23, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on Latino perceivers' overall attitudes. For Latino perceivers, there was no significant main effect of accent on average attitudes, $F(1, 121) = .46, p = .50, \eta_p^2 = .004$. There was no significant main effect of race on average attitudes, $F(1, 121) = .17, p = .68, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 121) = 2.77, p = .10, \eta_p^2 = .02$. Among the covariates, political attitudes, $p = .004, \eta_p^2 = .07$; solidarity, $p = .04, \eta_p^2 = .04$; gender, $p = .02, \eta_p^2 = .04$; and age, $p = .04, \eta_p^2 = .04$ had significant effects on average attitudes. More conservative perceivers reported more negative overall attitudes. Female perceivers reported more positive overall attitudes. Perceivers who reported more solidarity reported more positive overall attitudes. Older perceivers reported more positive overall attitudes. Mean overall attitude scores can be found in Figure 23, Panel (B)

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on other ethnicity perceivers' overall attitudes. For other ethnicity perceivers, there was no significant main effect of accent on average attitudes, $F(1, 120) = .06, p = .80, \eta_p^2 = .001$. There was no significant main effect of race on overall attitudes, $F(1, 120) = 1.39, p = .24, \eta_p^2 = .011$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 120) = .97, p = .33, \eta_p^2 = .008$. Among the covariates, political attitudes, $p = .05, \eta_p^2 = .03$ and math identification, $p = .02, \eta_p^2 = .04$ had significant effects. More conservative perceivers reported more negative overall attitudes. Perceivers more identified with math reported more positive overall attitudes. Mean overall attitude scores can be found in Figure 23. Mean overall attitude scores can be found in Figure 23, Panel (C).

The effects of background and race of the target on overall attitudes. It was hypothesized that the targets with a non-Latino background would be perceived more positively

compared to the targets with a Latino background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses, similar to studies 1 and 2, we excluded the Latino-accented targets and focused on the standard American accented targets. We compared the attitudes toward the remaining targets with regards to the targets' background and race. By excluding the Latino targets, we controlled for the confounding effects of background on overall attitudes. We only focused on differences in overall attitudes stemming only from the background and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on White American perceivers' overall attitudes. For White American perceivers, there was no significant main effect of background on average attitudes, $F(1, 148) = 3.74, p = .06, \eta_p^2 = .03$. There was no significant main effect of race on average attitudes, $F(1, 148) = 3.11, p = .08, \eta_p^2 = .02$. Furthermore, there was no significant interaction effect between background and race, $F(1, 148) = 2.62, p = .11, \eta_p^2 = .02$. Among the covariates, solidarity, $p = .006, \eta_p^2 = .05$; gender, $p = .004, \eta_p^2 = .05$; social class; $p = .01, \eta_p^2 = .04$ had significant effects on overall attitudes. Perceivers who reported higher solidarity also reported more positive overall attitudes. Female perceivers reported more positive overall attitudes. Perceiver who had higher self-reported SES reported less positive overall attitudes. Mean overall attitude scores can be found in Figure 23, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on Latino perceivers' overall attitudes. For Latino perceivers, there was a

significant main effect of background on average attitudes, $F(1, 117) = 6.71, p = .01, \eta_p^2 = .05$, with Latino perceivers perceiving targets with Latino backgrounds more positively compared to non-Latino targets. There was no significant main effect of race on average attitudes, $F(1, 117) = 2.03, p = .16, \eta_p^2 = .02$. Furthermore, there was no significant interaction effect between background and race, $F(1, 117) = .02, p = .89, \eta_p^2 = .001$. Among the covariates, math identification, $p = .01, \eta_p^2 = .05$; solidarity, $p = .004, \eta_p^2 = .07$; gender, $p = .01, \eta_p^2 = .05$ had significant effects on overall attitudes. Perceivers who reported higher solidarity reported higher overall attitudes. Female perceivers reported more positive overall attitudes. Perceiver who were more identified in math reported more positive overall attitudes. Mean overall attitude scores can be found in Figure 23, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on other ethnicity perceivers' overall attitudes. For other ethnicity perceivers, there was no significant main effect of background on average attitudes, $F(1, 119) = .10, p = .75, \eta_p^2 = .001$. There was no significant main effect of race on average attitudes, $F(1, 119) = .12, p = .73, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 119) = .29, p = .59, \eta_p^2 = .002$. Among the covariates, math identification, $p = .01, \eta_p^2 = .05$; solidarity, $p = .004, \eta_p^2 = .07$; and age, $p = .01, \eta_p^2 = .05$ had significant effects on overall attitudes. Perceivers who were more identified with math also reported more positive overall attitudes. Perceivers who reported more solidarity also reported more positive overall attitudes. Older perceivers reported more positive overall attitudes. Mean overall attitude scores can be found in Figure 23, Panel (C).

The effect of nonnative accent in comparison to dark skin tone. For each type of perceivers, consistent with Studies 1 and 2, we aimed to understand whether nonnative accent or

dark skin color is a more impactful cue. Therefore, one-way ANCOVAs were conducted to compare overall attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. In these analyses, consistent with previous analyses, we controlled for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. A one-way ANCOVA was conducted to compare overall attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For White American perceivers, there was no significant difference between overall attitudes toward these two targets, $F(1, 61) = .60, p = .44, \eta_p^2 = .01$. None of the covariates had a significant effect except for gender. Female perceivers reported more positive overall attitudes. Mean overall attitude scores can be found in Figure 23, Panel (A).

Latino perceivers. A one-way ANCOVA was conducted to compare overall attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For Latino perceivers, there was no significant difference between overall attitudes toward these two targets, $F(1, 65) = .63, p = .43, \eta_p^2 = .01$. Political attitudes had a significant effect on overall attitudes, $p = .001, \eta_p^2 = .15$. More conservative perceivers reported more negative overall attitudes. Mean overall attitude scores can be found in Figure 23, Panel (B).

Other ethnicity perceivers. A one-way ANCOVA was conducted to compare overall attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For other ethnicity perceivers,

there was no significant difference between overall attitudes toward these two targets, $F(1, 57) = .005$, $p = .94$, $\eta_p^2 = .001$. None of the covariates had a significant effect. Mean overall attitude scores can be found in Figure 23, Panel (C).

Social attitudes.

The effects of accent and race of the target on social attitudes. It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a Latino accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses, similar to Studies 1 and 2, in our analyses, we first excluded the non-Latino targets and focused on the Latino targets. We compared the attitudes toward the remaining targets with regards to the targets' accent and race. By excluding the non-Latino targets, we controlled for the confounding factor of background and only focused on differences in social attitudes stemming only from the accent and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on White American perceivers' social attitudes. For White American perceivers, there was no significant main effect of accent on social attitudes, $F(1, 158) = .10$, $p = .75$, $\eta_p^2 = .001$. There was no significant main effect of race on social attitudes, $F(1, 158) = .001$, $p = .99$, $\eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 158) = .02$, $p = .90$, $\eta_p^2 = .001$. Among the covariates, only solidarity, $p = .03$, $\eta_p^2 = .03$ had a significant positive effect on social attitudes. Mean social attitude scores can be found in Figure 24, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on Latino perceivers' social attitudes. For Latino perceivers, there was no significant main effect of accent on social attitudes, $F(1, 121) = .02, p = .89, \eta_p^2 = .001$. There was no significant main effect of race on social attitudes, $F(1, 121) = .17, p = .69, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 121) = 1.56, p = .21, \eta_p^2 = .01$. Among the covariates, political attitudes, $p = .03, \eta_p^2 = .04$ and gender, $p = .03, \eta_p^2 = .04$ had significant effects on social attitudes. More conservative perceivers reported more negative social attitudes. Female perceivers reported more positive social attitudes. Mean social attitude scores can be found in Figure 24, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on other ethnicity perceivers' social attitudes. For other ethnicity perceivers, there was no significant main effect of accent on social attitudes, $F(1, 120) = .64, p = .43, \eta_p^2 = .005$. There was no significant main effect of race on social attitudes, $F(1, 120) = .92, p = .34, \eta_p^2 = .008$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 120) = .96, p = .33, \eta_p^2 = .008$. Among the covariates, political attitudes, $p = .04, \eta_p^2 = .04$; ad math identification, $p = .01, \eta_p^2 = .05$ had significant effects on social attitudes. More conservative perceivers reported more negative social attitudes. Perceivers identified with math reported more positive social attitudes. Mean social attitude scores can be found in Figure 24, Panel (C).

The effects of background and race of the target on social attitudes. It was hypothesized that the targets with a non-Latino background would be perceived more positively compared to the targets with a Latino background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin

tone. To test these hypotheses, similar to Studies 1 and 2, we excluded the Latino-accented targets and focused on the standard American accented targets. We compared the attitudes toward the remaining targets with regards to the targets' background and race. By excluding the Latino targets, we controlled for the confounding effects of background on social attitudes. We only focused on differences in social attitudes stemming only from the background and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on White American perceivers' social attitudes. For White American perceivers, there was a significant main effect of background on social attitudes, $F(1, 148) = 7.30, p = .008, \eta_p^2 = .05$, with White American perceivers reporting more positive social attitudes toward targets with a Latino background compared to the targets with a non-Latino background. There was no significant main effect of race on social attitudes, $F(1, 148) = 2.50, p = .12, \eta_p^2 = .02$. Furthermore, there was no significant interaction effect between background and race, $F(1, 148) = 2.22, p = .14, \eta_p^2 = .02$. Among the covariates, political attitudes, $p = .04, \eta_p^2 = .03$; solidarity, $p = .003, \eta_p^2 = .06$; gender, $p = .003, \eta_p^2 = .06$; age, $p = .007, \eta_p^2 = .05$; and social class, $p = .02, \eta_p^2 = .04$ had significant effects on social attitudes. More conservative perceivers reported more positive social attitudes. Perceivers who reported high solidarity reported more positive social attitudes. Female perceivers reported more positive social attitudes. Older perceivers reported more negative social attitudes. Perceivers higher on social class reported more negative social attitudes. Mean social attitude scores can be found in Figure 24, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on Latino perceivers' social attitudes. For Latino perceivers, there was a significant main effect of background on social attitudes, $F(1, 117) = 5.89, p = .02, \eta_p^2 = .05$, with Latino perceivers reporting more positive social attitudes toward targets with a Latino background compared to targets with a non-Latino background. There was no significant main effect of race on social attitudes, $F(1, 117) = .53, p = .47, \eta_p^2 = .005$. Furthermore, there was no significant interaction effect between background and race, $F(1, 117) = .38, p = .54, \eta_p^2 = .003$. Among the covariates, math identification, $p = .003, \eta_p^2 = .07$; solidarity, $p = .005, \eta_p^2 = .07$; and age, $p = .03, \eta_p^2 = .04$ had significant effects on social attitudes. Perceivers highly identified with math reported more positive social attitudes. Perceivers high on solidarity reported more positive social attitudes. Older perceivers reported more positive social attitudes. Mean social attitude scores can be found in Figure 24, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on other ethnicity perceivers' social attitudes. For other ethnicity perceivers, there was no significant main effect of background on social attitudes, $F(1, 119) = .60, p = .44, \eta_p^2 = .005$. There was no significant main effect of race on social attitudes, $F(1, 119) = .05, p = .83, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 119) = .11, p = .74, \eta_p^2 = .001$. Among the covariates, only math identification had a significant positive effect on social attitudes, $p = .01, \eta_p^2 = .05$. Mean social attitude scores can be found in Figure 24, Panel (C).

The effect of nonnative accent in comparison to dark skin tone. For each type of perceivers, consistent with Studies 1 and 2, we aimed to understand whether nonnative accent or dark skin color is a more impactful cue. Therefore, one-way ANCOVAs were conducted to

compare social attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. In these analyses, consistent with previous analyses, we controlled for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. A one-way ANCOVA was conducted to compare social attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For White American perceivers, there was no significant difference between social attitudes toward these two targets, $F(1, 61) = .42, p = .52, \eta_p^2 = .007$. Among the covariates, math identification, $p = .02, \eta_p^2 = .08$ and gender, $p = .009, \eta_p^2 = .11$ had significant effects on social attitudes. Perceivers highly identified with math reported more positive social attitudes. Female perceivers reported more positive social attitudes. Mean social attitude scores can be found in Figure 24, Panel (A).

Latino perceivers. A one-way ANCOVA was conducted to compare social attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For Latino perceivers, there was no significant difference between social attitudes toward these two targets, $F(1, 65) = .82, p = .37, \eta_p^2 = .01$. Among the covariates, only political attitudes had a significant effect on social attitudes, $p = .001, \eta_p^2 = .15$. More conservative perceivers reported more negative social attitudes. Mean social attitude scores can be found in Figure 24, Panel (B).

Other ethnicity perceivers. A one-way ANCOVA was conducted to compare social attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For other ethnicity perceivers,

there was no significant difference between social attitudes toward these two targets, $F(1, 57) = .83, p = .37, \eta_p^2 = .01$. None of the covariates had a significant effect. Mean social attitude scores can be found in Figure 24, Panel (C).

Professional attitudes.

The effects of accent and race of the target on professional attitudes. It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a Latino accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses, similar to Studies 1 and 2, in our analyses, we first excluded the non-Latino targets and focused on the Latino targets. We compared the attitudes toward the remaining targets with regards to the targets' accent and race. By excluding the non-Latino targets, we controlled for the confounding factor of background and only focused on differences in professional attitudes stemming only from the accent and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on White American perceivers' professional attitudes. For White American perceivers, there was no significant main effect of accent on professional attitudes, $F(1, 158) = .92, p = .34, \eta_p^2 = .006$. There was no significant main effect of race on professional attitudes, $F(1, 158) = .38, p = .54, \eta_p^2 = .002$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 158) = .06, p = .80, \eta_p^2 = .001$. Among the covariates, only

solidarity had a positive significant effect on professional attitudes, $p = .03$, $\eta_p^2 = .03$. Mean professional attitude scores can be found in Figure 25, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on Latino perceivers' professional attitudes. For Latino perceivers, there was no significant main effect of accent on professional attitudes, $F(1, 121) = .54$, $p = .46$, $\eta_p^2 = .004$. There was no significant main effect of race on professional attitudes, $F(1, 121) = .57$, $p = .45$, $\eta_p^2 = .005$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 121) = 2.58$, $p = .11$, $\eta_p^2 = .02$. Among the covariates, only political attitudes had a significant effect on professional attitudes, $p = .01$, $\eta_p^2 = .05$. More conservative perceivers reported more negative professional attitudes. Mean professional attitude scores can be found in Figure 25, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on other ethnicity perceivers' professional attitudes. For other ethnicity perceivers, there was no significant main effect of accent on professional attitudes, $F(1, 131) = .51$, $p = .48$, $\eta_p^2 = .004$. There was no significant main effect of race on professional attitudes, $F(1, 131) = 2.52$, $p = .12$, $\eta_p^2 = .02$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 131) = .61$, $p = .44$, $\eta_p^2 = .005$. Among the covariates, only math identification had a positive effect on professional attitudes, $p = .04$, $\eta_p^2 = .04$. Mean professional attitude scores can be found in Figure 25, Panel (C).

The effects of background and race of the target on professional attitudes. It was hypothesized that the targets with a non-Latino background would be perceived more positively compared to the targets with a Latino background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin

tone. To test these hypotheses, similar to Studies 1 and 2, we excluded the Latino-accented targets and focused on the standard American accented targets. We compared the attitudes toward the remaining targets with regards to the targets' background and race. By excluding the Latino targets, we controlled for the confounding effects of background on professional attitudes. We only focused on differences in social attitudes stemming only from the background and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on White American perceivers' professional attitudes. For White American perceivers, there was no significant main effect of background on professional attitudes, $F(1, 148) = .15, p = .70, \eta_p^2 = .001$. There was no significant main effect of race on professional attitudes, $F(1, 148) = 1.52, p = .22, \eta_p^2 = .01$. There was no significant interaction effect between background and race, $F(1, 148) = .67, p = .41, \eta_p^2 = .005$. Among the covariates, age $p = .05, \eta_p^2 = .03$ and social class, $p = .03, \eta_p^2 = .03$ had significant effects on professional attitudes. Older perceivers reported more negative professional attitudes. Perceivers higher on social class reported more negative professional attitudes. Mean professional attitude scores can be found in Figure 25, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on Latino perceivers' professional attitudes. For Latino perceivers, there was no significant main effect of background on professional attitudes, $F(1, 117) = 1.98, p = .16, \eta_p^2 = .02$. There was no significant main effect of race on professional attitudes, $F(1, 117) = 3.49, p = .06, \eta_p^2 = .03$. There was no significant interaction effect between background and race,

$F(1, 117) = .04, p = .85, \eta_p^2 = .001$. Among the covariates, solidarity, $p = .02, \eta_p^2 = .05$ and age, $p = .03, \eta_p^2 = .04$ had significant effects on professional attitudes. Perceivers higher on solidarity reported more positive professional attitudes. Older perceivers reported more positive professional attitudes. Mean professional attitude scores can be found in Figure 25, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on other ethnicity perceivers' professional attitudes. For other ethnicity perceivers, there was no significant main effect of background on professional attitudes, $F(1, 119) = .13, p = .72, \eta_p^2 = .001$. There was no significant main effect of race on professional attitudes, $F(1, 119) = .04, p = .84, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 119) = .72, p = .40, \eta_p^2 = .006$. None of the covariates were significant. Mean professional attitude scores can be found in Figure 25, Panel (C).

The effect of nonnative accent in comparison to dark skin tone. For each type of perceivers, consistent with Studies 1 and 2, we aimed to understand whether nonnative accent or dark skin color is a more impactful cue. Therefore, one-way ANCOVAs were conducted to compare professional attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. In these analyses, consistent with previous analyses, we controlled for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. A one-way ANCOVA was conducted to compare professional attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For White American perceivers, there was no significant difference between social attitudes toward these two targets,

$F(1, 61) = 3.51, p = .07, \eta_p^2 = .05$. None of the covariates were significant. Mean professional attitude scores can be found in Figure 25, Panel (A).

Latino perceivers. A one-way ANCOVA was conducted to compare professional attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For Latino perceivers, there was no significant difference between professional attitudes toward these two targets, $F(1, 65) = .16, p = .69, \eta_p^2 = .003$. Among the covariates, only political attitudes had a significant effect on professional attitudes, $p = .04, \eta_p^2 = .06$. More conservative perceivers reported more negative professional attitudes. Mean professional attitude scores can be found in Figure 25, Panel (B).

Other ethnicity perceivers. A one-way ANCOVA was conducted to compare professional attitudes toward the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For other ethnicity perceivers, there was no significant difference between professional attitudes toward these two targets, $F(1, 57) = 1.35, p = .25, \eta_p^2 = .02$. None of the covariates were significant. Mean professional attitude scores can be found in Figure 25, Panel (C).

Behavioral intentions toward nonnative accented speakers

Likelihood of taking a future class.

Similar to Studies 1 and 2, participants' evaluation of their likelihood of taking a future class with the target TA was used as a proxy for behavioral intentions in the professional domain.

The effects of accent and race of the target on the perceivers' likelihood of taking a future class. It was hypothesized that the targets with a standard American accent would be

perceived more positively compared to the targets with a Latino accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses, similar to Studies 1 and 2, in our analyses, we first excluded the non-Latino targets and focused on the Latino targets. We compared the likelihood of taking a future class from the remaining targets with regards to the targets' accent and race. By excluding the non-Latino targets, we controlled for the confounding factor of background and focused on differences in the likelihood of taking a future class stemming only from the accent and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on White American perceivers' likelihood of taking a future class. For White American perceivers, there was a significant main effect of accent on the likelihood of taking a future class, $F(1, 158) = 5.92, p = .02, \eta_p^2 = .04$, with White American perceivers reporting higher likelihood of taking a future class from targets with standard American accents compared to the targets with a Latino accent. There was no significant main effect of race on the likelihood of taking a future class, $F(1, 158) = .01, p = .94, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 158) = .27, p = .60, \eta_p^2 = .002$. None of the covariates were significant. Mean likelihood of taking a future class scores can be found in Figure 26, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on Latino perceivers' likelihood of taking a future class. For Latino perceivers, there was no significant main effect of accent on the likelihood of taking a future class, $F(1,$

121) = .58, $p = .45$, $\eta_p^2 = .005$. There was no significant main effect of race on the likelihood of taking a future class, $F(1, 121) = .24$, $p = .63$, $\eta_p^2 = .002$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 121) = 3.40$, $p = .07$, $\eta_p^2 = .03$. Among the covariates, math identification, $p = .001$, $\eta_p^2 = .13$ and gender, $p = .02$, $\eta_p^2 = .04$ had significant effects on taking a future class. Math identification had a positive effect on the likelihood of taking a future class. Female perceivers reported higher likelihood of taking a future class. Mean likelihood of taking a future class scores can be found in Figure 26, Panel (B)

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on other ethnicity perceivers' likelihood of taking a future class. For other ethnicity perceivers, there was no significant main effect of accent on the likelihood of taking a future class, $F(1, 120) = .01$, $p = .96$, $\eta_p^2 = .001$. There was no significant main effect of race on the likelihood of taking a future class, $F(1, 120) = .13$, $p = .72$, $\eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 120) = .07$, $p = .79$, $\eta_p^2 = .001$. Among the covariates, political attitudes, $p = .003$, $\eta_p^2 = .07$ and math identification, $p = .02$, $\eta_p^2 = .04$ had significant effects on the likelihood of taking a future class. More conservative perceivers stated lower likelihood of taking a future class. Perceivers who are highly identified with math reported higher likelihood of taking a future class. Mean likelihood of taking a future class can be found in Figure 26, Panel (C).

The effects of background and race of the target on the perceivers' likelihood of taking a future class. It was hypothesized that the targets with a non-Latino background would be perceived more positively compared to the targets with a Latino background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses, similar to Studies 1 and 2, we

excluded the Latino-accented targets and focused on the standard American accented targets. We compared the likelihood of taking a future class from the remaining targets with regards to the targets' background and race. By excluding the Latino targets, we controlled for the confounding effects of background on the likelihood of taking a future class. We only focused on differences in the likelihood of taking a future class stemming only from the background and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on White American perceivers' likelihood of taking a future class. For White American perceivers, there was no significant main effect of background on the likelihood of taking a future class, $F(1, 148) = 2.75, p = .10, \eta_p^2 = .02$. There was no significant main effect of race on the likelihood of taking a future class, $F(1, 148) = 2.80, p = .10, \eta_p^2 = .02$. However, there was a significant interaction effect between background and race, $F(1, 148) = 5.77, p = .02, \eta_p^2 = .04$. White American perceivers reported higher likelihood of taking a future class from the target with the light skin color if the target was Latino. However, White American perceivers reported higher likelihood of taking a future class from the target with the dark skin color if the target was non-Latino. Among the covariates, math identification, $p = .03, \eta_p^2 = .03$; solidarity, $p = .002, \eta_p^2 = .06$; age, $p = .001, \eta_p^2 = .09$; and social class, $p = .05, \eta_p^2 = .02$ had significant effects on the likelihood of taking a future class. Perceivers highly identified with math reported higher likelihood of taking a future class. Perceivers high on solidarity reported higher likelihood of taking a future class. Older perceivers reported less likelihood of taking a future class. Perceivers higher on self-reported social class reported less likelihood of taking a

future class. Mean likelihood of taking a future class scores can be found in Figure 26, Panel (A). The interaction can be found in Figure 27.

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on Latino perceivers' likelihood of taking a future class. For Latino perceivers, there was no significant main effect of background on the likelihood of taking a future class, $F(1, 117) = 1.38, p = .24, \eta_p^2 = .01$. There was no significant main effect of race on the likelihood of taking a future class, $F(1, 117) = .01, p = .93, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 117) = 2.73, p = .10, \eta_p^2 = .02$. Among the covariates, political attitudes, $p = .04, \eta_p^2 = .04$; math identification, $p = .001, \eta_p^2 = .14$; solidarity, $p = .002, \eta_p^2 = .08$ had significant effects on the likelihood of taking a future class. More conservative perceivers reported less likelihood of taking a future class. Math identification and solidarity had positive effects on the likelihood of taking a future class. Mean likelihood of taking a future class scores can be found in Figure 26, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on other ethnicity perceivers' likelihood of taking a future class. For other ethnicity perceivers, there was no significant main effect of background on the likelihood of taking a future class, $F(1, 119) = .06, p = .80, \eta_p^2 = .001$. There was no significant main effect of race on the likelihood of taking a future class, $F(1, 119) = .04, p = .85, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 119) = .04, p = .85, \eta_p^2 = .001$. Among the covariates, only math identification had a significant positive effect on the likelihood of taking a future class, $p = .004, \eta_p^2 = .07$. Mean likelihood of taking a future class scores can be found in Figure 26, Panel (C).

The effect of nonnative accent in comparison to dark skin tone. For each type of perceivers, consistent with Studies 1 and 2, we aimed to understand whether nonnative accent or dark skin color is a more impactful cue. Therefore, one-way ANCOVAs were conducted to compare likelihood of taking a future class from the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. In these analyses, consistent with previous analyses, we controlled for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. A one-way ANCOVA was conducted to compare likelihood of taking a future class from the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For White American perceivers, there was a significant difference between likelihood of taking a future class ratings regarding these two targets, $F(1, 61) = 5.15, p = .03, \eta_p^2 = .08$. White American perceivers reported higher likelihood of taking a future class from the non-Latino target with a dark skin color and a standard American accent ($M = 4.76, SD = 1.67$) compared to the Latino target with a light skin color and a Latino accent ($M = 3.72, SD = 1.85$). Among the covariates, only math identification had a significant positive effect on the likelihood of taking a future class, $p = .009, \eta_p^2 = .11$. Mean likelihood of taking a future class scores can be found in Figure 26, Panel (A).

Latino perceivers. A one-way ANCOVA was conducted to compare likelihood of taking a future class from the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For Latino perceivers, there was no significant difference between likelihood of taking a future class ratings regarding these two targets, $F(1, 65) = 2.52, p = .12, \eta_p^2 = .04$. Among the covariates, political attitudes, $p =$

.002, $\eta_p^2 = .14$ and math identification, $p = .001$, $\eta_p^2 = .21$ had significant effects on the likelihood of taking a future class. More conservative perceivers reported less likelihood of taking a future class. Perceivers identified with math reported higher likelihood of taking a future class. Mean likelihood of taking a future class scores can be found in Figure 26, Panel (B).

Other ethnicity perceivers. A one-way ANCOVA was conducted to likelihood of taking a future class from the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For other ethnicity perceivers, there was no significant difference between likelihood of taking a future class ratings regarding these two targets, $F(1, 57) = .03$, $p = .85$, $\eta_p^2 = .001$. None of the covariates were significant. Mean likelihood of taking a future class scores can be found in Figure 26, Panel (C).

Likelihood of a having lunch.

Similar to Studies 1 and 2, participants' evaluation of their likelihood of having lunch with the target TA was used as a proxy for behavioral intentions in the social domain.

The effects of accent and race of the target on the perceivers' likelihood of having lunch with the target. It was hypothesized that the targets with a standard American accent would be perceived more positively compared to the targets with a Latino accent. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses, similar to Studies 1 and 2, in our analyses, we first excluded the non-Latino targets and focused on the Latino targets. We compared the likelihood of having lunch with the remaining targets with regards to the targets' accent and race. By excluding the non-Latino targets, we controlled for the confounding factor of background and focused on differences in the likelihood of having lunch stemming only from the

accent and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on White American perceivers' likelihood of having lunch. For White American perceivers, there was no significant main effect of accent on the likelihood of having lunch, $F(1, 157) = .54, p = .46, \eta_p^2 = .003$. There was no significant main effect of race on the likelihood of having lunch, $F(1, 157) = .03, p = .87, \eta_p^2 = .001$. There was no significant interaction effect between accent and race, $F(1, 157) = .62, p = .43, \eta_p^2 = .004$. Among the covariates, only solidarity had a significant positive effect on the likelihood of having lunch, $p = .001, \eta_p^2 = .06$. Mean likelihood of having lunch scores can be found in Figure 28, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on Latino perceivers' likelihood of having lunch. For Latino perceivers, there was no significant main effect of accent on the likelihood of having lunch, $F(1, 121) = 2.30, p = .13, \eta_p^2 = .02$. There was no significant main effect of race on the likelihood of having lunch, $F(1, 121) = .70, p = .40, \eta_p^2 = .006$. There was no significant interaction effect between accent and race, $F(1, 121) = .28, p = .60, \eta_p^2 = .002$. Among the covariates, political attitudes, $p = .02, \eta_p^2 = .05$; math identification, $p = .001, \eta_p^2 = .09$; solidarity, $p = .01, \eta_p^2 = .05$; satisfaction, $p = .02, \eta_p^2 = .05$; and age, $p = .001, \eta_p^2 = .09$ had significant effects on the likelihood of having lunch.

Conservative perceivers stated lower likelihood of having lunch. Perceivers higher in their math identification stated higher likelihood of having lunch. Solidarity had a positive and satisfaction had a negative effect on the likelihood of having lunch. Older perceivers stated higher likelihood of having lunch. Mean likelihood of having lunch scores can be found in Figure 28, Panel (B)

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on other ethnicity perceivers' likelihood of having lunch. For other ethnicity perceivers, there was no significant main effect of accent on the likelihood of having lunch, $F(1, 119) = 1.40, p = .24, \eta_p^2 = .01$. There was no significant main effect of race on the likelihood of having lunch, $F(1, 119) = 1.75, p = .19, \eta_p^2 = .02$. There was no significant interaction effect between accent and race, $F(1, 119) = .16, p = .69, \eta_p^2 = .001$. Among the covariates, only age had a significant effect on the likelihood of having lunch, $p = .03, \eta_p^2 = .04$. Older perceivers stated higher likelihood of having lunch. Mean likelihood of having lunch scores can be found in Figure 28, Panel (C).

The effects of background and race of the target on the perceivers' likelihood of having lunch with the target. It was hypothesized that the targets with a non-Latino background would be perceived more positively compared to the targets with a Latino background. It was also hypothesized that the targets with a light skin tone would be perceived more positively compared to the targets with a dark skin tone. To test these hypotheses, similar to Studies 1 and 2, we excluded the Latino-accented targets and focused on the standard American accented targets. We compared the likelihood of having lunch with the remaining targets with regards to the targets' background and race. By excluding the Latino targets, we controlled for the confounding effects of background on the likelihood of having lunch. We only focused on differences in the likelihood of taking a future class stemming only from the background and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on White American perceivers' likelihood of having lunch. For White American perceivers, there was no significant main effect of background on the likelihood of having lunch, $F(1, 147) = .33, p = .57, \eta_p^2 = .002$. There was no significant main effect of race on the likelihood of having lunch, $F(1, 147) = 2.04, p = .16, \eta_p^2 = .01$. However, there was a significant interaction effect between background and race, $F(1, 147) = 5.95, p = .02, \eta_p^2 = .04$. White American perceivers indicated higher likelihood of having lunch with a target with a light skin color if the target has a Latino background. However, if the target has a non-Latino background, targets with the dark skin color were preferred. Among the covariates, solidarity, $p = .001, \eta_p^2 = .07$; gender, $p = .03, \eta_p^2 = .03$; and social class, $p = .002, \eta_p^2 = .06$ had significant effects on the likelihood of having lunch. Solidarity had a positive effect on the likelihood of having lunch. Female perceivers reported higher likelihood of having lunch. Perceivers higher on social class reported lower likelihood of having lunch. Mean likelihood of having lunch scores can be found in Figure 28, Panel (A). The interaction can be found in Figure 29.

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on Latino perceivers' likelihood of having lunch. For Latino perceivers, there was a significant main effect of background on the likelihood of having lunch, $F(1, 116) = 3.93, p = .05, \eta_p^2 = .03$, with Latino perceivers indicating higher likelihood of having lunch with targets from a Latino background compared to targets from a non-Latino background. There was no significant main effect of race on the likelihood of having lunch, $F(1, 116) = .84, p = .36, \eta_p^2 = .007$. Furthermore, there was no significant interaction effect between background and race, $F(1, 116) = .01, p = .99, \eta_p^2 = .001$. Among the covariates, math identification, $p = .03, \eta_p^2 = .04$

and age, $p = .02$, $\eta_p^2 = .05$ had significant positive effects on the likelihood of having lunch.

Mean likelihood of having lunch scores can be found in Figure 28, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on other ethnicity perceivers' likelihood of having lunch. For other ethnicity perceivers, there was no significant main effect of background on the likelihood of having lunch, $F(1, 118) = .27$, $p = .60$, $\eta_p^2 = .002$. There was no significant main effect of race on the likelihood of having lunch, $F(1, 118) = 2.76$, $p = .10$, $\eta_p^2 = .02$. Furthermore, there was no significant interaction effect between background and race, $F(1, 118) = .04$, $p = .85$, $\eta_p^2 = .001$. Among the covariates, only social class had a significant effect on the likelihood of having lunch, $p = .01$, $\eta_p^2 = .05$. Perceivers higher on the self-reported social class reported lower likelihood of having lunch. Mean likelihood of having lunch scores can be found in Figure 28, Panel (C).

The effect of nonnative accent in comparison to dark skin tone. For each type of perceivers, consistent with Studies 1 and 2, we aimed to understand whether nonnative accent or dark skin color is a more impactful cue. Therefore, one-way ANCOVAs were conducted to compare likelihood of having lunch with the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. In these analyses, consistent with previous analyses, we controlled for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. A one-way ANCOVA was conducted to compare likelihood of having lunch with the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For White American

perceivers, there was a not significant difference between likelihood of having lunch ratings regarding these two targets, $F(1, 61) = .98, p = .33, \eta_p^2 = .02$. None of the covariates were significant. Mean likelihood of having lunch scores can be found in Figure 28, Panel (A).

Latino perceivers. A one-way ANCOVA was conducted to compare likelihood of having lunch with the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For Latino perceivers, there was no significant difference between likelihood of having lunch ratings regarding these two targets, $F(1, 65) = 1.16, p = .29, \eta_p^2 = .02$. Among the covariates, political attitudes, $p = .007, \eta_p^2 = .11$ and age, $p = .02, \eta_p^2 = .08$ had significant effects on the likelihood of having lunch. Conservative perceivers reported lowered likelihood of having lunch. Older perceivers reported higher likelihood of having lunch. Mean likelihood of having lunch scores can be found in Figure 28, Panel (B).

Other ethnicity perceivers. A one-way ANCOVA was conducted to likelihood of taking a having lunch with the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For other ethnicity perceivers, there was no significant difference between likelihood of having lunch ratings regarding these two targets, $F(1, 57) = .20, p = .66, \eta_p^2 = .004$. Among the covariates, only social class had a significant positive effect on the likelihood of having lunch, $p = .04, \eta_p^2 = .07$. Mean likelihood of having lunch scores can be found in Figure 28, Panel (C).

Perceived personality

Participants' perceptions of the personality of the TAs were investigated on the Big-Five dimensions of extraversion, agreeableness, conscientiousness, emotional stability, and openness

to experience. We did not formulate ad-hoc hypotheses on these personality dimensions. We investigated these in an exploratory fashion.

Extraversion.

The effects of accent and race of the target on perceivers' extraversion ratings. To understand the effect of accent and race, similar to Studies 1 and 2, in our analyses, we first excluded the non-Latino targets and focused on the Latino targets. We compared the extraversion ratings toward the remaining targets with regards to the targets' accent and race. By excluding the non-Latino targets, we controlled for the confounding factor of background and only focused on differences in extraversion ratings stemming only from the accent and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on White American perceivers' extraversion ratings. For White American perceivers, there was no significant main effect of accent on extraversion, $F(1, 158) = .03, p = .88, \eta_p^2 = .001$. There was no significant main effect of race on extraversion, $F(1, 158) = .21, p = .65, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 158) = .21, p = .65, \eta_p^2 = .001$. Among the covariates, solidarity had a significant positive effect on perceived extraversion, $p = .02, \eta_p^2 = .03$. Mean extraversion scores can be found in Figure 30, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on Latino perceivers' extraversion ratings. For Latino perceivers, there was no

significant main effect of accent on extraversion, $F(1, 121) = 1.23, p = .27, \eta_p^2 = .01$. There was no significant main effect of race on extraversion, $F(1, 121) = 3.19, p = .08, \eta_p^2 = .03$.

Furthermore, there was no significant interaction effect between accent and race, $F(1, 121) = 2.90, p = .09, \eta_p^2 = .02$. None of the covariates were significant. Mean extraversion scores can be found in Figure 30, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on other ethnicity perceivers' extraversion ratings. For other ethnicity perceivers, there was no significant main effect of accent on extraversion, $F(1, 120) = 1.60, p = .21, \eta_p^2 = .01$. There was no significant main effect of race on extraversion, $F(1, 120) = .22, p = .64, \eta_p^2 = .002$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 120) = .33, p = .57, \eta_p^2 = .003$. Among the covariates, only math identification had a significant positive effect on perceived extraversion, $p = .03, \eta_p^2 = .04$. Mean extraversion scores can be found in Figure 30, Panel (C).

The effects of background and race of the target on perceivers' extraversion ratings.

To understand the effects of background and race, similar to Studies 1 and 2, we excluded the Latino-accented targets and focused on the standard American accented targets. We compared the extraversion ratings toward the remaining targets with regards to the targets' background and race. By excluding the Latino targets, we controlled for the confounding effects of background on extraversion. We only focused on differences in extraversion ratings stemming only from the background and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on White American perceivers' extraversion ratings. For White American perceivers, there was no significant main effect of background on extraversion, $F(1, 148) = 2.32, p = .13, \eta_p^2 = .02$. There was no significant main effect of race on extraversion, $F(1, 148) = 2.50, p = .12, \eta_p^2 = .02$. Furthermore, there was no significant interaction effect between background and race, $F(1, 148) = .63, p = .43, \eta_p^2 = .004$. Among the covariates, only political attitudes had a significant effect on perceived extraversion, $p = .02, \eta_p^2 = .04$. More conservative perceivers reported higher perceived extraversion. Mean extraversion scores can be found in Figure 30, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on Latino perceivers' extraversion ratings. For Latino perceivers, there was a significant main effect of background on extraversion, $F(1, 117) = 5.96, p = .02, \eta_p^2 = .05$, with Latino participants reporting higher extraversion scores for Latino background targets compared to their non-Latino counterparts. There was no significant main effect of race on extraversion, $F(1, 117) = .14, p = .71, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 117) = 5.86, p = .02, \eta_p^2 = .05$. None of the covariates were significant. Mean extraversion scores can be found in Figure 30, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on other ethnicity perceivers' extraversion ratings. For other ethnicity perceivers, there was no significant main effect of background on extraversion, $F(1, 119) = .15, p = .70, \eta_p^2 = .001$. There was no significant main effect of race on extraversion, $F(1, 119) = .22, p = .64, \eta_p^2 = .002$. Furthermore, there was no significant interaction effect between background and race, $F(1, 119) = .27, p = .61, \eta_p^2 = .002$. Among the covariates, only math

identification had a significant positive effect on perceived extraversion, $p = .001$, $\eta_p^2 = .09$.

Mean extraversion scores can be found in Figure 30, Panel (C).

The effect of nonnative accent in comparison to dark skin tone. For each type of perceivers, consistent with Studies 1 and 2, we aimed to understand whether nonnative accent or dark skin color is a more impactful cue. Therefore, one-way ANCOVAs were conducted to compare extraversion ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. In these analyses, consistent with previous analyses, we controlled for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. A one-way ANCOVA was conducted to compare extraversion ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For White American perceivers, there was no significant difference between extraversion ratings regarding these two targets, $F(1, 61) = .01$, $p = .92$, $\eta_p^2 = .001$. None of the covariates were significant. Mean extraversion scores can be found in Figure 30, Panel (A).

Latino perceivers. A one-way ANCOVA was conducted to compare extraversion ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For Latino perceivers, there was no significant difference between extraversion ratings regarding these two targets, $F(1, 65) = 1.90$, $p = .17$, $\eta_p^2 = .03$. None of the covariates were significant. Mean extraversion scores can be found in Figure 30, Panel (B).

Other ethnicity perceivers. A one-way ANCOVA was conducted to extraversion ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For other ethnicity perceivers, there was no significant difference between extraversion ratings regarding these two targets, $F(1, 57) = 1.78, p = .19, \eta_p^2 = .03$. None of the covariates were significant. Mean extraversion scores can be found in Figure 30, Panel (C).

Agreeableness.

The effects of accent and race of the target on perceivers' agreeableness ratings. To understand the effect of accent and race, similar to Studies 1 and 2, in our analyses, we first excluded the non-Latino targets and focused on the Latino targets. We compared the agreeableness ratings toward the remaining targets with regards to the targets' accent and race. By excluding the non-Latino targets, we controlled for the confounding factor of background and only focused on differences in agreeableness ratings stemming only from the accent and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on White American perceivers' agreeableness ratings. For White American perceivers, there was no significant main effect of accent on agreeableness, $F(1, 158) = 1.14, p = .29, \eta_p^2 = .007$. There was no significant main effect of race on agreeableness, $F(1, 158) = .05, p = .83, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 158) = .02, p = .89, \eta_p^2 = .001$. Among the covariates, only solidarity had a

negative effect on perceived agreeableness, $p = .04$, $\eta_p^2 = .03$. Mean agreeableness scores can be found in Figure 31, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on Latino perceivers' agreeableness ratings. For Latino perceivers, there was no significant main effect of accent on agreeableness, $F(1, 131) = 1.19$, $p = .28$, $\eta_p^2 = .01$. There was a significant main effect of race on agreeableness, $F(1, 131) = 7.53$, $p = .007$, $\eta_p^2 = .06$, with Latino perceivers reporting higher agreeableness ratings for targets with a light skin color compared to targets with a dark skin color (not denoted in Fig. 31). Furthermore, there was no significant interaction effect between accent and race, $F(1, 131) = 1.07$, $p = .30$, $\eta_p^2 = .009$. Among the covariates, political attitudes, $p = .05$, $\eta_p^2 = .03$; gender, $p = .004$, $\eta_p^2 = .07$; and age, $p = .003$, $\eta_p^2 = .07$ had significant effects on perceived agreeableness. More conservative perceivers reported more negative perceived agreeableness. Female perceivers reported more positive perceived agreeableness. Older perceivers reported more positive perceived agreeableness. Mean agreeableness scores can be found in Figure 31, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on other ethnicity perceivers' agreeableness ratings. For other ethnicity perceivers, there was a significant main effect of accent on agreeableness, $F(1, 120) = 6.26$, $p = .01$, $\eta_p^2 = .05$, with other ethnicity perceivers perceiving the Latino-accented targets as more agreeable compared to their standard American accented counterparts. There was also a significant main effect of race on agreeableness, $F(1, 120) = 6.28$, $p = .01$, $\eta_p^2 = .05$, with other ethnicity perceivers perceiving the targets with a dark skin color as more agreeable compared to the targets with a light skin color (not denoted in Fig. 27). However, there was no significant interaction effect between accent and race, $F(1, 120) = .001$, $p = .99$, $\eta_p^2 = .001$. Among the

covariates, math identification had a significant positive effect on perceived agreeableness, $p = .005$, $\eta_p^2 = .06$. Mean agreeableness scores can be found in Figure 31, Panel (C).

The effects of background and race of the target on perceivers' agreeableness ratings.

To understand the effects of background and race, similar to Studies 1 and 2, we excluded the Latino-accented targets and focused on the standard American accented targets. We compared the agreeableness ratings toward the remaining targets with regards to the targets' background and race. By excluding the Latino targets, we controlled for the confounding effects of background on agreeableness. We only focused on differences in agreeableness ratings stemming only from the background and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on White American perceivers' agreeableness ratings. For White American perceivers, there was no significant main effect of background on agreeableness, $F(1, 148) = .67$, $p = .42$, $\eta_p^2 = .004$. There was no significant main effect of race on agreeableness, $F(1, 148) = .58$, $p = .45$, $\eta_p^2 = .004$. Furthermore, there was no significant interaction effect between background and race, $F(1, 148) = .43$, $p = .52$, $\eta_p^2 = .003$. None of the covariates were significant. Mean agreeableness scores can be found in Figure 31, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on Latino perceivers' agreeableness ratings. For Latino perceivers, there was a significant main effect of background on agreeableness, $F(1, 117) = 6.39$, $p = .01$, $\eta_p^2 = .05$, with Latino perceivers perceiving targets from Latino backgrounds as more agreeable compared to targets from non-Latino backgrounds. There was also a significant main effect of

race on agreeableness, $F(1, 117) = 5.21, p = .02, \eta_p^2 = .04$, with Latino participants perceiving targets with a light skin color as more agreeable compared to targets with a dark skin color (not denoted in Fig. 27). However, there was no significant interaction effect between background and race, $F(1, 117) = .78, p = .38, \eta_p^2 = .007$. Among the covariates, political attitudes, $p = .007, \eta_p^2 = .11$ and satisfaction, $p = .03, \eta_p^2 = .07$ had significant effects on perceived agreeableness. Conservative perceivers reported higher perceived agreeableness. Perceivers high on satisfaction reported higher perceived agreeableness. Mean agreeableness scores can be found in Figure 31, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on other ethnicity perceivers' agreeableness ratings. For other ethnicity perceivers, there was no significant main effect of background on agreeableness, $F(1, 119) = 1.36, p = .25, \eta_p^2 = .01$. There was no significant main effect of race on agreeableness, $F(1, 119) = 1.13, p = .29, \eta_p^2 = .009$. Furthermore, there was no significant interaction effect between background and race, $F(1, 119) = .87, p = .35, \eta_p^2 = .007$. Among the covariates, solidarity, $p = .04, \eta_p^2 = .07$ and satisfaction, $p = .004, \eta_p^2 = .14$ had positive effects on perceived agreeableness. Mean agreeableness scores can be found in Figure 31, Panel (C).

The effect of nonnative accent in comparison to dark skin tone. For each type of perceivers, consistent with Studies 1 and 2, we aimed to understand whether nonnative accent or dark skin color is a more impactful cue. Therefore, one-way ANCOVAs were conducted to compare agreeableness ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. In these analyses, consistent with previous analyses, we controlled for participants' age, gender, SES,

identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. A one-way ANCOVA was conducted to compare agreeableness ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For White American perceivers, there was no significant difference between agreeableness ratings regarding these two targets, $F(1, 61) = .01, p = .92, \eta_p^2 = .001$. None of the covariates were significant. Mean agreeableness scores can be found in Figure 31, Panel (A).

Latino perceivers. A one-way ANCOVA was conducted to compare agreeableness ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For Latino perceivers, there a significant difference between agreeableness ratings regarding these two targets, $F(1, 65) = 9.93, p = .002, \eta_p^2 = .13$, with Latino perceivers perceiving the Latino target with a light skin color and a Latino accent ($M = 6.07, SD = .80$) as more agreeable compared to the American target with a dark skin color and a standard American accent ($M = 5.02, SD = 1.23$). Among the covariates, political attitudes, $p = .007, \eta_p^2 = .11$ and satisfaction, $p = .03, \eta_p^2 = .07$ had significant effects on perceived agreeableness. More conservative perceivers reported lower agreeableness. Perceivers higher on satisfaction reported higher perceived agreeableness. Mean agreeableness scores can be found in Figure 31, Panel (B).

Other ethnicity perceivers. A one-way ANCOVA was conducted to agreeableness ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For other ethnicity perceivers, there was no significant difference between agreeableness ratings regarding these two targets, $F(1, 57) =$

3.76, $p = .06$, $\eta_p^2 = .06$. Among the covariates, solidarity, $p = .04$, $\eta_p^2 = .14$ and satisfaction, $p = .004$, $\eta_p^2 = .14$ had positive effects on perceived agreeableness. Mean agreeableness scores can be found in Figure 31, Panel (C).

Conscientiousness.

The effects of accent and race of the target on perceivers' conscientiousness ratings.

To understand the effect of accent and race, similar to Studies 1 and 2, in our analyses, we first excluded the non-Latino targets and focused on the Latino targets. We compared the conscientiousness ratings toward the remaining targets with regards to the targets' accent and race. By excluding the non-Latino targets, we controlled for the confounding factor of background and only focused on differences in conscientiousness ratings stemming only from the accent and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on White American perceivers' conscientiousness ratings. For White American perceivers, there was no significant main effect of accent on conscientiousness, $F(1, 158) = .001$, $p = .99$, $\eta_p^2 = .001$. There was no significant main effect of race on conscientiousness, $F(1, 158) = .07$, $p = .79$, $\eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 158) = .01$, $p = .97$, $\eta_p^2 = .001$. Among the covariates, solidarity, $p = .007$, $\eta_p^2 = .05$; gender, $p = .05$, $\eta_p^2 = .02$; and social class, $p = .05$, $\eta_p^2 = .02$ had significant effects. Solidarity had a positive effect on perceived conscientiousness. Female perceivers reported higher perceived conscientiousness. Perceivers higher on self-

reported social class reported lower perceived conscientiousness. Mean conscientiousness scores can be found in Figure 32, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on Latino perceivers' conscientiousness ratings. For Latino perceivers, there was no significant main effect of accent on conscientiousness, $F(1, 121) = .01, p = .94, \eta_p^2 = .001$. There was no significant main effect of race on conscientiousness, $F(1, 121) = 1.75, p = .19, \eta_p^2 = .02$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 121) = .28, p = .60, \eta_p^2 = .002$. Among the covariates, political attitudes, $p = .001, \eta_p^2 = .09$; gender, $p = .02, \eta_p^2 = .04$; and age, $p = .002, \eta_p^2 = .08$ were significant. More conservative perceivers reported lower perceived conscientiousness. Female perceivers reported higher perceived conscientiousness. Older perceivers reported higher perceived conscientiousness. Mean conscientiousness scores can be found in Figure 32, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on other ethnicity perceivers' conscientiousness ratings. For other ethnicity perceivers, there was no significant main effect of accent on conscientiousness, $F(1, 120) = .07, p = .79, \eta_p^2 = .001$. There was no significant main effect of race on conscientiousness, $F(1, 120) = 3.22, p = .08, \eta_p^2 = .03$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 120) = .20, p = .65, \eta_p^2 = .002$. Among the covariates, only math identification had a significant positive effect on perceived conscientiousness, $p = .02, \eta_p^2 = .05$. Mean conscientiousness scores can be found in Figure 32, Panel (C).

The effects of background and race of the target on perceivers' conscientiousness ratings. To understand the effects of background and race, similar to Studies 1 and 2, we excluded the Latino-accented targets and focused on the standard American accented targets. We

compared the conscientiousness ratings toward the remaining targets with regards to the targets' background and race. By excluding the Latino targets, we controlled for the confounding effects of background on conscientiousness. We only focused on differences in conscientiousness ratings stemming only from the background and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on White American perceivers' conscientiousness ratings. For White American perceivers, there was no significant main effect of background on conscientiousness, $F(1, 148) = .30, p = .59, \eta_p^2 = .002$. There was no significant main effect of race on conscientiousness, $F(1, 148) = 1.29, p = .26, \eta_p^2 = .009$. Furthermore, there was no significant interaction effect between background and race, $F(1, 148) = .56, p = .45, \eta_p^2 = .004$. Among the covariates, gender, $p = .001, \eta_p^2 = .07$ and age, $p = .04, \eta_p^2 = .03$ had an effect on perceived conscientiousness. Female perceivers reported higher perceived conscientiousness. Older perceivers reported lower perceived conscientiousness. Mean conscientiousness scores can be found in Figure 32, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on Latino perceivers' conscientiousness ratings. For Latino perceivers, there was no significant main effect of background on conscientiousness, $F(1, 117) = .99, p = .32, \eta_p^2 = .008$. There was a significant main effect of race on conscientiousness, $F(1, 117) = 6.50, p = .01, \eta_p^2 = .05$, with Latino perceivers perceiving the targets with a light skin color as more conscientious compared to the targets with a dark skin color (not denoted in Fig. 32). Furthermore, there was no significant interaction effect between background and race, $F(1, 117)$

$= .19, p = .67, \eta_p^2 = .002$. Among the covariates, political attitudes, $p = .01, \eta_p^2 = .05$; solidarity, $p = .001, \eta_p^2 = .15$; gender, $p = .02, \eta_p^2 = .04$; age, $p = .03, \eta_p^2 = .04$; and social class, $p = .02, \eta_p^2 = .05$ had significant effects on perceived conscientiousness. More conservative perceivers reported lower perceived conscientiousness. Perceivers higher on solidarity reported higher perceived conscientiousness. Female perceivers reported higher perceived conscientiousness. Older perceivers reported higher perceived conscientiousness. Perceivers higher on self-reported social class reported lower perceived conscientiousness. Mean conscientiousness scores can be found in Figure 32, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on other ethnicity perceivers' conscientiousness ratings. For other ethnicity perceivers, there was no significant main effect of background on conscientiousness, $F(1, 119) = .30, p = .59, \eta_p^2 = .003$. There was no significant main effect of race on conscientiousness, $F(1, 119) = .34, p = .56, \eta_p^2 = .003$. Furthermore, there was no significant interaction effect between background and race, $F(1, 119) = 1.94, p = .17, \eta_p^2 = .02$. Among the covariates, age had a significant effect on perceived conscientiousness, $p = .04, \eta_p^2 = .04$. Older perceivers reported higher perceived conscientiousness. Mean conscientiousness scores can be found in Figure 32, Panel (C).

The effect of nonnative accent in comparison to dark skin tone. For each type of perceivers, consistent with Studies 1 and 2, we aimed to understand whether nonnative accent or dark skin color is a more impactful cue. Therefore, one-way ANCOVAs were conducted to compare conscientiousness ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. In these analyses, consistent with previous analyses, we controlled for participants' age, gender,

SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. A one-way ANCOVA was conducted to compare conscientiousness ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For White American perceivers, there was no significant difference between conscientiousness ratings regarding these two targets, $F(1, 61) = .93, p = .34, \eta_p^2 = .02$. None of the covariates were significant. Mean conscientiousness scores can be found in Figure 32, Panel (A).

Latino perceivers. A one-way ANCOVA was conducted to compare conscientiousness ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For Latino perceivers, there not a significant difference between conscientiousness ratings regarding these two targets, $F(1, 65) = 3.33, p = .07, \eta_p^2 = .05$. Among the covariates, only political attitudes had a significant effect on perceived conscientiousness, $p = .005, \eta_p^2 = .11$. More conservative perceivers reported lower perceived conscientiousness. Mean conscientiousness scores can be found in Figure 32, Panel (B).

Other ethnicity perceivers. A one-way ANCOVA was conducted to conscientiousness ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For other ethnicity perceivers, there was no significant difference between conscientiousness ratings regarding these two targets, $F(1, 57) = .007, p = .93, \eta_p^2 = .001$. None of the covariates were significant. Mean conscientiousness scores can be found in Figure 32, Panel (C).

Emotional stability.*The effects of accent and race of the target on perceivers' emotional stability ratings.*

To understand the effect of accent and race, similar to Studies 1 and 2, in our analyses, we first excluded the non-Latino targets and focused on the Latino targets. We compared the emotional stability ratings toward the remaining targets with regards to the targets' accent and race. By excluding the non-Latino targets, we controlled for the confounding factor of background and only focused on differences in emotional stability ratings stemming only from the accent and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on White American perceivers' emotional stability ratings. For White American perceivers, there was no significant main effect of accent on emotional stability, $F(1, 158) = .46, p = .50, \eta_p^2 = .003$. There was no significant main effect of race on emotional stability, $F(1, 158) = .84, p = .36, \eta_p^2 = .005$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 158) = 1.15, p = .28, \eta_p^2 = .007$. None of the covariates were significant. Mean emotional stability scores can be found in Figure 33, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on Latino perceivers' emotional stability ratings. For Latino perceivers, there was no significant main effect of accent on emotional stability, $F(1, 121) = .71, p = .40, \eta_p^2 = .006$. There was no significant main effect of race on emotional stability, $F(1, 121) = 1.78, p = .19, \eta_p^2 = .01$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 121) = .02, p = .88, \eta_p^2 = .001$. Among the covariates, math identification, $p = .02, \eta_p^2 = .04$

and solidarity, $p = .02$, $\eta_p^2 = .04$ had significant effects on perceived emotional stability.

Perceivers high on math identification reported lower perceived emotional stability. Perceivers high on solidarity reported higher perceived emotional stability. Mean emotional stability scores can be found in Figure 33, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on other ethnicity perceivers' emotional stability ratings. For other ethnicity perceivers, there was no significant main effect of accent on emotional stability, $F(1, 120) = 2.25$, $p = .14$, $\eta_p^2 = .02$. There was no significant main effect of race on emotional stability, $F(1, 120) = .78$, $p = .38$, $\eta_p^2 = .006$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 120) = .02$, $p = .88$, $\eta_p^2 = .001$. Among the covariates, math identification, $p = .001$, $\eta_p^2 = .09$; solidarity, $p = .009$, $\eta_p^2 = .06$; satisfaction, $p = .02$, $\eta_p^2 = .05$; and age, $p = .05$, $\eta_p^2 = .03$ had significant positive effects on perceived emotional stability. Mean emotional stability scores can be found in Figure 33, Panel (C).

The effects of background and race of the target on perceivers' emotional stability ratings. To understand the effects of background and race, similar to Studies 1 and 2, we excluded the Latino-accented targets and focused on the standard American accented targets. We compared the emotional stability ratings toward the remaining targets with regards to the targets' background and race. By excluding the Latino targets, we controlled for the confounding effects of background on emotional stability. We only focused on differences in emotional stability ratings stemming only from the background and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on White American perceivers' emotional stability ratings. For White American perceivers, there was no significant main effect of background on emotional stability, $F(1, 148) = 1.37, p = .24, \eta_p^2 = .009$. There was no significant main effect of race on emotional stability, $F(1, 148) = 1.22, p = .27, \eta_p^2 = .008$. Furthermore, there was no significant interaction effect between background and race, $F(1, 148) = 1.54, p = .22, \eta_p^2 = .01$. Among the covariates, gender, $p = .001, \eta_p^2 = .07$ and age, $p = .05, \eta_p^2 = .03$ had significant effects on perceived emotional stability. Female perceivers reported higher perceived emotional stability. Older perceivers reported lower perceived emotional stability. Mean emotional stability scores can be found in Figure 33, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on Latino perceivers' emotional stability ratings. For Latino perceivers, there was no significant main effect of background on emotional stability, $F(1, 117) = .73, p = .39, \eta_p^2 = .006$. There was; however, a significant main effect of race on emotional stability, $F(1, 117) = 3.84, p = .05, \eta_p^2 = .03$, with Latino perceivers perceiving the targets with a light skin color as more emotionally stable compared to the targets with a dark skin color (not denoted in Fig. 29). However, there was no significant interaction effect between background and race, $F(1, 117) = .43, p = .51, \eta_p^2 = .004$. Among the covariates, solidarity had a positive significant effect on perceived emotional stability, $p = .008, \eta_p^2 = .06$. Mean emotional stability scores can be found in Figure 33, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on other ethnicity perceivers' emotional stability ratings. For other ethnicity perceivers, there was no significant main effect of background on emotional stability, F

(1, 119) = .17, $p = .68$, $\eta_p^2 = .001$. There was no significant main effect of race on emotional stability, $F(1, 119) = .01$, $p = .95$, $\eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 119) = .96$, $p = .33$, $\eta_p^2 = .008$. Among the covariates, math identification had a significant positive effect on perceived emotional stability, $p = .005$, $\eta_p^2 = .07$. Mean emotional stability scores can be found in Figure 33, Panel (C).

The effect of nonnative accent in comparison to dark skin tone. For each type of perceivers, consistent with Studies 1 and 2, we aimed to understand whether nonnative accent or dark skin color is a more impactful cue. Therefore, one-way ANCOVAs were conducted to compare emotional stability ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. In these analyses, consistent with previous analyses, we controlled for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. A one-way ANCOVA was conducted to compare emotional stability ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For White American perceivers, there was no significant difference between emotional stability ratings regarding these two targets, $F(1, 61) = .70$, $p = .41$, $\eta_p^2 = .01$. None of the covariates were significant. Mean emotional stability scores can be found in Figure 33, Panel (A).

Latino perceivers. A one-way ANCOVA was conducted to compare emotional stability ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For Latino perceivers, there was a significant difference between emotional stability ratings regarding these two targets, $F(1, 65) =$

4.35, $p = .04$, $\eta_p^2 = .06$, with Latino perceivers perceiving the Latino target with a light skin color and a Latino accent ($M = 5.21$, $SD = .70$) as more emotionally stable compared to the American target with a dark skin color and a standard American accent ($M = 4.59$, $SD = 1.00$). Among the covariates, only political attitudes had a significant effect on perceived emotional stability, $p = .007$, $\eta_p^2 = .11$. More conservative perceivers reported lower perceived emotional stability. Mean emotional stability scores can be found in Figure 33, Panel (B).

Other ethnicity perceivers. A one-way ANCOVA was conducted to emotional stability ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For other ethnicity perceivers, there was no significant difference between emotional stability ratings regarding these two targets, $F(1, 57) = 1.98$, $p = .17$, $\eta_p^2 = .03$. Among the covariates, political attitudes, $p = .04$, $\eta_p^2 = .08$ and math identification, $p = .02$, $\eta_p^2 = .10$ had significant effects on perceived emotional stability. More conservative perceivers reported lower perceived emotional stability. Math identification had a positive effect on perceived emotional stability. Mean emotional stability scores can be found in Figure 33, Panel (C).

Openness to experience.

The effects of accent and race of the target on perceivers' openness to experience ratings. To understand the effect of accent and race, similar to Studies 1 and 2, in our analyses, we first excluded the non-Latino targets and focused on the Latino targets. We compared the openness to experience ratings toward the remaining targets with regards to the targets' accent and race. By excluding the non-Latino targets, we controlled for the confounding factor of background and only focused on differences in openness to experience ratings stemming only

from the accent and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on White American perceivers' openness to experience ratings. For White American perceivers, there was no significant main effect of accent on openness to experience, $F(1, 158) = .02, p = .88, \eta_p^2 = .001$. There was no significant main effect of race on openness to experience, $F(1, 158) = 1.42, p = .24, \eta_p^2 = .009$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 158) = .001, p = .99, \eta_p^2 = .001$. Among the covariates, only solidarity had a positive effect on perceived openness to experience, $p = .01, \eta_p^2 = .04$. Mean openness to experience scores can be found in Figure 34, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on Latino perceivers' openness to experience ratings. For Latino perceivers, there was no significant main effect of accent on openness to experience, $F(1, 121) = .06, p = .81, \eta_p^2 = .001$. There was no significant main effect of race on openness to experience, $F(1, 121) = .11, p = .74, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 121) = .18, p = .67, \eta_p^2 = .001$. Among the covariates, political attitudes, $p = .01, \eta_p^2 = .05$; gender, $p = .005, \eta_p^2 = .06$; and age, $p = .001, \eta_p^2 = .18$ had significant effects on perceived openness to experience. More conservative perceivers reported lower perceived openness to experience. Female perceivers reported higher perceived openness to experience. Older perceivers reported higher perceived openness to experience. Mean openness to experience scores can be found in Figure 34, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' accent and race on other ethnicity perceivers' openness to experience ratings. For other ethnicity perceivers, there was no significant main effect of accent on openness to experience, $F(1, 120) = .33, p = .57, \eta_p^2 = .003$. There was no significant main effect of race on openness to experience, $F(1, 120) = 1.69, p = .20, \eta_p^2 = .01$. Furthermore, there was no significant interaction effect between accent and race, $F(1, 120) = 1.10, p = .30, \eta_p^2 = .009$. Among the covariates, political attitudes had a significant effect on perceived openness to experience, $p = .02, \eta_p^2 = .04$. More conservative perceivers reported lower perceived openness to experience. Mean openness to experience scores can be found in Figure 34, Panel (C).

The effects of background and race of the target on perceivers' openness to experience ratings. To understand the effects of background and race, similar to Studies 1 and 2, we excluded the Latino-accented targets and focused on the standard American accented targets. We compared the openness to experience ratings toward the remaining targets with regards to the targets' background and race. By excluding the Latino targets, we controlled for the confounding effects of background on openness to experience. We only focused on differences in openness to experience ratings stemming only from the background and race differences of the targets. In the analyses reported below, we controlled for perceivers' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on White American perceivers' openness to experience ratings. For White American perceivers, there was no significant main effect of background on openness to experience, $F(1, 148) = .18, p = .68, \eta_p^2 = .001$. There was; however, a significant main effect

of race on openness to experience, $F(1, 148) = 4.07, p = .05, \eta_p^2 = .03$, with White American perceivers perceiving the targets with a dark skin color as more open to experience compared to the targets with a light skin color (not denoted in Fig. 34). However, there was no significant interaction effect between background and race, $F(1, 148) = .57, p = .45$. Among the covariates, political attitudes, $p = .03, \eta_p^2 = .03$; solidarity, $p = .04, \eta_p^2 = .03$; gender, $p = .004, \eta_p^2 = .06$; and social class, $p = .002, \eta_p^2 = .06$ had significant effects on perceived openness to experience. More conservative perceivers reported higher perceived openness to experience. Perceivers higher on solidarity reported higher perceived openness to experience. Female perceivers reported higher perceived openness to experience. Perceivers higher on self-reported social class reported lower perceived openness to experience. Mean openness to experience scores can be found in Figure 34, Panel (A).

Latino perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on Latino perceivers' openness to experience ratings. For Latino perceivers, there was a significant main effect of background on openness to experience, $F(1, 117) = 6.81, p = .01, \eta_p^2 = .06$, with Latino perceivers perceiving targets with a Latino background as more open to experience compared to targets with a non-Latino background. There was no significant main effect of race on openness to experience, $F(1, 117) = 1.16, p = .29, \eta_p^2 = .01$. Furthermore, there was no significant interaction effect between background and race, $F(1, 117) = .04, p = .84, \eta_p^2 = .001$. Among the covariates, political attitudes, $p = .02, \eta_p^2 = .04$; math identification, $p = .03, \eta_p^2 = .04$; solidarity, $p = .05, \eta_p^2 = .03$; and age, $p = .004, \eta_p^2 = .07$ had significant effects on perceived openness to experience. More conservative perceivers reported lower perceived openness to experience. Math identification and solidarity had positive effects on perceived

openness to experience. Older perceivers reported higher perceived openness to experience. Mean openness to experience scores can be found in Figure 34, Panel (B).

Other ethnicity perceivers. Two-way ANCOVAs were conducted to examine the effect of targets' background and race on other ethnicity perceivers' openness to experience ratings. For other ethnicity perceivers, there was no significant main effect of background on openness to experience, $F(1, 119) = 1.06, p = .30, \eta_p^2 = .009$. There was no significant main effect of race on openness to experience, $F(1, 119) = .11, p = .74, \eta_p^2 = .001$. Furthermore, there was no significant interaction effect between background and race, $F(1, 119) = .11, p = .74, \eta_p^2 = .001$. Among the covariates, math identification had a positive significant effect on perceived openness to experience, $p = .008, \eta_p^2 = .06$. Mean openness to experience scores can be found in Figure 34, Panel (C).

The effect of nonnative accent in comparison to dark skin tone. For each type of perceivers, consistent with Studies 1 and 2, we aimed to understand whether nonnative accent or dark skin color is a more impactful cue. Therefore, one-way ANCOVAs were conducted to compare openness to experience ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. In these analyses, consistent with previous analyses, we controlled for participants' age, gender, SES, identification with being American (solidarity and satisfaction subscales), math identification, and political attitudes.

White American perceivers. A one-way ANCOVA was conducted to compare openness to experience ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For White American perceivers, there was no significant difference between openness to experience ratings

regarding these two targets, $F(1, 61) = 2.26, p = .14, \eta_p^2 = .04$. None of the covariates were significant. Mean openness to experience scores can be found in Figure 34, Panel (A).

Latino perceivers. A one-way ANCOVA was conducted to compare openness to experience ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For Latino perceivers, there was no significant difference between openness to experience ratings regarding these two targets, $F(1, 65) = 5.53, p = .02, \eta_p^2 = .08$. Among the covariates, political attitudes, $p = .001, \eta_p^2 = .20$; solidarity, $p = .01, \eta_p^2 = .09$; satisfaction, $p = .004, \eta_p^2 = .12$; and age, $p = .003, \eta_p^2 = .12$ had significant effects on perceived openness to experience. More conservative perceivers reported lower perceived openness to experience. Solidarity had a negative and satisfaction had a positive effect on perceived openness to experience. Older perceivers reported higher perceived openness to experience. Mean openness to experience scores can be found in Figure 34, Panel (B).

Other ethnicity perceivers. A one-way ANCOVA was conducted to openness to experience ratings regarding the Latino target with a light skin color and a Latino accent and the non-Latino target with a dark skin color and a standard American accent. For other ethnicity perceivers, there was no significant difference between openness to experience ratings regarding these two targets, $F(1, 57) = .85, p = .36, \eta_p^2 = .02$. None of the covariates were significant. Mean openness to experience scores can be found in Figure 34, Panel (C).

Discussion

The goal of Study 3 was to investigate White American, Latino, and other ethnicity perceivers' perceptions of Latino-accented teaching assistants. The goal of this study was to employ a more diverse sample in terms of ethnicity, age, and background when investigating the

effects of nonnative accent, background, and race of the targets on perceptions. Similar to Study 1, we exposed participants to an audio recording of a fake math class by a teaching assistant with a Latino/ standard American accent paired with a Latino/ non-Latino background, and light/ dark skin color. Following the audio recording, participants stated their evaluations of and their attitudes toward the targets.

Attitudes

First, it was hypothesized that perceivers would demonstrate a more positive attitude toward standard American accented targets compared to Latino-accented targets. Second, it was hypothesized that perceivers would demonstrate a more positive attitude toward non-Latino targets compared to Latino targets. Third, it was hypothesized that perceivers would demonstrate a more positive attitude toward a target with a light skin color compared to a target with a dark skin color. Fourth, we aimed to pit nonnative accent and dark skin color against each other as stereotyping cues. We compared the perceptions toward the Latino target with a light skin color and a Latino accent to the American target with a dark skin color and a standard American accent. We investigated White American, Latino, and other ethnicity perceivers' attitudes as overall attitudes, social attitudes, and professional attitudes.

In terms of overall attitudes, our hypotheses were rejected for all types of perceivers; our results failed to show the predicted differences between our experimental groups. Furthermore, for Latino perceivers, the effects were the reverse of what was predicted. Latino perceivers perceived targets with Latino backgrounds more positively compared to non-Latino targets.

In terms of social attitudes, our hypotheses were rejected for all types of perceivers; our results failed to show the predicted differences between our experimental groups. Furthermore,

in terms of background, the effects were the reverse of what was predicted. Both White American and Latino perceivers demonstrated more positive social attitudes toward targets with a Latino background compared to the targets with a non-Latino background.

In terms of professional attitudes, all hypotheses were rejected. Results failed to show differences between experimental groups.

Behavioral intentions toward nonnative accented speakers

We used participants' evaluation of their likelihood of taking a future class with the target TA as a proxy for their behavioral intentions in the professional domain. Similarly, we used participants' evaluation of their likelihood of having lunch with the targets (if the targets were not their TA) as a proxy for their behavioral intentions in the social domain.

It was hypothesized that participants would want to interact with the targets with a standard American accent compared to the targets with a Latino accent. Similarly, it was hypothesized that participants would want to interact less with targets with a Latino background compared to targets with a non-Latino background. It was hypothesized that participants would want to interact with the targets with a light skin color compared to the targets with a dark skin color. Finally, we aimed to explore the perceptions toward the Latino target with a light skin color and a Latino accent in comparison to the American target with a dark skin color and a standard American accent.

Results showed that White American perceivers were the only ones who reported decreased behavioral interaction intentions with the targets with a nonnative accent. White American perceivers reported higher likelihood of taking a future class from targets with

standard American accents compared to the targets with a Latino accent. This effect did not replicate for the social interactions domain.

In terms of the effects of targets' background and race, White American perceivers demonstrated interesting effects. White American perceivers reported higher likelihood of taking a future class and having lunch from the target with the light skin color if the target was Latino. However, White American perceivers reported higher likelihood of taking a future class or having lunch from the target with the dark skin color if the target was non-Latino. This finding can be explained by the optimal distinctiveness theory (Brewer, 2003). White American perceivers preferred interactions with those who differ from them only on one dimension, both in the professional and social domains. Furthermore, White American perceivers reported higher likelihood of taking a future class from the non-Latino target with a dark skin color and a standard American accent compared to the Latino target with a light skin color and a Latino accent. Therefore, for the White American perceivers in this study, the Latino accent served as a greater cue leading to stereotyping than dark skin color. None of these effects replicated for the other perceivers.

For the Latino and other ethnicity perceivers, there was only one difference we observed across their behavioral intentions to interact with the different targets. Latino perceivers indicated higher likelihood of having lunch with targets from a Latino background compared to targets from a non-Latino background. This is in contrast to the optimal distinctiveness theory. Latino perceivers simply preferred to interact with their ingroup. However, this finding was only observed in the social domain. Therefore, the findings on personality perceptions can explain this finding. Latino perceivers attributed greater extraversion, agreeableness, and openness to experience to targets from Latino backgrounds. These are all qualities that can enhance social

interactions. Therefore, Latino perceivers may wanted to interact with Latino targets who demonstrate such qualities that can enhance the social interaction.

Perceived personality

We investigated how the participants perceived the personalities of the targets in an exploratory fashion.

Extraversion. In terms of extraversion, results only showed differences across experimental conditions for the Latino perceivers. Latino perceivers reported higher extraversion scores for Latino background targets compared to their non-Latino counterparts. This finding can be explained by previous research that shows Latinos are more sociable than White Americans (Ramírez-Esparza, Mehl, Álvarez-Bermúdez, Pennebaker, 2009). Therefore, Latinos can perceive other Latinos to be more extraverted.

Agreeableness. Results about agreeableness differed across participant types. White American perceivers did not associate Latino accent or background, or light/dark skin color with agreeableness. For Latino and other ethnicity perceivers, results slightly differed but they were consistent in that being Latino lead to perceptions of increased agreeableness. For example, other ethnicity perceivers perceiving the Latino-accented targets as more agreeable compared to their standard American accented counterparts. Although Latino participants did not demonstrate the same perception due to accent, Latino perceivers perceived targets from Latino backgrounds as more agreeable compared to targets from non-Latino backgrounds. Similarly, Latino perceivers perceived the Latino target with a light skin color and a Latino accent as more agreeable compared to the American target with a dark skin color and a standard American accent. Therefore, for Latino perceivers, a dark skin color was a more impactful cue leading to decreased perceptions of agreeableness; whereas, Latino accent did not have the same negative impact.

There were no consistent findings regarding skin color of the target and agreeableness. Whereas White American perceivers did not demonstrate any differing perceptions of the targets based on the targets' skin color, Latino perceivers reported higher agreeableness ratings for targets with a light skin color compared to targets with a dark skin color. However, other ethnicity perceivers perceived the targets with a dark skin color as more agreeable compared to the targets with a light skin color. Therefore, the findings regarding skin color were not consistent.

Conscientiousness. In terms of conscientiousness, unlike Study 1 or Study 2, we did not find an effect of nonnative accent on lowered conscientiousness scores. None of the participant types reported differing conscientiousness scores based on nonnative accent or Latino background of the targets. This can be explained by that it is more likely for the Mechanical sample size to be older and more diverse in terms of background and socioeconomic status compared to the participant pool samples employed in Studies 1 and 2. This difference in the findings can be explained by the nature of our samples. This difference demonstrates that as individuals get more exposure to others from different background, the negative effect of nonnative accent on perceived conscientiousness dissipates.

In terms of skin color of the target, Latino perceivers reported that the targets with a light skin color were more conscientious compared to the targets with a dark skin color. However, White American and other ethnicity perceivers did not report differing conscientiousness ratings depending on skin color of the targets.

Emotional stability. Results demonstrated that for all perceiver types, perceived emotional stability was not linked to Latino accent or background. However, Latino perceivers perceived the targets with a light skin color as more emotionally stable compared to the targets

with a dark skin color. Similarly, Latino perceivers reported that the Latino target with a light skin color and a Latino accent was more emotionally stable compared to the American target with a dark skin color and a standard American accent. These findings are consistent with our agreeableness and conscientiousness findings in the current study. Latino perceivers in Study 3 consistently attributed positive qualities to targets with a light skin color. However, this did not consistently replicate across perceiver types.

Openness to experience. In terms of openness to experience, neither perceiver type reported a link between nonnative accent of the target and perceived openness to experience. In terms of the background, only Latino perceivers reported that targets with a Latino background were more open to experience compared to targets with a non-Latino background. This is a finding similar to the extraversion and agreeableness findings. Due to the fact that Latinos give are more sociable than White Americans (Ramírez-Esparza et al., 2009), Latinos may be associating personality dimensions that can potentially increase sociability to other Latinos.

In terms of skin color of the target, only White American perceivers reported that the targets with a dark skin color were more open to experience compared to the targets with a light skin color. However, this finding did not replicate across perceiver types.

GENERAL DISCUSSION

One of the cues that can signify stigma during communication is accent. Past research has shown that individuals speaking with nonnative accents face stereotypes, discrimination and stigma (Gluszek & Dovidio, 2010). Based on this work, the main goal of this dissertation was to understand how the presence or absence of nonnative accent determines stereotypes toward a nonnative accented speaker. We expected that the specific accent will elicit stereotypes regarding the specific culture that the nonnative accented speaker belongs to; therefore, altering perceptions toward the nonnative accented speaker. Furthermore, we tested the interaction nonnative accent would have with skin color and explored the effect of background on stereotypes.

In these set of studies, we exposed perceivers to Latino (low-status nonnative accent), French (high-status nonnative accent), and standard American accented targets with various backgrounds and light/dark skin colors. In Study 1, we exposed White American college students to Latino and American accented targets whereas in Study 2, we exposed White American college students to French and American accented targets. In Study 3, we exposed a Mechanical Turk sample that consists of White Americans, Latinos, and other ethnicity perceivers to Latino and American accented targets.

Stereotypes toward Nonnative Accented Speakers

This set of studies were based on the theories on stereotyping. Allport (1954) explains that stereotypes have the functions of making it possible to perceive the existence of ingroups in contrast to outgroups. Stereotypes are also theorized to have the functions of economizing on time and effort spent on information processing, making stereotypes particularly salient when

cognitive capacity is limited (Spears & Haslam, 1997; Govorun & Payne, 2006). Therefore, in the current set of studies, we expected to observe stereotyping toward nonnative accented speakers. Nonnative accent requires more cognitive resources to understand, and in a classroom setting, resources are limited. Therefore, we expected our experimental design to allow us to observe these stereotypes. We measured attitudes toward native and nonnative accented speakers to understand this. However, in contrast to previous work on stereotyping, in terms of attitudes, our results failed to show the hypothesized effects.

Stereotypes have also been suggested to have system justifying functions (Jost & Banaji, 1994; Jost, Banaji, & Nosek, 2004). Jost, Kivetz, Rubini, Guermandi, & Mosso, 2005). To justify the inequalities existing in the social system, previous work showed that high and low-status groups are perceived to have different but complementary characteristics. For example, whereas men are found to be more agentic, women are found to be more communal (Conway, Pizzamiglio, & Mount, 1996). Similarly, the stereotype content model suggests that groups of higher status are perceived as more competent and less warm; groups of lower status are perceived as less competent and more warm (Fiske, et al, 2002). Subjectively positive stereotypes on the warmth dimension are functionally consistent with unflattering stereotypes on the agency dimension in justifying and maintaining the system (Fiske et al., 2012).

With respect to these theories, we can expect professional attitudes to be more pronounced for speakers with a standard American accent whereas social attitudes to be more pronounced for speakers with a nonnative accent. Our results are consistent with these theories. We found a consistent positive effect of nonnative accent on social attitudes with our college student samples. In Study 1, we found that targets with a Latino accent were perceived more positively on social attitudes compared to the targets with a standard American accent. In other

words, contrary to our hypotheses, Latino accent served as a cue of sociability. Similarly, in Study 2, we found that participants reported more positive social attitudes toward the French target with a light skin color and a French accent compared to the American target with a dark skin color and a standard American accent. In other words, nonnative accent was a positive cue leading to more positive social attitudes. In light of the theories on the system justifying functions of stereotypes, we can argue that nonnative accented speakers are perceived as more warm. The more positive social attitudes may be a way to justify the unflattering negative stereotypes toward nonnative accented speakers (Fiske, et al., 2012). However, we failed to spot the lack of perceived competence such as negative professional attitudes.

Although participants did not report negative attitudes toward nonnative accented speakers, when the personality dimensions were explored, results supported the system justifying functions of stereotypes. A result we consistently found in Studies 1 and 2 was that standard American accented targets were perceived as more conscientious compared to nonnative accented targets. Similarly, White American perceivers in our studies indicated less intentions to take a class from a target with a nonnative accent compared to a target with a native accent. These results are in line with the stereotype content model. We can argue that while nonnative accented speakers are perceived as more social, they are not perceived as conscientious and perceivers did not want to interact with them professionally.

The finding that nonnative accented speakers were perceived as less conscientious can be used to understand the lower teaching evaluations nonnative accented individuals receive (Gill, 1994). For example, if a person is perceived to be not conscientious, that perception could lead to such lowered teaching evaluations. In the current set of studies, similarly, perceivers did not want to take a class from the nonnative accented speakers. In future research, it is important to

investigate this link directly. Furthermore, this finding was not replicated in Study 3 by our diverse Mechanical Turk sample. This may be explained by that the Mechanical Turk sample was older and more diverse in terms of background and socioeconomic status compared to the participant pool samples employed in Studies 1 and 2. This difference might show that as individuals get more exposure to others from diverse backgrounds, some of the negative effect of nonnative accent on perceived conscientiousness may dissipate. This needs to be tested in future work.

Similarly, in terms of background, we consistently found positive evaluations for targets from Latino backgrounds. In Study 1, we found that the Latino target with a light skin color and a Latino accent was perceived as more agreeable and emotionally stable compared to the non-Latino target with a dark skin color and a standard American accent. However, when it came to behavioral intentions, the effects were mixed. For example, in Study 2, participants reported decreased intentions to take a class from targets with a French background. Therefore, regarding background, similar to nonnative accent, we can argue that we found support for the system justifying functions of stereotypes. However, the effects were not consistent.

The Effects of Skin Color

We aimed to understand whether dark skin would be a cue leading to stereotyping. Previous work on stereotyping showed that African-Americans were described less favorably than White-Americans (Jackson, Lewandowski, Ingram, & Hodge, 1997). Furthermore, previous work showed that race could be an important indicator of deciding whether someone belongs to the ingroup or not in an implicit association test (Devos & Ma, 2013). However, in the current set of studies, we could not find support for these findings. In terms of skin color, our results do not suggest a negative attitude toward dark skin color. However, in Study 1, we showed that

when evaluating Latino targets, light skin color leads to more positive professional attitude ratings, whereas for non-Latino targets, dark skin leads to more positive professional attitude ratings. However, this finding was not replicated in the other studies. In other words, we did not observe an additive model of stereotypes.

A similar interaction was observed between background and skin color. In Study 3, White American perceivers reported higher likelihood of taking a future class from and having lunch with the target with the light skin color if the target was Latino. However, White American perceivers reported higher likelihood of taking a future class or having lunch from the target with the dark skin color if the target was non-Latino. Furthermore, White American perceivers reported higher likelihood of taking a future class from the non-Latino target with a dark skin color and a standard American accent compared to the Latino target with a light skin color and a Latino accent.

These interactions between skin color and background can be explained in light of the optimal distinctiveness theory (Brewer, 2003). We can argue that White American perceivers developed positive professional attitudes the most toward the ones that differ from them only on one domain. For example, a Latino background by itself leads to a positive evaluation only if the skin color of the target is similar. Similarly, a dark skin color by itself leads to a positive evaluation only if it is not paired with a Latino accent. The targets that were different only on one dimension from themselves elicited the most interest in White American perceivers. However, it is important to note that in our study, we only employed two shades of skin color that was not too light or too deep. In future research, when investigating accent from an intersectional perspective, it may be important to see the interaction of nonnative accent with lighter and deeper skin colors.

The Effects of Different Types of Accents

In the current set of studies, we aimed to understand whether a high-status (French) accent would elicit different responses from the participants than a low-status (Latino) accent. Previous work is limited in this regard. Yet, some previous work shows that the type of nonnative accent determines the perceptions. For example, in the U.S., German accented eyewitnesses were perceived as more credible compared to the Lebanese accented eyewitnesses (Frumkin, 2007). However, in the current set of studies, because we failed to find stereotypical attitudes toward nonnative accented speakers, we could not test this difference. However, we consistently found that both Latino and French-accented speakers were perceived as less conscientious (Study 1 and 2) and perceivers did not want to take a future class with them (all studies). Therefore, we can argue that consistent with previous work, nonnative accent is a negative cue that elicit stereotyping, even if it is a high-status accent. Based on this finding, we can argue that nonnative accent is perceived negatively primarily because it signifies membership to an outgroup. In other words, both low and high-status nonnative accents are negatively perceived because they both cue outgroup membership. An alternative explanation can be that taking a class from an accented speaker might be depleting cognitive resources.

The Effects of Perceivers' Background

In the current set of studies, we also aimed to understand the effect of the perceivers' background on stereotyping. Based on previous work, we explored whether Latino or other ethnicity perceivers would have enhanced or decreased stereotypes toward nonnative accented speakers. Based on the literature on stereotype threat, we can expect Latino or other ethnicity perceivers to have more pronounced stereotypes toward nonnative accented speakers. One type of stereotype threat individuals can experience is own-reputation threat, which is the fear that

one's behavior will confirm in the minds of outgroup members, that the negative stereotypes held about one's group are true of one's self (Shapiro & Neuberg, 2007). For example, Latino and other ethnicity perceivers may experience stereotype threat after hearing nonnative accented speakers. If this is the case, they would report more pronounced stereotypes. Our results failed to support this. Yet, we did not measure whether all Latino and other ethnicity perceivers have nonnative accents themselves and the strength of the accent.

The opposing theory was the rejection-identification model (Branscombe, Schmitt, & Harvey, 1999). According to this model, members of minority groups increase group identification in response to perceived prejudice and discrimination from the outside. According to this model, we would expect Latino and other ethnicity perceivers to identify with the nonnative accented speakers; therefore, reporting more positive evaluations compared to their White counterparts.

We cannot argue that one theory overrides the other by the current studies' results. However, we found partial support for the rejection-identification model. In Study 3, we did not find negative perceptions toward nonnative accented speakers from Latino or other ethnicity perceivers. While White American perceivers reported decreased interest in taking a future class from the nonnative accented speakers, these effects were not observed for Latino or other ethnicity perceivers. In other words, participants who are from diverse backgrounds did not report decreased intentions to interact with nonnative accented targets. Future research needs to investigate whether Latino or other ethnicity perceivers identified more with the nonnative accented targets.

Because we did not measure whether the perceivers were actually nonnative or their level of nonnative accent, this difference may also be due to the fact that Latino or nonnative accented

perceivers have more exposure to various nonnative or local accents on a daily basis. Therefore, while deciding whether they want to take a class from an individual or have lunch with an individual, they might not focus on whether they had an accent or not. Furthermore, it may be important to investigate in future work mediators in understanding why individuals from diverse background demonstrate intentions to interact with nonnative accented speakers. One possible mediator could be the ease of understanding the speaker. It may be possible that exposure to accented speech makes it easier to understand accented speech; therefore, eliminating the reasons to refrain from interacting with the nonnative accented speakers.

Another interesting finding was related to the targets' Latino background. We found that in Study 3, Latino perceivers perceived targets with Latino backgrounds more positively on overall attitudes compared to non-Latino targets. Furthermore, both White American and Latino perceivers demonstrated more positive social attitudes toward targets with a Latino background compared to the targets with a non-Latino background. Furthermore, Latino perceivers evaluated Latino targets as more extraverted, agreeable, and open to experience. In a more nuanced way, other ethnicity perceivers evaluated the Latino-accented targets as more agreeable compared to their standard American accented counterparts.

Because we failed to find any negative perceptions toward Latino background targets in Study 3, these perceptions can be a part of Latino perceivers' system justifying beliefs or these perceptions can be evaluated at face value. Latino perceivers may simply be identifying with an ingroup member. These personality dimensions can also potentially increase sociability. Because Latinos are more sociable than White Americans (Ramírez-Esparza, Mehl, Álvarez-Bermúdez, Pennebaker, 2009), they may be evaluated higher on these dimensions by other Latinos.

Limitations and Future Research

An important limitation of the current set of studies is that our effect sizes were small. Especially considering the many number of statistical tests we carried out, this points to the possibility of having Type I error in our results. Therefore, the results and implications of these studies need to be taken with precaution. Before making applied implications, it is important to replicate these results.

A related limitation of our design was that our targets were already depicted as successful individuals and they had intelligible accents. We also provided information on the targets' previous successful teaching evaluations. Furthermore, the recordings were specifically piloted to be at least moderately intelligible and understandable, so that we can solely focus on the stereotypes toward accented speech. Furthermore, the light and dark skin colors of the targets were not too fair or too deep. In future research, it is crucial to investigate perceptions of more stereotypically negative members of these groups.

Another related limitation is that our targets may be from groups that are not severely negatively stereotyped. In future research, it is important to investigate perceptions toward other cultural groups. For example, in the current political environment, Middle Eastern immigrants may be negatively perceived in the U.S. It is important for future research to investigate how individuals with Middle Eastern accents are perceived. Furthermore, in future work, it is important to investigate nonnative accent in conjunction with other cues such as clothing, social class, and religion cues. Given the small size of our effects, it is possible that nonnative accent comes in play when these other cues are present, or these cues drive stereotyping toward targets rather than nonnative accent. Moreover, the effect of nonnative accent need to also be tested with

perceptions toward ambiguous target. For example, if minimal information is given about a target, nonnative accent could play a larger role in shaping perceptions toward the target.

Our study is limited in explaining which aspect of nonnative accent leads to stigma or stereotyping. Future research needs to discern between possible explanations. The first possibility is that the category of the accent leads to a stigmatized category. For example, knowing that a target has a French accent leads to perceiving that target more negatively. The second possibility is that hearing a nonnative accent is a cue for showing that the target is an outgroup member, which leads to stereotyping due to outgroup derogation. For example, even if the accent is ambiguous, because it is a nonnative accent, it would lead to stereotyping, unlike a local accent. The third possibility is that hearing a nonnative accent, and being able to correctly locate the source of the accent, is a cue for membership to a specific culture, which makes stereotypes about the specific culture more salient. If this is the case, a local or nonnative accent could both lead to stereotyping if the culture the accent signifies has a negative connotation. The third possibility is that nonnative accent is perceived negatively purely because it is depleting cognitive resources of the listener, even if it is an intelligible accent. For example, in settings where cognitive resources are limited, nonnative accent may be perceived negatively; whereas in other settings, it is not.

Another limitation is that the current research does not address the boundary conditions of when nonnative accent is a negative cue. In other words, conditions under nonnative accent can be a positive cue were not investigated. There are two factors that needs to be addressed in future work regarding when nonnative accent can be positive: First, are any nonnative accents positive? For example, if the source of the accent is located, does a high-status nonnative accent lead to positive perceptions toward an ambiguous target? Second, are any environments more

welcoming and appreciative of nonnative accent? For example, academic settings, or art societies can value a nonnative accented target more than a native accented target. In conditions where diversity brings value, such as how a diverse background would bring value to an artist, it is possible that nonnative accent will be a positive cue. Similarly, a multinational company can value a nonnative accented target more than a native accented target, because the nonnative accent can cue sensitivity to various cultures. Factors that make an environment more welcoming of nonnative accent need to be investigated in future work.

There were also limitations regarding the design of the studies. For example, the Latino accent employed in the study as the nonnative accent manipulation was Puerto Rican accent. We employed this accent as a proxy of nonnative accent because in Connecticut where the laboratory experiments took place, the most common Latino populations are from Puerto Rico. Therefore, if we used, for example, a Mexican accent, it would be risky in the sense that our participants could not locate the accent. However, it is a limitation of the study that we used a local accent as a proxy for a nonnative accent. In future research, it is important to examine perceptions toward actual nonnative accents.

There were also issues with reliabilities of the personality scales (extraversion subscale). In future work, it is important to employ more reliable scales. Furthermore, we employed self-reports in our studies. It is possible that the effects will be emphasized in actual interactions. Therefore, future research should focus on actual interactions with diverse nonnative speakers. Furthermore, focusing on open ended depictions of the speakers can shed light on perceivers' actual perceptions of the speakers. Self-reports may be limited in detecting these stereotypes.

In our studies, the negative perceptions toward nonnative accented speakers did not replicate with the more diverse samples. This difference may show that as individuals get more

exposure to others from diverse backgrounds, some of the negative effect of nonnative accent on perceived conscientiousness dissipate. In future research, this link needs to be tested specifically. If perceivers are exposed to nonnative accented speakers over the course of an experiment, their attitude changes can be explored.

In terms of skin color, our results did not suggest negative stereotypes toward dark skin, yet suggested an interaction between dark skin and background. However, our study design employed explicit rather than implicit attitudes; and behavioral intentions rather than behaviors, which may partially explain why we failed to replicate the findings in previous work. In future research, it is important to carry out behavioral interactions in the laboratory.

We failed to find negative attitudes toward nonnative accented speakers. We also found that both low-status and high-status nonnative accents were perceived similarly. However, we did not directly compare perceptions toward these speakers. In future work, these comparisons may be important.

While White American perceivers reported negative perceptions toward nonnative accented speakers, Latino and other ethnicity perceivers did not report these negative perceptions. However, an important limitation is that we did not focus on whether these perceivers had native or nonnative accents themselves, the intensity of their accents, or how much their accents affected them. We used ethnicity as a way to increase the likelihood of having an accent that deviates from the standard American accent. If a Latino or other ethnicity perceiver have a strong Latino accent and is a native speaker, such a perceiver may or may not feel threatened about their own accent. Therefore, future research needs to differentiate these possible scenarios. In a similar vein, it is important in future work to investigate the difference

between nonnative and local accents and how they lead to different perceptions of nonnative accented speakers.

Future work needs to investigate mechanisms leading the more robust effects obtained in the current investigation. For example, regarding the different perceptions by White American and other perceivers, we can speculate that there is a rejection-identification mechanism. However, the actual mechanism needs to be investigated. Possible other moderators that can be investigated can be sympathy with the speaker, ingroup identification, and ease of understanding the speaker. It is possible that Latino and other ethnicity perceivers are exposed to nonnative accents more commonly; and therefore, they have a better time understanding the nonnative accented speaker. Therefore, the specific mechanism needs to be investigated in future research.

Finally, the experiences of nonnative accented speakers needs to be further explored in future work. Previous work showed that nonnative accented speakers experience communication difficulties and decreased belonging (Gluszek, & Dovidio, 2010). However, the evidence on their experiences is limited. Therefore, experiences of nonnative or local accented individuals need to be investigated in future work. It is possible that targets will report experiences of stigma despite the fact that perceivers do not report consistent negative attitudes in our studies.

Effects of the Control Variables

In Study 1 and Study 2, we could not observe consistent effects of the control variables. However, this could have been due to the restricted range of these variables in the participant pool data. In Study 3, the control variables had a wider range, and some consistent effects have been observed. First, females reported more positive evaluations and higher likelihood of interactions. Possible gender effects need to be investigated in future work.

Second, perceivers who were identified with math reported more positive evaluations and higher likelihood of interactions. For perceivers who are identified with math, such interactions would be attractive. However, math identification can be a potential moderator in this research. For example, it is possible that for individuals identified with math, the stakes are higher for having a nonnative accented TA; however, social interactions can be afforded. Such research questions need to be addressed in future analyses.

Third, political identification was a consistent predictor of positive evaluations and the higher likelihood of interactions. Conservative perceivers reported less positive evaluations and decreased likelihood to interact with the targets. This is a finding that leads to interesting future research directions. For example, are conservatives not interested in new interactions? Or are conservatives not interested in interacting with outgroup member? It is clear that in future analyses and research, political attitudes need to be investigated as a moderator in these effects.

The results suggest that in future work, gender, identification with math, and political attitudes need to be measured when studying accents; yet it might not be crucial to measure for all of the other control variables we employed in the current studies. However, it should also be noted that the effects of these covariates were small similar to our main effects. Therefore, the impact of these variables need to be tested further before deriving applied implications from these results.

Conclusions and Implications

The current set of studies show that although explicit attitudes may be positive, perceived personality and intentions to interact may be negative when evaluating targets. This is a theoretical and practical concern to have in future work. Previous research shows that explicit attitudes may not be good predictors of intergroup behavior (Hofmann, Gschwender, Castelli, & Schmitt, 2008). The current set of studies also show that attitudes may be positive while

behavioral intentions are not. This may stem from the system justifying perceptions of the perceivers. The perceivers may be using their positive perceptions as a way to balance their negative perceptions and behavioral intentions.

This work also shows that while White Americans demonstrate decreased intentions to interact with nonnative accented speakers, Latino and other ethnicity perceivers did not show the same effect. This may be due to exposure to accented speech. This is in line with previous findings on intergroup contact and prejudice. Specifically, Allport (1954) suggested that contact between groups will result in reduced prejudice. Furthermore, Pettigrew and Tropp (2006) also supported in a meta-analysis that contact between groups result in reduced prejudice. In a similar vein, the current set of studies show that perceivers who potentially had more exposure to nonnative accented speech had more positive perceptions of nonnative accented speakers.

Markodragojevic, Danamastro, Howardgiles, and Alexandersink (2016) investigated the representation of accented speakers in the media. The authors gathered samples of programs from primetime television over a ten-week period. Each character that had more than two lines was coded for their role (major, minor, or background characters), attributes (e.g. appearing intelligent, charismatic, or likeable) and their accent (standard-American, non-standard American, foreign-Anglo, and foreign-other). Results demonstrated an under-representation of characters with non-standard American and foreign-other accents. Furthermore, when these characters appear, they are portrayed as having less status related characteristics and less physical appearance than their counterparts with standard-American and foreign-Anglo accents. In other words, if an individual is not surrounded by nonnative accented speakers on a daily basis, it is not likely for them to be exposed to nonnative accented speakers in the media. An

important implication; therefore, can be that to increase the nonnative accented characters in the media.

References

- Allport, G. W. (1954). *The nature of prejudice*. Garden City, NY, USA: Doubleday Anchor Books.
- Ambady, N., & Rosenthal, R. (1993). Half a minute: Predicting teacher evaluations from thin slices of nonverbal behavior and physical attractiveness. *Journal of Personality and Social Psychology*, 64 (3), 431-441.
- Branscombe, N. R., Schmitt, M. T., & Harvey, R. D. (1999). Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality And Social Psychology*, 77 (1), 135-149.
- Brewer, M. B. (1999). The psychology of prejudice: Ingroup love or outgroup hate? *Journal of Social Issues*, 55 (3), 429-444.
- Brewer, M. B. (2003). Optimal distinctiveness, social identity, and the self. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 480-491). New York, NY: Guilford Press.
- Christopher, A. N., Zabel, K. L., Jones, J. R., & Marek, P. (2008). Protestant ethic ideology: Its multifaceted relationships with just world beliefs, social dominance orientation, and right-wing authoritarianism. *Personality and Individual Differences*, 45, 473-477.
- Conway, M., Pizzamiglio, M. T., and Mount, L. (1996). Status, communality, and agency: Implications for stereotypes of gender and other groups. *Journal of Personality and Social Psychology*, 71, 25-38.
- Devos, T., & Ma, D. S. (2013). How 'American' is Barack Obama? The role of national identity in a historic bid for the White House. *Journal of Applied Social Psychology*, 43 (1), 214-226.

- Díaz-Loving, R., & Draguns, J. G. (1999). Culture, meaning, and personality in Mexico and in the United States. In Y.- T. Lee, C. R. McCauley, & J. G. Draguns (Eds.), *Personality and person perception across cultures* (pp. 103-126). Mahwah, NJ: Lawrence Erlbaum.
- Druckerman, P. (2013). *Bringing Up Bébé: One American Mother Discovers the Wisdom of French Parenting*. New York: Penguin Books.
- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, 82 (6), 878–902.
- Frumkin, L. (2007). Influences of accent and ethnic background on perceptions of eyewitness testimony. *Psychology, Crime & Law*, 13 (3), 317-331.
- Gill, M. M. (1994). Accent and stereotypes: Their effect on perceptions of teachers and lecture comprehension. *Journal of Applied Communication Research*, 22, 384-361.
- Gluszek, A., & Dovidio, J. F. (2010). Speaking with a nonnative accent: Perceptions of bias, communication difficulties, and belonging in the United States. *Journal of Language and Social Psychology*, 29 (2), 224-234.
- Gluszek, A., & Dovidio, J. F. (2010). The way they speak: A social psychological perspective on the stigma of nonnative accents in communication. *Personality and Social Psychology Review*, 14 (2), 214-237.
- Goffman, Erving. (1963) *Stigma; notes on the management of spoiled identity*. Englewood Cliffs: N.J., Prentice-Hall

- Gonzales, P. M., Blanton, H., & Williams, K. J. (2002). The effects of stereotype threat and double-minority status on the test performance of Latino women. *Personality and Social Psychology Bulletin*, 28 (5), 659-670.
- Govorun, O. & Payne, B. K. (2006). Ego-depletion and Prejudice: Separating automatic and controlled components. *Social Cognition*, 24 (2), 111-136.
- Guiliano, M. (2005). *French Women Don't Get Fat: The Secret of Eating for Pleasure*. New York: Random House, Inc.
- Hammond, A. (2014). Why are some accents more attractive? Retrieved from:
<http://blog.esl-languages.com/blog/esl/foreign-accents-attractive/>
- Hofmann, W., Gschwender, T., Castelli, L. & Schmitt, M. (2008). Implicit and explicit attitudes and interracial interaction: The moderating role of situationally available control resources. *Group Processes and Intergroup Relations*, 11 (1), 69-87.
- Huff, C. & Tingley, D. (2015). "Who are these people?" Evaluating the demographic characteristics and political preferences of MTurk survey respondents. *Research and Politics*, 2 (3), 1-12.
- Ikizer, E. G. & Blanton, H. (2016). Media coverage of "wise" interventions can reduce concern for the disadvantaged. *Journal of Experimental Psychology: Applied*, 22 (2), 135-147.
- Jackson, L. A., Lewandowski, D. A., Ingram, J. M., & Hodge, C. N. (1997). Group stereotypes: Content, gender specificity, and affect associated with typical group members. *Journal of Social Behavior & Personality*, 12 (2), 381-396.
- Jost, J. T., and Banaji, M. (1994). The role of stereotyping in system justification and the production of false consciousness. *British Journal of Social Psychology*, 22, 1-27.

- Jost, J. T., Banaji, M. R., and Nosek, B. A. (2004). A decade of system justification theory: Accumulated Evidence of Conscious and Unconscious Bolstering of the Status Quo. *Political Psychology*, 25 (6), 881-919.
- Jost, T. J., Kivetz, Y., Rubini, M., Guermandi, G., & Mosso, C. (2005). System-justifying functions of complementary regional and ethnic stereotypes: Cross-national evidence. *Social Justice Research*, 18 (3), 305-333.
- Kinzler, K. D., Shutts, K., Dejesus, J., & Spelke, E. S. (2009). Accent trumps race in guiding children's social preferences. *Social Cognition*, 27 (4), 623-634.
- Kuhn, M. & McPartland, T. S. (1954). An empirical investigation of self-attitudes. *American Sociological Review*, 19, 68-76.
- Lev-Ari, S., & Keysar, B. (2010). Why don't we believe non-native speakers? The influence of accent on credibility. *Journal of Experimental Social Psychology*, 46 (6), 1093-1096.
- Pettigrew, T. F. & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90 (5), 751-783.
- Ramírez-Esparza, N., Chung, C. K., Sierra-Otero, G. & Pennebaker, J. W. (2012). Cross-cultural constructions of self-schemas: Americans and Mexicans. *Journal of Cross-Cultural Psychology*, 43 (2), 233-250.
- Ramírez-Esparza, N., Mehl, M. R., Álvarez-Bermúdez, J., & Pennebaker, J. W. (2009). Are Mexicans more or less sociable than Americans? Insights from a naturalistic observation study. *Journal of Research in Personality*, 43, 1-7.

- Ryder, A. G., Alden, L., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional?: A head-to-head comparison in the prediction of demographics, personality, self-identity, and adjustment. *Journal of Personality and Social Psychology*, 79, 49-65.
- Schmitt, M. T., Branscombe, N. R., Kobrynowicz, D., & Owen, S. (2002). Perceiving discrimination against one's gender group has different implications for well-being in women and men. *Personality and Social Psychology Bulletin*, 28 (2), 197-210.
- Schmitt, M. T., Spears, R., & Branscombe, N. R. (2003). Constructing a minority group identity out of shared rejection: The case of international students. *European Journal of Social Psychology*, 33 (1), 1-12.
- Schmitt, M. T. & Branscombe, N. R. (2002) The meaning and consequences of perceived discrimination in disadvantaged and privileged social groups, *European Review of Social Psychology*, 12 (1), 167-199.
- Shapiro, J. R. (2011). From stereotype threat to stereotype threats. In Inzlicht, M. & Schmader, T. (Eds.), *Stereotype Threat: Theory, Process, and Application* (71-88). New York: Oxford University Press, Inc.
- Shapiro, J. R., & Neuberg, S. L. (2007). From stereotype threat to stereotype threats: Implications of a multi-threat framework for causes, moderators, mediators, consequences, and interventions. *Personality and Social Psychology Review*, 11 (2), 107-130.
- Spears, R., & Haslam, S. A. (1997). Stereotyping and the burden of cognitive load. In R. Spears, P. J. Oakes, N. Ellemers, S. A. Haslam, R. Spears, P. J. Oakes, ... S. A. Haslam (Eds.) , *The social psychology of stereotyping and group life* (pp. 171-207). Malden: Blackwell Publishing.

- Tiedens, L. Z., Ellsworth, P. C., Mesquita, B. 2000. Sentimental stereotypes: Emotional expectations for high- and low-status group members. *Personality and Social Psychology Bulletin*, 26 (5), 560-575.
- Triandis, H. C., Marín, G., Lisansky, J., & Betancourt, H. (1984). Simpatía as a cultural script of Hispanics. *Journal of Personality and Social Psychology*, 47, 1363-1375.
- Turner, J. C., & Tajfel, H. (1986). The social identity theory of intergroup behavior. *Psychology of intergroup relations*, 5, 7-24.
- Wood, D., Harms, P. D., & Vazire, S. (2010). Perceiver effects as projective tests: What your perceptions of others say about you. *Journal of Personality and Social Psychology*, 99 (1), 174-190.

Footnote


¹ Data were analyzed also using orthogonal contrast coding. Results were equivalent. Therefore, only one set of analyses were included in this dissertation.

Appendix A

LinkedIn Profiles

Pictures of speaker was created using FaceResearch.org, all via averaging three pictures. Afterwards, dark skin and light skin versions of the picture were created using image altering software. Below are examples of LinkedIn profiles of non-Latino American targets.

Light skin version




Daniel Walker 1s
Teaching Assistant at University of Connecticut
Storrs Mansfield, Connecticut | Higher Education
Education University of Connecticut

Send a message


connector


<https://www.linkedin.com/in/daniel-walker-a2730912b> Contact info

Background


 Experience

Teaching Assistant
University of Connecticut




 Education


University of Connecticut
Doctor of Philosophy (PhD), Mathematics, 3.94
2015 – 2020



Clark College
Bachelor's degree, Mathematics, 3.72
2011 – 2015



Dark skin version



Daniel Walker

1

Teaching Assistant at University of Connecticut
Storrs Mansfield, Connecticut | Higher Education

Education University of Connecticut


Send a message ▾

connectic


in https://www.linkedin.com/in/daniel-walker-a2730912b


Contact in

Background


 Experience

Teaching Assistant
University of Connecticut




 Education

University of Connecticut
Doctor of Philosophy (PhD), Mathematics, 3.94
2015 – 2020



Clark College
Bachelor's degree, Mathematics, 3.72
2011 – 2015



Appendix B**Prescreening questions for the participant pool (Study 1 and Study 2)**

(these questions were asked in the main study in Study 3)

Demographics & accent:

1. Indicate which culture you most identify with.
 - a. American
 - b. Other
2. Are you bilingual (that is, you speak two or more languages)?
 - a. Yes, please specify the languages you speak
 - b. No
3. Are you bicultural (that is, you identify yourself with more than one culture, for example you identify as a Mexican American or a Chinese American)?
 - a. Yes, please specify the cultures you identify with
 - b. No

Political attitudes:

The following questions are about your political attitudes.

1. To what extent do you view yourself as Democrat/ Republican?

Extremely	Quite	slightly	Neither	slightly	quite	extremely
democrat	democrat	democrat		republican	republican	republican

2. In terms of social policies, where do you place yourself on this scale?

Extremely	Quite	slightly	Neither	slightly	quite	extremely
liberal	liberal	liberal		conservative	conservative	conservative

3. In terms of economic policies, where do you place yourself on this scale?

Extremely	Quite	slightly	Neither	slightly	quite	extremely
liberal	liberal	liberal		conservative	conservative	conservative

4. When it comes to politics in general, where do you place yourself on this scale?

Extremely	Quite	slightly	Neither	slightly	quite	extremely
liberal	liberal	liberal		conservative	conservative	conservative

Math identification:

1. I am good at math

1	2	3	4	5	6	7	8	9	10	11
Strongly disagree										Strongly agree

2. It is important to me that I am good at math.

1	2	3	4	5	6	7	8	9	10	11
Strongly disagree										Strongly agree

Identification with being American (solidarity and satisfaction subscales):

Please indicate the extent to which you agree with the following statements.

1. I feel a bond with Americans.

1	2	3	4	5
Strongly disagree		Somewhat disagree	Neutral	Somewhat agree
				Strongly agree

2. I feel solidarity with Americans.

Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
----------------------	----------------------	---------	-------------------	-------------------

3. I feel committed to Americans.

Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
----------------------	----------------------	---------	-------------------	-------------------

4. I am glad to be American.

Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
----------------------	----------------------	---------	-------------------	-------------------

5. I think that Americans have a lot to be proud of.

Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
----------------------	----------------------	---------	-------------------	-------------------

6. It is pleasant to be American.

Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
----------------------	----------------------	---------	-------------------	-------------------

7. Being American gives me a good feeling.

Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
----------------------	----------------------	---------	-------------------	-------------------

Appendix C

Survey questions

Attitudes:

Please rate the TA on the following traits.

1	2	3	4	5	6	7
<i>Not credible</i>				<i>Credible</i>		

1	2	3	4	5	6	7
<i>Not smart</i>				<i>Smart</i>		

1	2	3	4	5	6	7
<i>Not hardworking</i>				<i>Hardworking</i>		

1	2	3	4	5	6	7
<i>Not intelligent</i>				<i>Intelligent</i>		

1	2	3	4	5	6	7
<i>Not interesting</i>				<i>Interesting</i>		

1	2	3	4	5	6	7
<i>Not friendly</i>				<i>Friendly</i>		

1	2	3	4	5	6	7
<i>Not attractive</i>				<i>Attractive</i>		

1	2	3	4	5	6	7
<i>Not social</i>				<i>Social</i>		

Extra dimensions: accepting, active, anxious (this dimension was reverse scored), attentive, competent, confident, dominant, empathic, enthusiastic, honest, likable, optimistic, professional, supportive, and warm. (Ambady & Rosenthal, 1993)

1	2	3	4	5	6	7
<i>Not accepting</i>				<i>Accepting</i>		

1	2	3	4	5	6	7
<i>Not active</i>				<i>Active</i>		

1	2	3	4	5	6	7
<i>Not anxious</i>				<i>Anxious</i>		

1	2	3	4	5	6	7
<i>Not attentive</i>				<i>Attentive</i>		

1	2	3	4	5	6	7
<i>Not competent</i>				<i>Competent</i>		

1	2	3	4	5	6	7
<i>Not confident</i>				<i>Confident</i>		

1	2	3	4	5	6	7
<i>Not dominant</i>				<i>Dominant</i>		

1	2	3	4	5	6	7
<i>Not empathic</i>				<i>Empathic</i>		

1	2	3	4	5	6	7
<i>Not enthusiastic</i>				<i>Enthusiastic</i>		

1	2	3	4	5	6	7
<i>Not honest</i>				<i>Honest</i>		

1	2	3	4	5	6	7
<i>Not likable</i>				<i>Likable</i>		

1	2	3	4	5	6	7
<i>Not optimistic</i>				<i>Optimistic</i>		

1	2	3	4	5	6	7
<i>Not professional</i>				<i>Professional</i>		

1	2	3	4	5	6	7
<i>Not supportive</i>				<i>Supportive</i>		

1	2	3	4	5	6	7
<i>Not warm</i>				<i>Warm</i>		

Behavioral intentions and general questions:

Please indicate the extent to which they agree with the following statements:

1. In a future class, I would like to take this TA's class.

1	2	3	4	5	6	7
Not at all				Extremely		

2. How easy do you think this course is?

1 2 3 4 5 6 7

Not at all

Extremely

3. How informative do you think this course is?

1 2 3 4 5 6 7

Not at all

Extremely

4. How much do you like the TA?

1 2 3 4 5 6 7

Not at all

Extremely

5. If this person was not your TA, how much would you like to have lunch with them?

1 2 3 4 5 6 7

Not at all

Extremely

6. Where would you place the TA on the following spectrum for social class?

- a. Working class
- b. Lower middle class
- c. Middle class
- d. Upper middle class
- e. Upper class

Perceived acculturation:

1. How American do you think is this TAis?

1 2 3 4 5 6 7

Not Extremely
American at all American

2. How long do you think (in years) they have been living in America? _____years

Stereotype content:

In this section, we are not interested in your personal beliefs, but in how you think Latino TAs are viewed by others.

Competence scale:

1. As viewed by society, how competent are members of this group?

1	2	3	4	5
Not				Extremely
at all				

2. As viewed by society, how confident are members of this group?

1	2	3	4	5
Not				Extremely
at all				

3. As viewed by society, how independent are members of this group?

1	2	3	4	5
Not				Extremely
at all				

4. As viewed by society, how competitive are members of this group?

1	2	3	4	5
Not				Extremely
at all				

5. As viewed by society, how intelligent are members of this group?

1	2	3	4	5
Not				Extremely
at all				

Warmth scale:

1. As viewed by society, how tolerant are members of this group?

1	2	3	4	5
Not				Extremely
at all				

2. As viewed by society, how warm are members of this group?

1	2	3	4	5
Not				Extremely
at all				

3. As viewed by society, how good natured are members of this group?

1	2	3	4	5
Not				Extremely
at all				

Status scale:

1	2	3	4	5
Not				Extremely
at all				

1	2	3	4	5
Not				Extremely
at all				

1	2	3	4	5
Not				Extremely
at all				

Competition scale:

[illegible]

1	2	3	4	5
Not				Extremely
at all				

3. Resources that go to members of this group are likely to take away from the resources of people like me.

1	2	3	4	5
Not				Extremely
at all				

Stereotype content (adapted for personal views):

In this section, we are interested in your personal beliefs about Latino TAs.

Competence scale:

6. How competent do you think are members of this group?

1	2	3	4	5
Not				Extremely
at all				

7. How confident do you think are members of this group?

1	2	3	4	5
Not				Extremely
at all				

8. How independent do you think are members of this group?

1	2	3	4	5
Not				Extremely
at all				

9. How competitive do you think are members of this group?

1	2	3	4	5
Not				Extremely
at all				

10. How intelligent do you think are members of this group?

1	2	3	4	5
Not				Extremely
at all				

Warmth scale:

5. How tolerant do you think are members of this group?

1	2	3	4	5
Not				Extremely
at all				

6. How warm do you think are members of this group?

1	2	3	4	5
Not				Extremely
at all				

7. How good natured do you think are members of this group?

1	2	3	4	5
---	---	---	---	---

- Not
at all
- Extremely
8. How sincere do you think are members of this group?
- 1 2 3 4 5
- Not
at all
- Extremely

Status scale:

4. How prestigious do you find the jobs achieved by members of this group?
- 1 2 3 4 5
- Not
at all
- Extremely
5. How economically successful do you find members of this group been?
- 1 2 3 4 5
- Not
at all
- Extremely
6. How well educated do you think are members of this group?
- 1 2 3 4 5
- Not
at all
- Extremely

Competition scale:

4. If members of this group get special breaks (such as preference in hiring decisions), I think this will make things more difficult for people like me.
- 1 2 3 4 5
- Not
at all
- Extremely
5. I think that the more power members of this group have, the less power people like me will have.
- 1 2 3 4 5
- Not
at all
- Extremely
6. I think that resources that go to members of this group will take away from the resources of people like me.
- 1 2 3 4 5
- Not
at all
- Extremely

Identification with being American (centrality, individual self-stereotyping, and in-group homogeneity subscales):

Please indicate the extent to which you agree with the following statements.

1. I often think about the fact that I am American.

1	2	3	4	5
Strongly disagree		Somewhat disagree	Neutral	Somewhat agree
				Strongly agree

2. The fact that I am American is an important part of my identity.

1	2	3	4	5
Strongly disagree		Somewhat disagree	Neutral	Somewhat agree
				Strongly agree

3. Being American is an important part of how I see myself.

1	2	3	4	5
Strongly disagree		Somewhat disagree	Neutral	Somewhat agree
				Strongly agree

4. I have a lot in common with the average American person.

1	2	3	4	5
Strongly disagree		Somewhat disagree	Neutral	Somewhat agree
				Strongly agree

5. I am similar to the average American person.

1	2	3	4	5
Strongly disagree		Somewhat disagree	Neutral	Somewhat agree
				Strongly agree

6. American people have a lot in common with each other.

1	2	3	4	5
Strongly disagree		Somewhat disagree	Neutral	Somewhat agree
				Strongly agree

7. American people are very similar to each other.

1	2	3	4	5	
Strongly disagree		Somewhat disagree	Neutral	Somewhat agree	Strongly agree

Open-ended personality descriptions:

In this part of the survey, you will be making a guess about the TA's personality. Think of yourself taking this TA's class. Imagine you met with this TA outside at a coffee shop. What would you think of them? What would be your experience like? Use the twenty statements below to describe the kind of person you believe the TA is.

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

He is...

Personality ratings:

How do you see the TA in general?

I see this TA as someone who is...

Outgoing/extraverted

1	2	3	4	5	6	7
Not at all					Extremely	

Enthusiastic/excited

Bold/assertive

Happy/joyful

Loud/noisy

Energetic/active

Funny/amusing

Brave/fearless

Bashful/shy

Kind-hearted/caring

Thankful/grateful

Affectionate/passionate

Courteous/polite

Truthful/honest

Cheerful/good-humored

Supportive/encouraging

Short-tempered/impatient

Unsympathetic/unfriendly

Angry/hostile

Conceited/egotistical

Cruel/abusive

Insulting/offensive

Controlling/dominant

Organized/efficient

Dependable/reliable

Level-headed/sensible
Accomplished/successful
Competent/capable
Messy/sloppy
Unreliable/undependable
Childish/immature
Awkward/clumsy
Calm/relaxed
Confident/self-assured
Satisfied/secure
Tense/nervous
Ashamed/guilt-prone
Unstable/disturbed
Insecure/unsure
Sad/unhappy
Crabby/grouchy
Lonely/lonesome
Creative/artistic
Intelligent/smart
Complex/deep
Skilled/talented
Traditional/conventional
Narrow-minded/close-minded
Prominent/well-known
Well-liked/likeable
Great/wonderful
Weird/strange
Attractive/good-looking
Annoying/aggravating
Bad/immoral

Dumb/stupid

Extraordinary/exceptional

Stylish/fashionable

Demographics:

2. Please indicate your gender:
 - a. Female
 - b. Male
 - c. Other
3. Please indicate your age:
4. If financially independent, where would you place yourself on the following spectrum for social class? (if you are not financially independent, please answer based on where you would place your parents on this spectrum)
 - a. Working class
 - b. Lower middle class
 - c. Middle class
 - d. Upper middle class
 - e. Upper class

The following demographic questions will only be included in Studies 1 and 2.

1. Please indicate your intended major:
 2. What is your GPA?
 3. Have you taken high school college credit in Math? If yes, indicate the courses you took:
 4. What are the college level courses you took in Math?
 5. How good are you in Math?
- Very bad bad average good very good

The following demographic questions will only be included in Study 3.

5. Indicate your ethnicity
 - a. American Indian or Alaskan Native
 - b. Asian
 - c. Black or African American
 - d. Latino or Hispanic
 - e. Native Hawaiian or Pacific Islander
 - f. White
6. Indicate your years of education
 - a. Less than 12 years
 - b. Currently in high school
 - c. High school graduate
 - d. Currently in college
 - e. College graduate
 - f. Currently in graduate or professional school
 - g. Doctoral or professional school graduate
7. If you identify with a culture other than American, indicate which culture you identify with _____

8. Indicate the number of years you have lived in the US _____

9. Where are you from? _____

10. Do you have a nonnative accent?

a. Yes

b. No

11. Have you ever felt that you were being treated differently because of your accent?

a. Yes

b. No

12. How frequently do you feel being treated differently because of your accent?

Never

rarely

sometimes

often

always

Information recall:

Based on the lecture you have listened to, choose the correct answer choice to the best of your memory.

1. The lecture was on
 - a. Derivatives.
 - b. Integrals.
2. Derivatives are fundamental in
 - a. Science, engineering, and economics
 - b. Only engineering
3. The lecture covered
 - a. The geometric definition of a derivative
 - b. The conceptual definition of a derivative
4. A secant line is
 - a. A line that is orthogonal to a curve
 - b. A line that joins two points on a curve
5. How do we know which lines are tangent lines?
 - a. By using secant lines
 - b. By using other tangent lines

Manipulation check:

1. What do you think the experiment was about? _____
2. What do you think the hypothesis of the experiment is? _____

Appendix D**Pilot questions**

Please answer the following questions based on the audio recording you just listened to.

1. How difficult is it to understand this speaker?

1 2 3 4 5 6 7

Very easy

Very difficult

2. How intelligible is the speaker?

1 2 3 4 5 6 7

Not at all

Very

Appendix E

Script for the audio recordings

Welcome to 18.01 Welcome to 18.01. Today we start “Unit One”; the topic of the unit is differentiation. We’ll start by reviewing what’s in store in the next couple of weeks. The topic of this lecture is “what is a derivative?” We’re going to look at this question from several different points of view, and the first one is the geometric interpretation. We’ll also discuss a physical interpretation. Later we’ll learn what makes calculus so fundamental in science and engineering. Derivatives are important in all measurements – in science, in engineering, in economics, in political science, in polling, in lots of commercial applications, in just about everything. In this unit we’ll also learn how to differentiate any function you know. That’s a tall order, but by the end of the unit you will know how to take $x \cdot \arctan(x)$ derivatives of functions like $f(x) = e^x$. Let’s begin.

MIT open courseware link: http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/1.-differentiation/part-a-definition-and-basic-rules/session-1-introduction-to-derivatives/MIT18_01SCF10_Ses1a.pdf

Geometric definition of the derivative: We’re still trying to find a computational method of finding the equation of the tangent line – how do we compute the value of m ? In general, how do we know which lines are tangent lines and which lines are not?

A secant line is a line that joins two points on a curve. If the two points are close enough together, the slope of the secant line is close to the slope of the curve. We want to find the slope of the tangent line m — which equals the slope of the curve — and we use the slopes of secant lines to do this. Suppose PQ is a secant line of the graph of $f(x)$. We can find the slope of the graph at P by calculating the slope of PQ as Q moves closer and closer to P (and the slope of PQ gets closer and closer to m). The tangent line equals the limit of secant lines PQ as $Q \rightarrow P$; here P is fixed and Q varies.

MIT open courseware link: http://ocw.mit.edu/courses/mathematics/18-01sc-single-variable-calculus-fall-2010/1.-differentiation/part-a-definition-and-basic-rules/session-1-introduction-to-derivatives/MIT18_01SCF10_Ses1c.pdf

Table 1

Experimental groups in Study 1 and Study 3

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Standard American accent	Standard American accent	Standard American accent	Standard American accent	Latino accent	Latino accent
Light skin (non-Latino) American name	Dark skin (non-Latino) American name	Light skin Latino name	Dark skin Latino name	Light skin Latino name	Dark skin Latino name

Table 2

Experimental groups in Study 2

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Standard American accent	Standard American accent	Standard American accent	Standard American accent	French accent	French accent
Light skin (non-Latino) American name	Dark skin (non-Latino) American name	Light skin French name	Dark skin French name	Light skin French name	Dark skin French name



Figure 1. Pictures of the targets with a dark skin color and a light skin color used in Studies 1, 2, and 3.

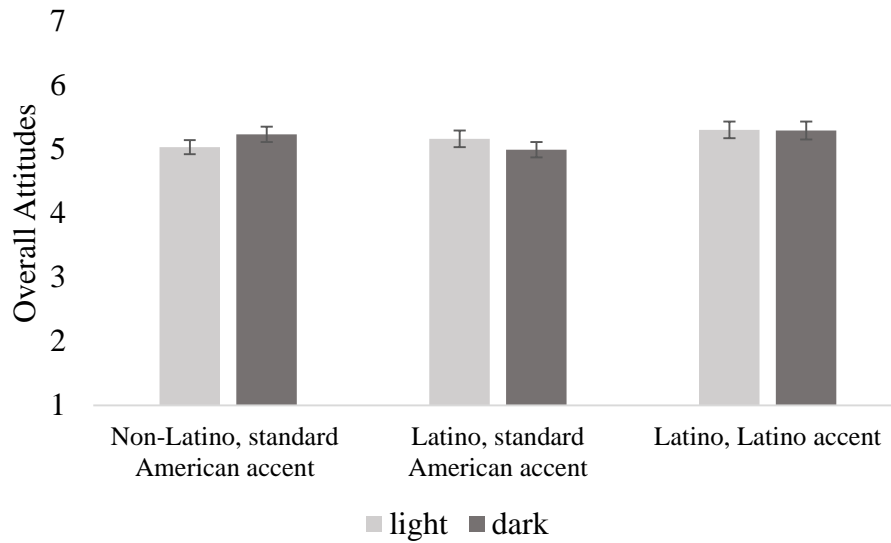


Figure 2. Mean overall attitude scores toward the targets across experimental groups in Study 1. Higher scores show positive attitudes. Adjusted mean scores were used.

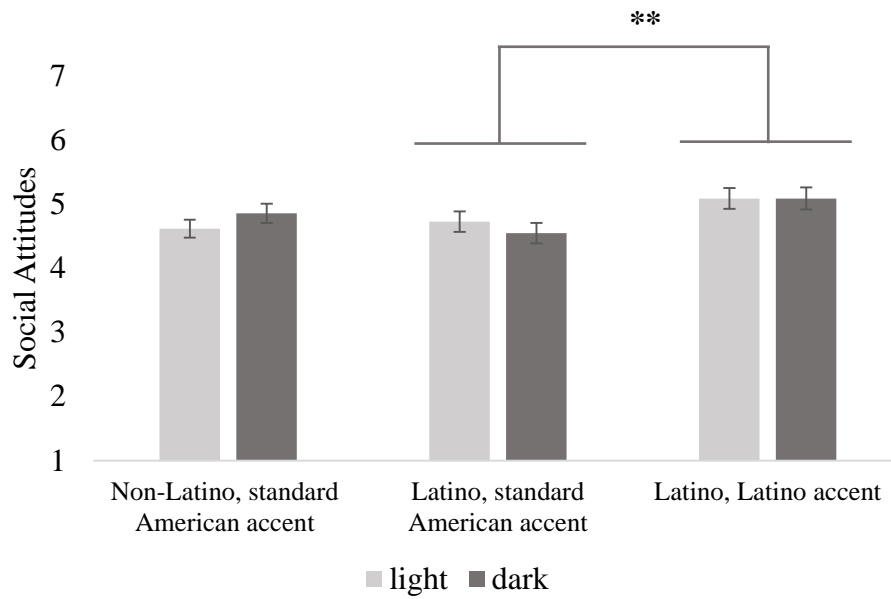


Figure 3. Mean social attitude scores toward the targets across experimental groups in Study 1. Higher scores show positive attitudes. Adjusted mean scores were used. **denotes $p < .01$.

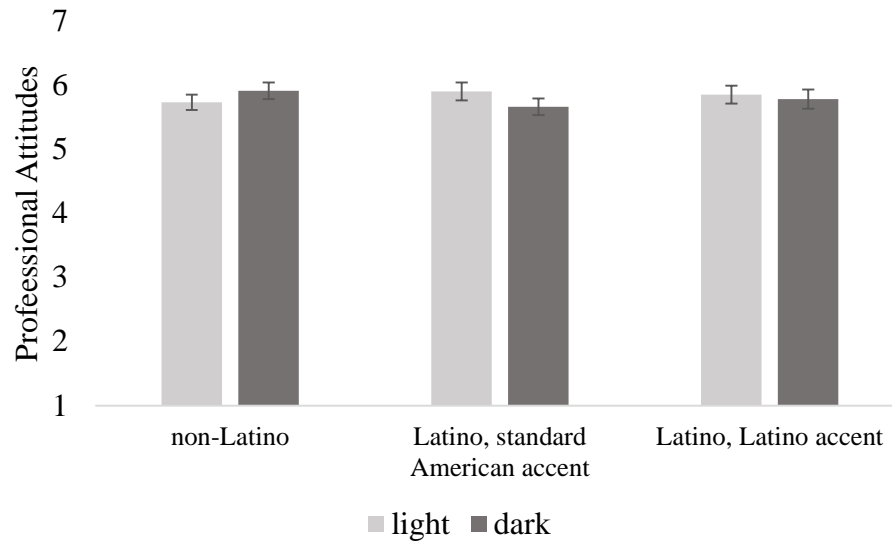


Figure 4. Mean professional attitude scores toward the targets across experimental groups in Study 1. Higher scores show positive attitudes. Adjusted mean scores were used.

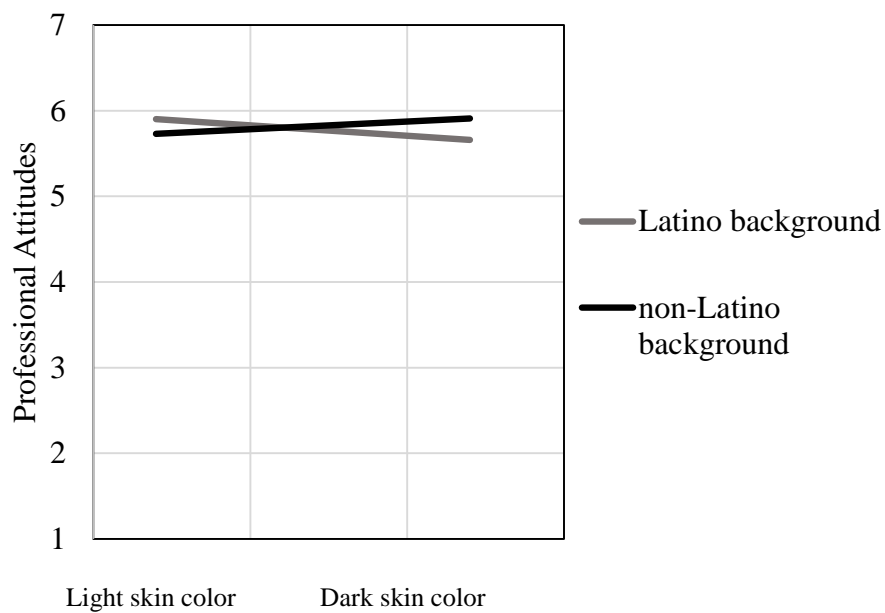


Figure 5. The interaction between background and race regarding professional attitudes in Study 1.

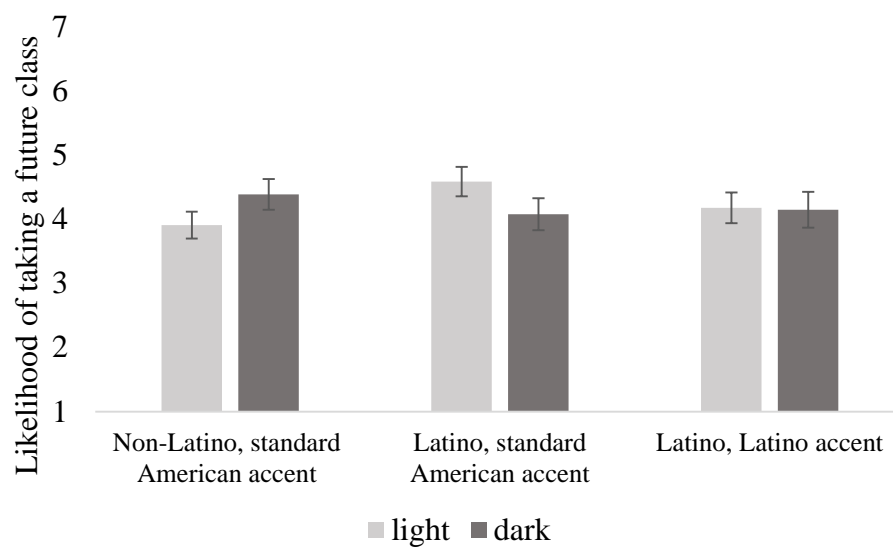


Figure 6. Mean scores for likelihood of taking a future class from the targets across experimental groups in Study 1. Higher scores show higher likelihood. Adjusted mean scores were used.

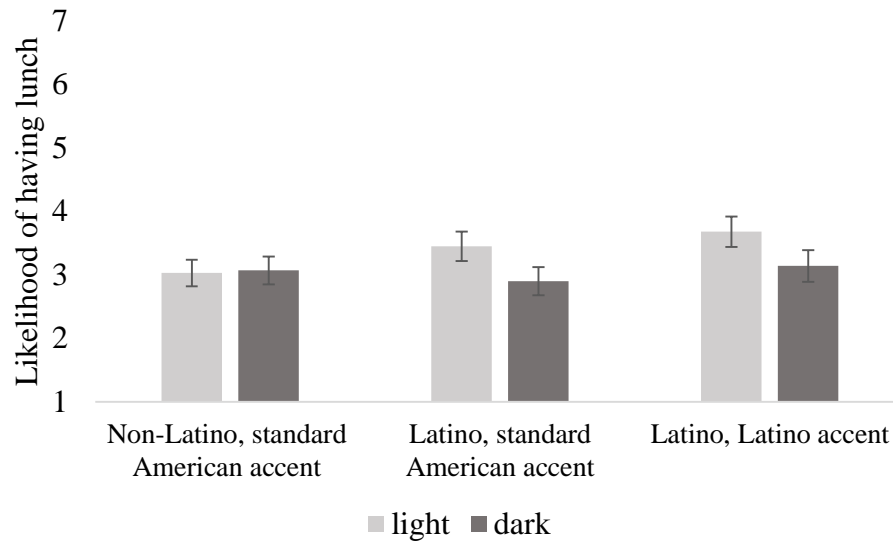


Figure 7. Mean scores for likelihood having lunch with the targets across experimental groups in Study 1. Higher scores show higher likelihood. Adjusted mean scores were used.

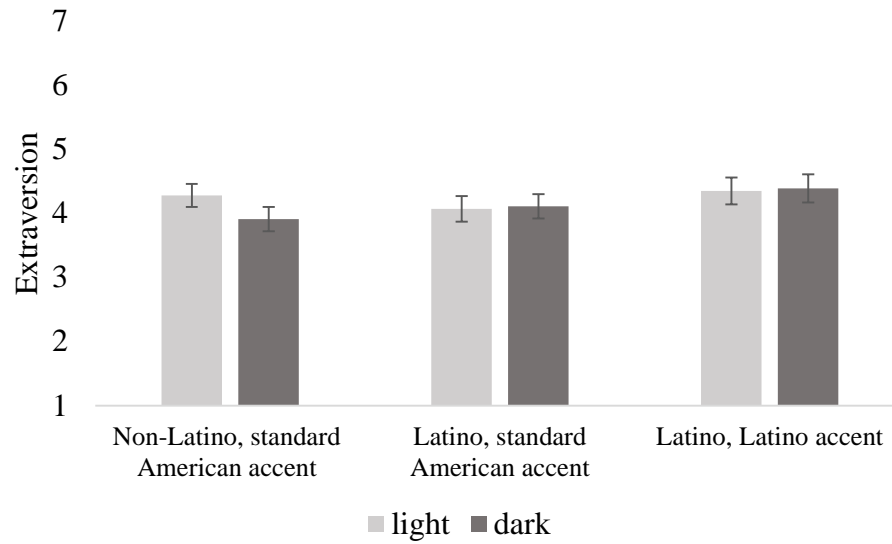


Figure 8. Mean extraversion ratings of the targets across experimental groups in Study 1. Higher scores show higher perceived extraversion. Adjusted mean scores were used.

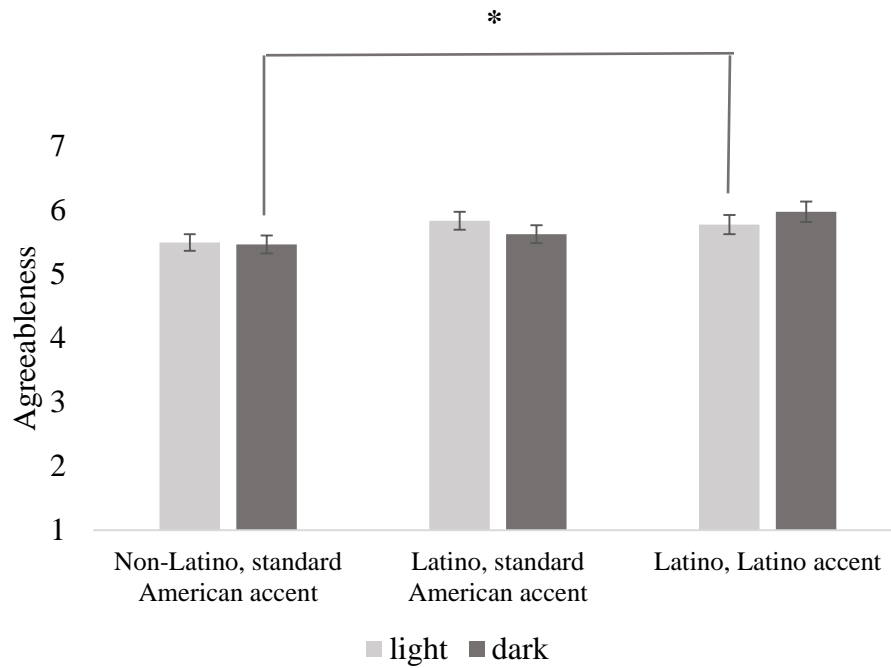


Figure 9. Mean agreeableness ratings of the targets across experimental groups in Study 1. Higher scores show higher perceived agreeableness. Adjusted mean scores were used. * denotes $p < .05$.

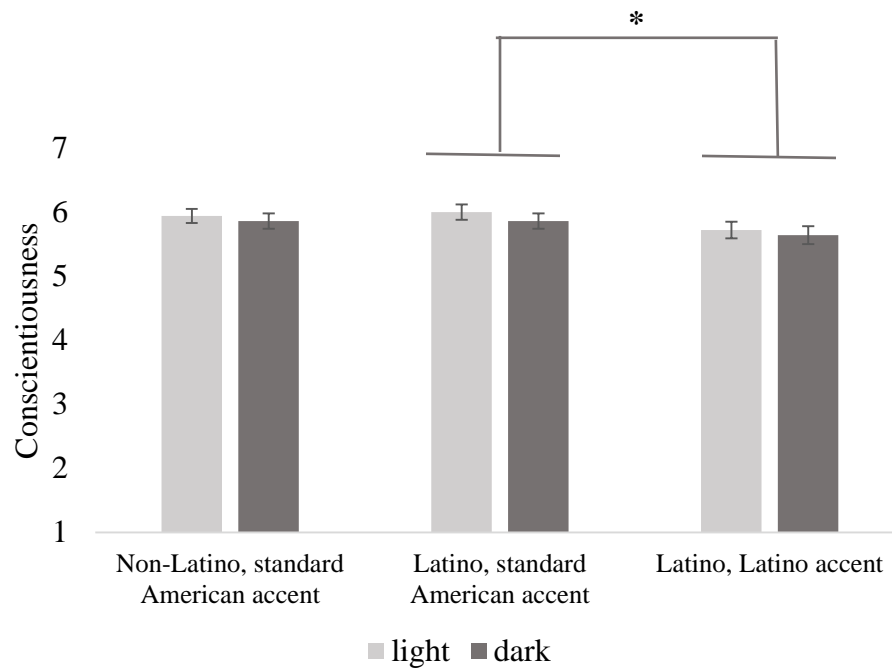


Figure 10. Mean conscientiousness ratings of the targets across experimental groups in Study 1. Higher scores show higher perceived conscientiousness. Adjusted mean scores were used. * denotes $p < .05$.

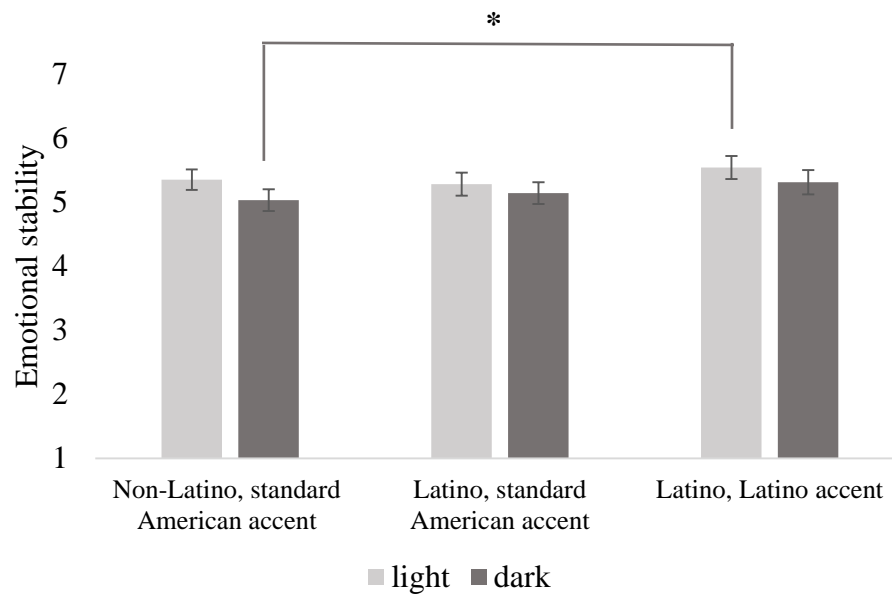


Figure 11. Mean emotional stability ratings of the targets across experimental groups in Study 1. Higher scores show higher perceived emotional stability. Adjusted mean scores were used. * denotes $p < .05$.

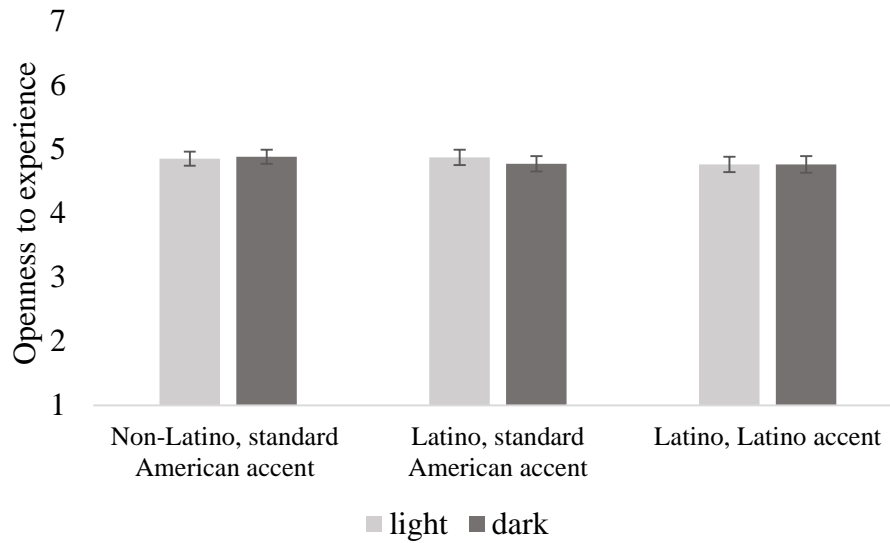


Figure 12. Mean openness to experience ratings of the targets across experimental groups in Study 1. Higher scores show higher perceived openness to experience. Adjusted mean scores were used.

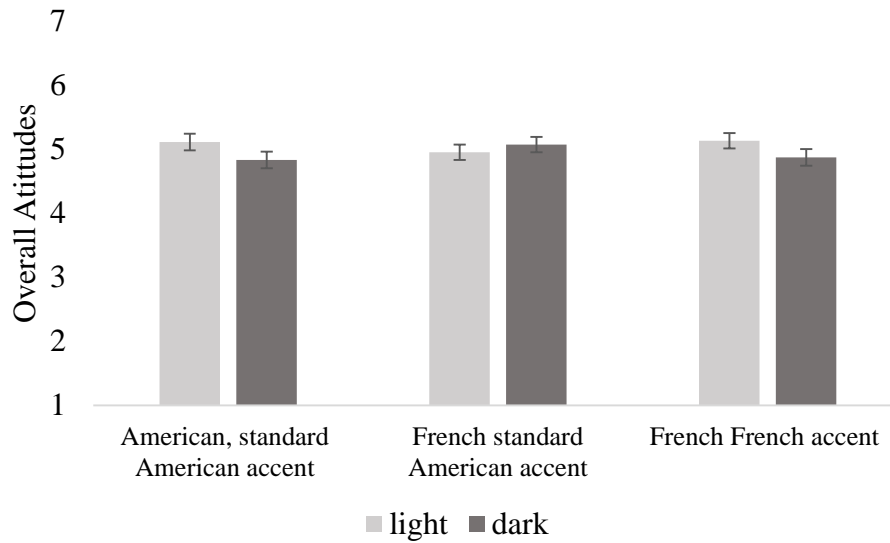


Figure 13. Mean overall attitude scores toward the targets across experimental groups in Study 2. Higher scores show positive attitudes. Adjusted mean scores were used.

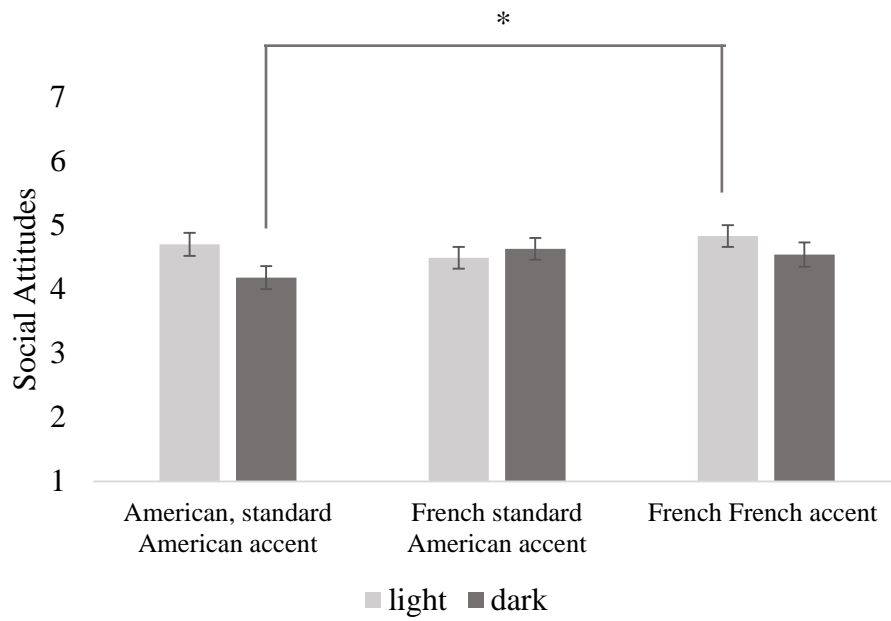


Figure 14. Mean social attitude scores toward the targets across experimental groups in Study 2. Higher scores show positive attitudes. Adjusted mean scores were used. * denotes $p < .05$.

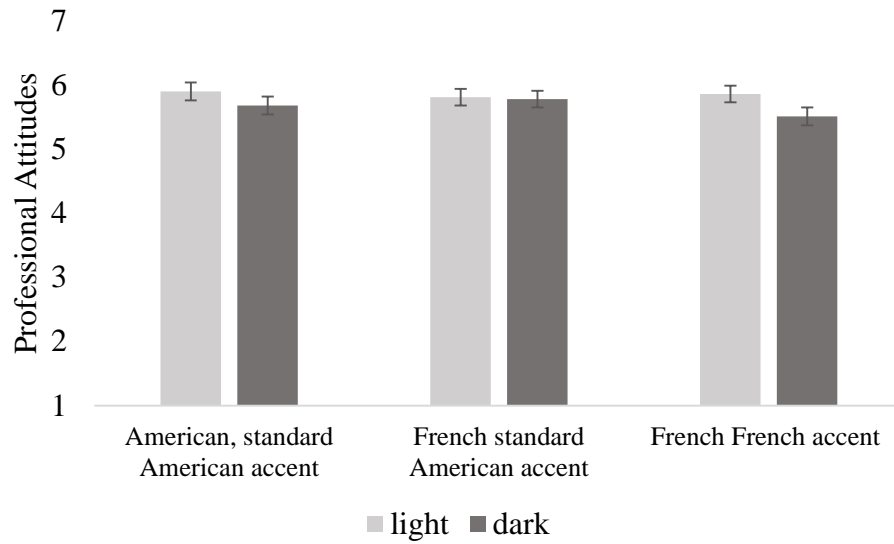


Figure 15. Mean professional attitude scores toward the targets across experimental groups in Study 2. Higher scores show positive attitudes. Adjusted mean scores were used.

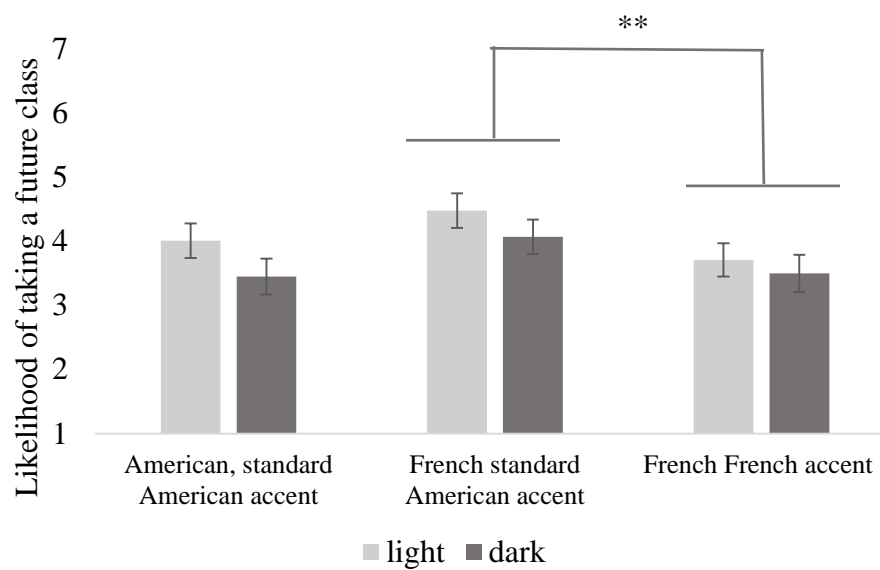


Figure 16. Mean scores for likelihood of taking a future class from the targets across experimental groups in Study 2. Higher scores show higher likelihood. Adjusted mean scores were used. ** denotes $p < .01$.

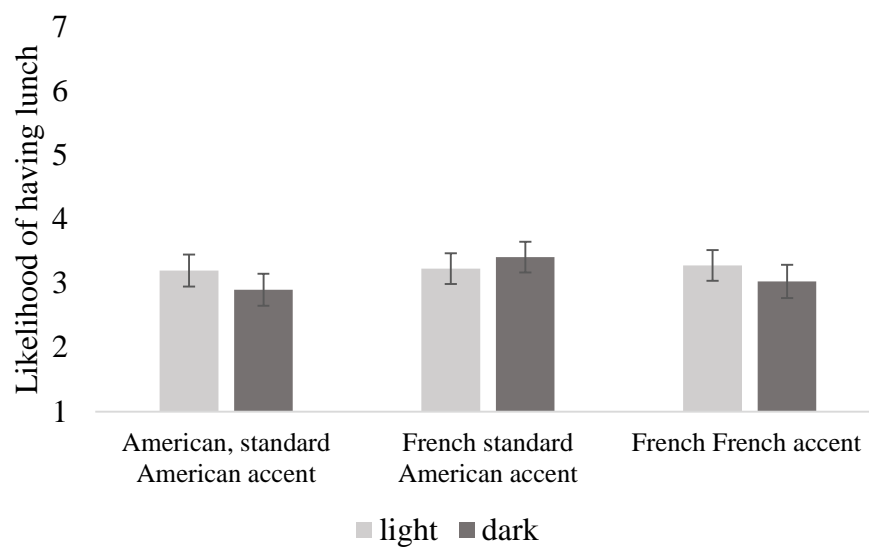


Figure 17. Mean scores for likelihood having lunch with the targets across experimental groups in Study 2. Higher scores show higher likelihood. Adjusted mean scores were used.

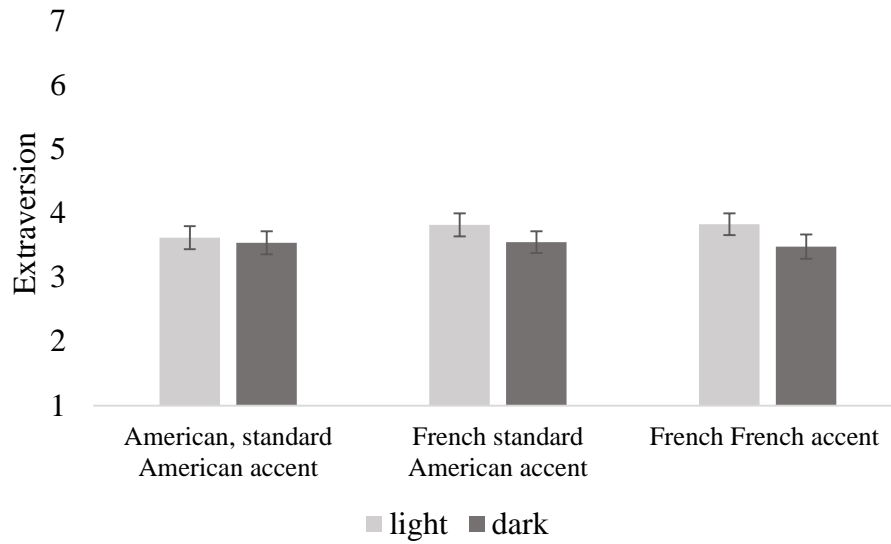


Figure 18. Mean extraversion ratings of the targets across experimental groups in Study 2. Higher scores show higher perceived extraversion. Adjusted mean scores were used.

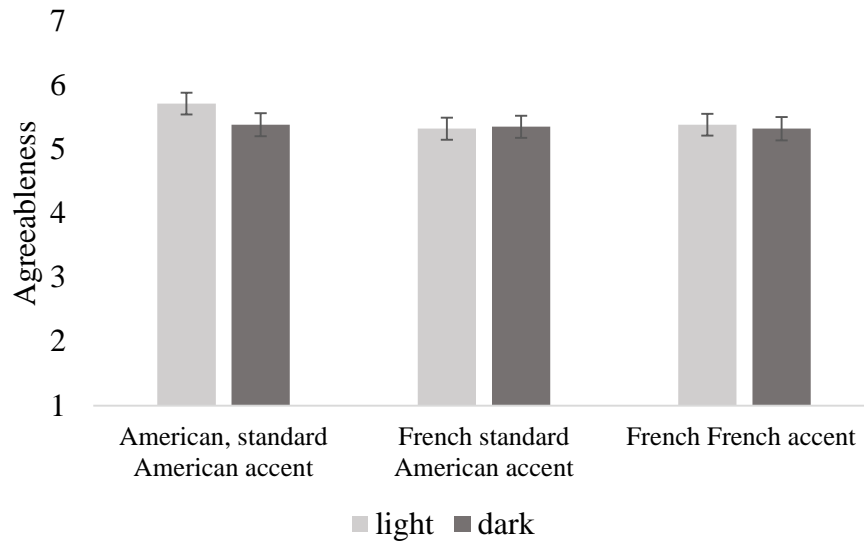


Figure 19. Mean agreeableness ratings of the targets across experimental groups in Study 2. Higher scores show higher perceived agreeableness. Adjusted mean scores were used.

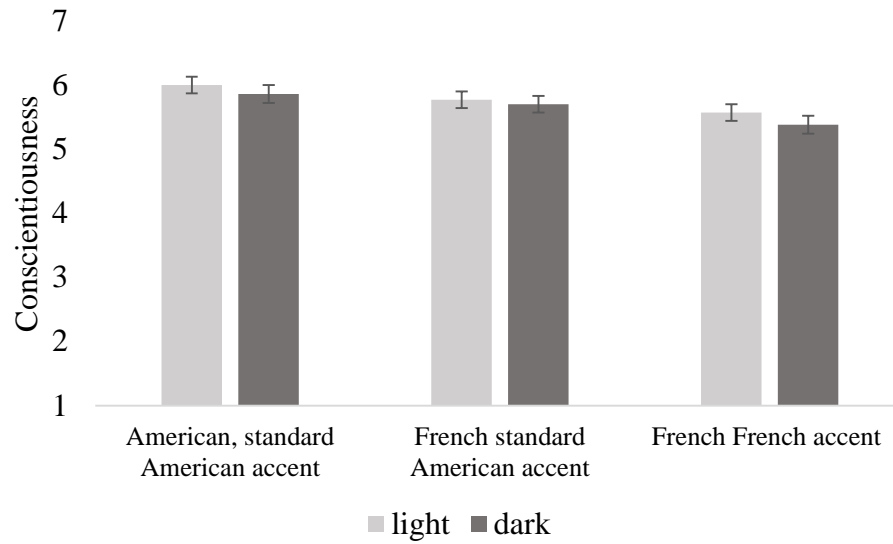


Figure 20. Mean conscientiousness ratings of the targets across experimental groups in Study 2. Higher scores show higher perceived conscientiousness. Adjusted mean scores were used.

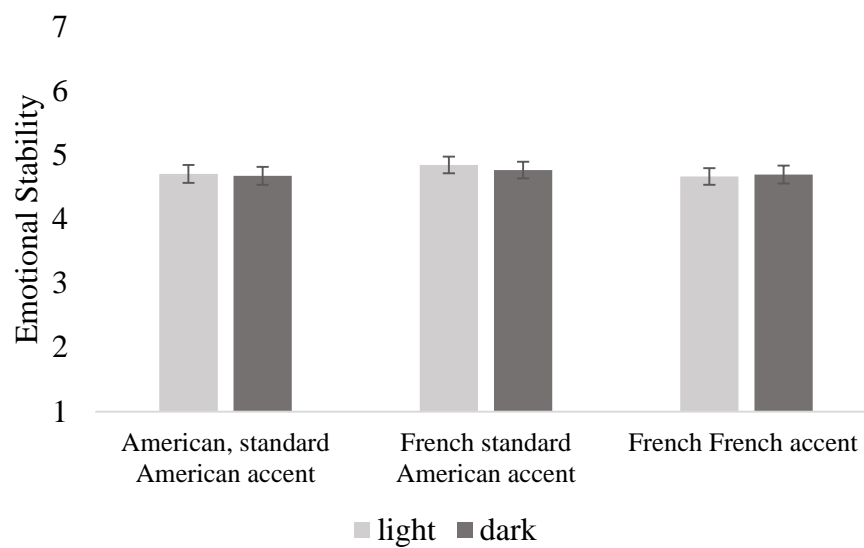


Figure 21. Mean emotional stability ratings of the targets across experimental groups in Study 2. Higher scores show higher perceived emotional stability. Adjusted mean scores were used.

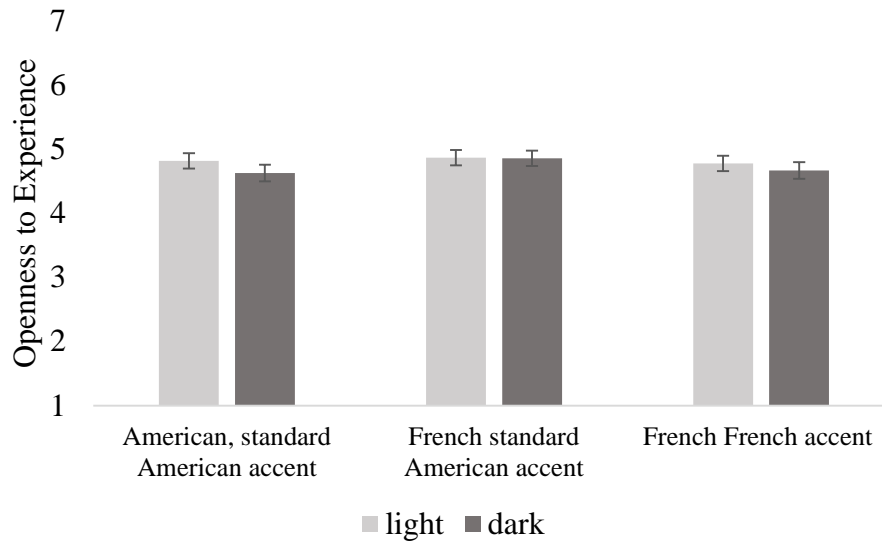


Figure 22. Mean openness to experience ratings of the targets across experimental groups in Study 2. Higher scores show higher perceived openness to experience. Adjusted mean scores were used.

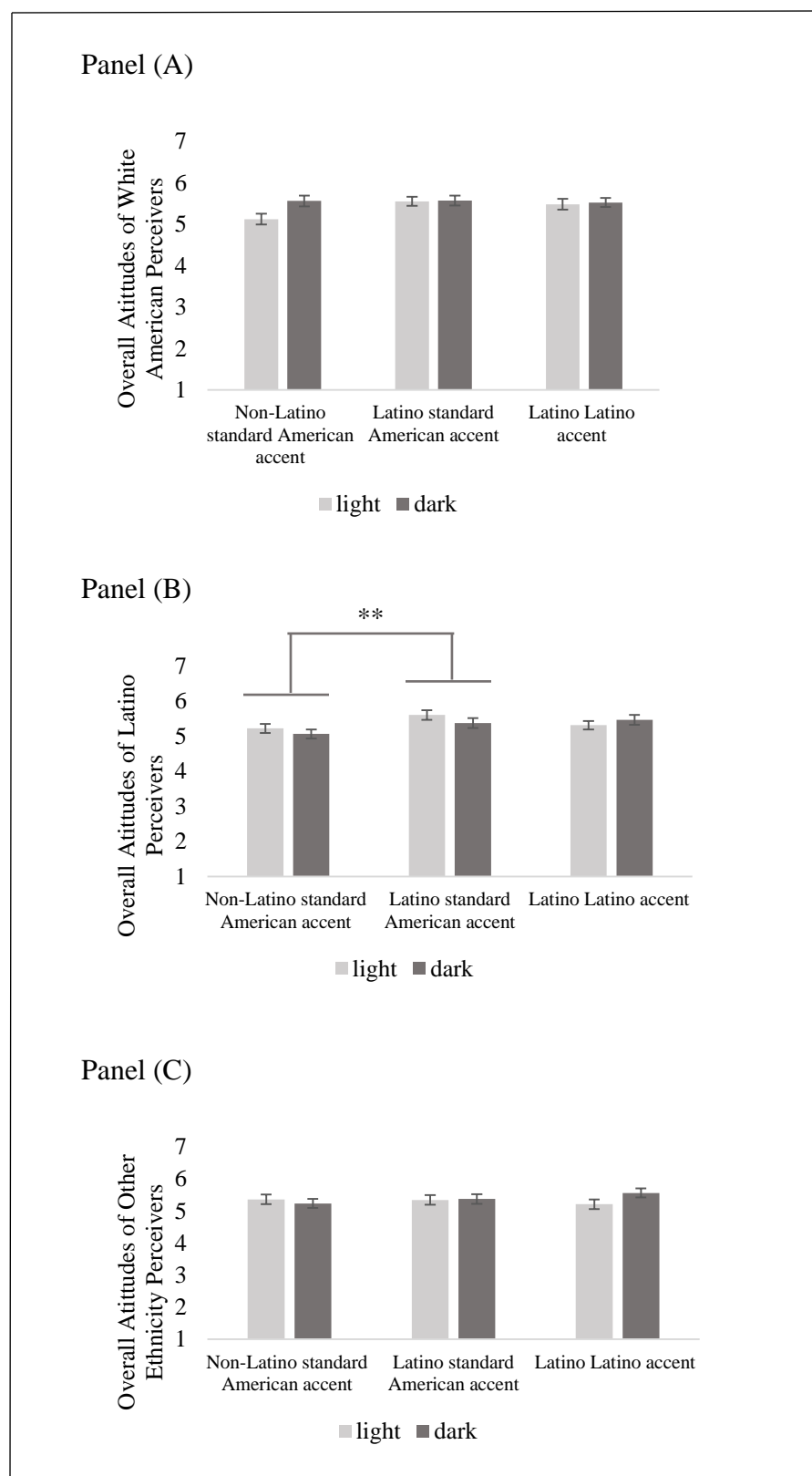
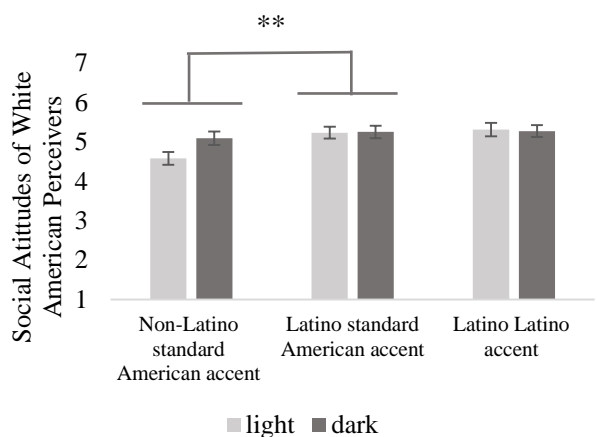
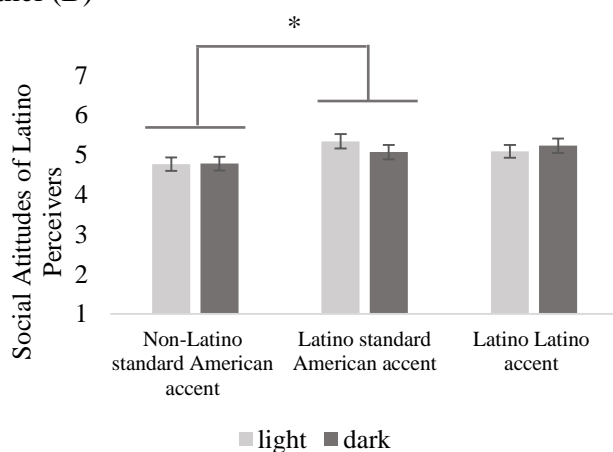


Figure 23. Mean scores for overall attitudes toward targets across conditions in Study 3. Higher scores show positive attitudes. Adjusted mean scores were used. ** denotes $p < .01$.

Panel (A)



Panel (B)



Panel (C)

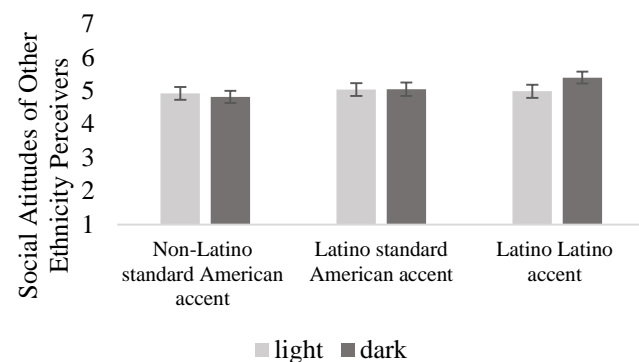
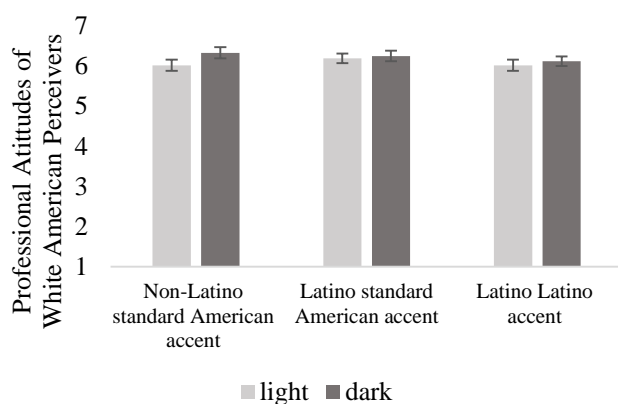
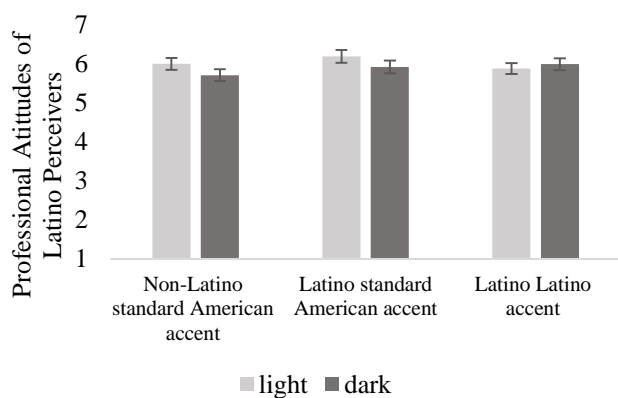


Figure 24. Mean scores for social attitudes toward targets across conditions in Study 3. Higher scores show positive attitudes. Adjusted mean scores were used. * denotes $p < .05$, ** denotes $p < .01$.

Panel (A)



Panel (B)



Panel (C)

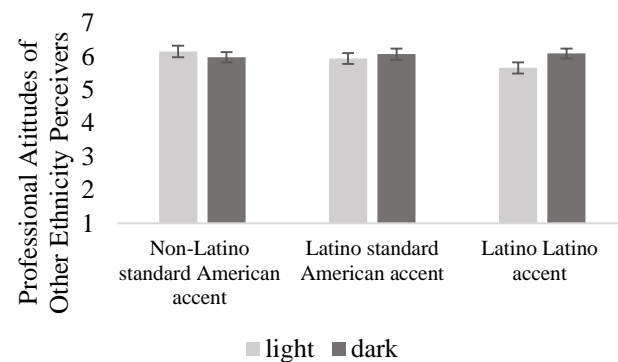


Figure 25. Mean scores for professional attitudes toward targets across conditions in Study 3. Higher scores show positive attitudes. Adjusted mean scores were used.

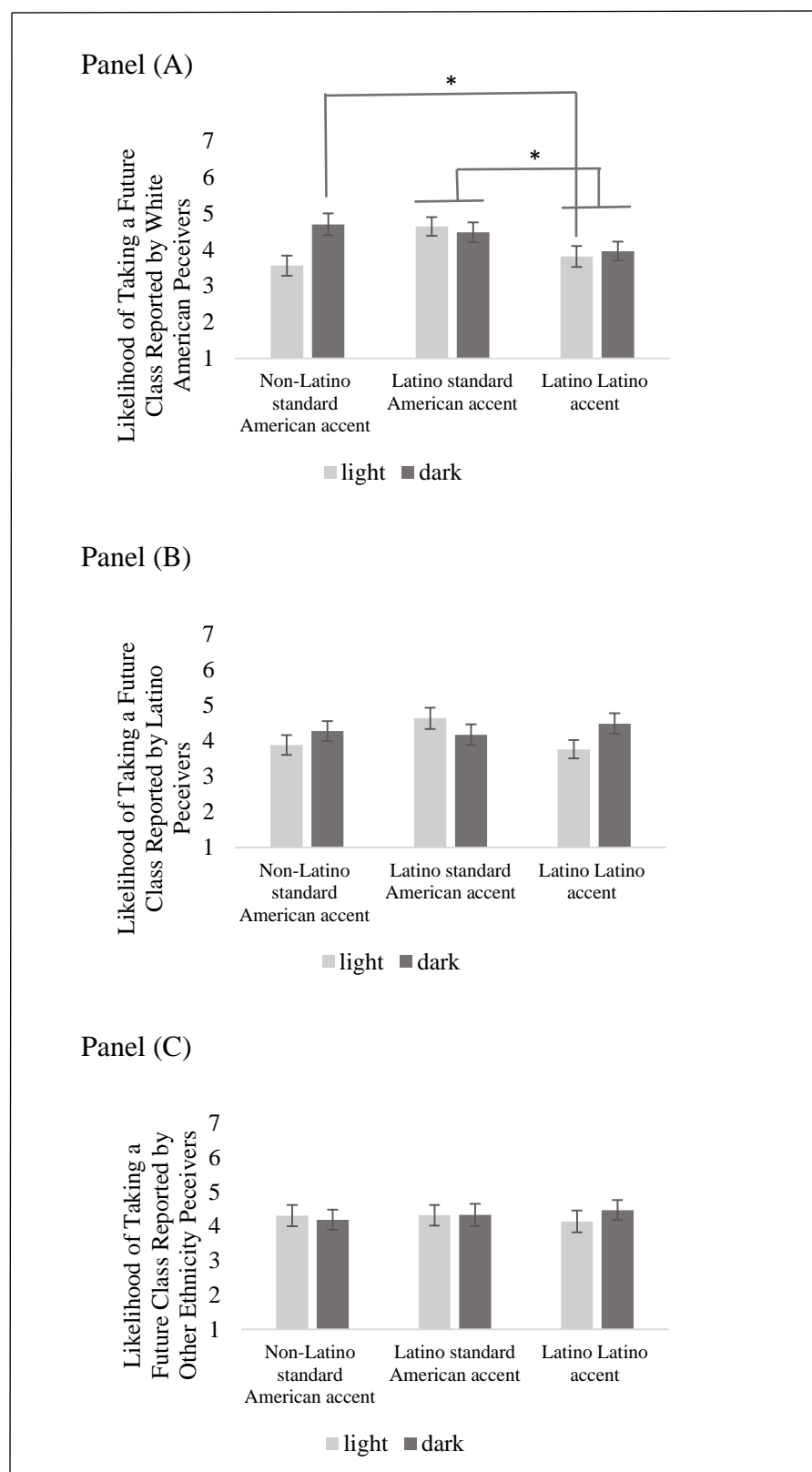


Figure 26. Mean scores for likelihood of taking a future class ratings across conditions in Study 3. Higher scores show higher likelihood. Adjusted mean scores were used. * denotes $p < .05$.

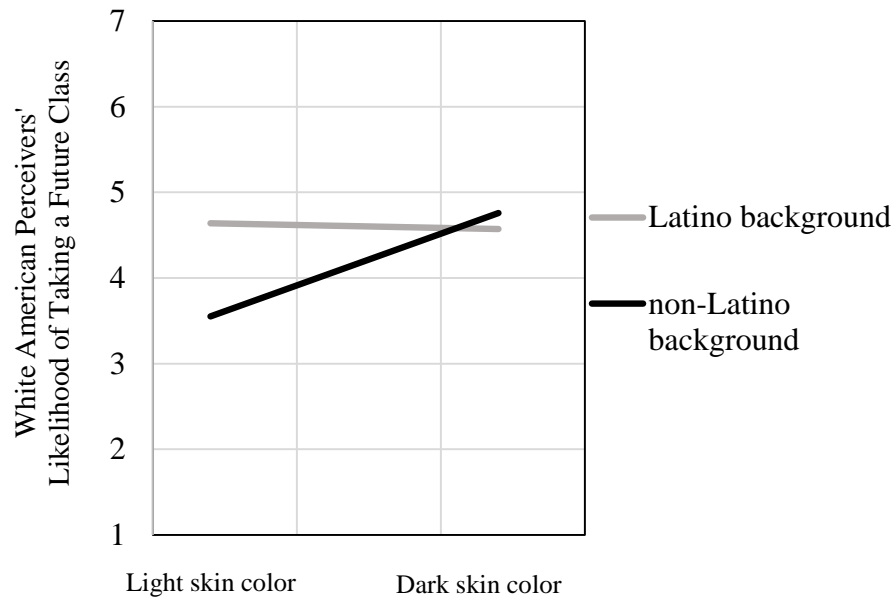


Figure 27. The interaction between background and race regarding White perceivers' likelihood of taking a future class in Study 3.

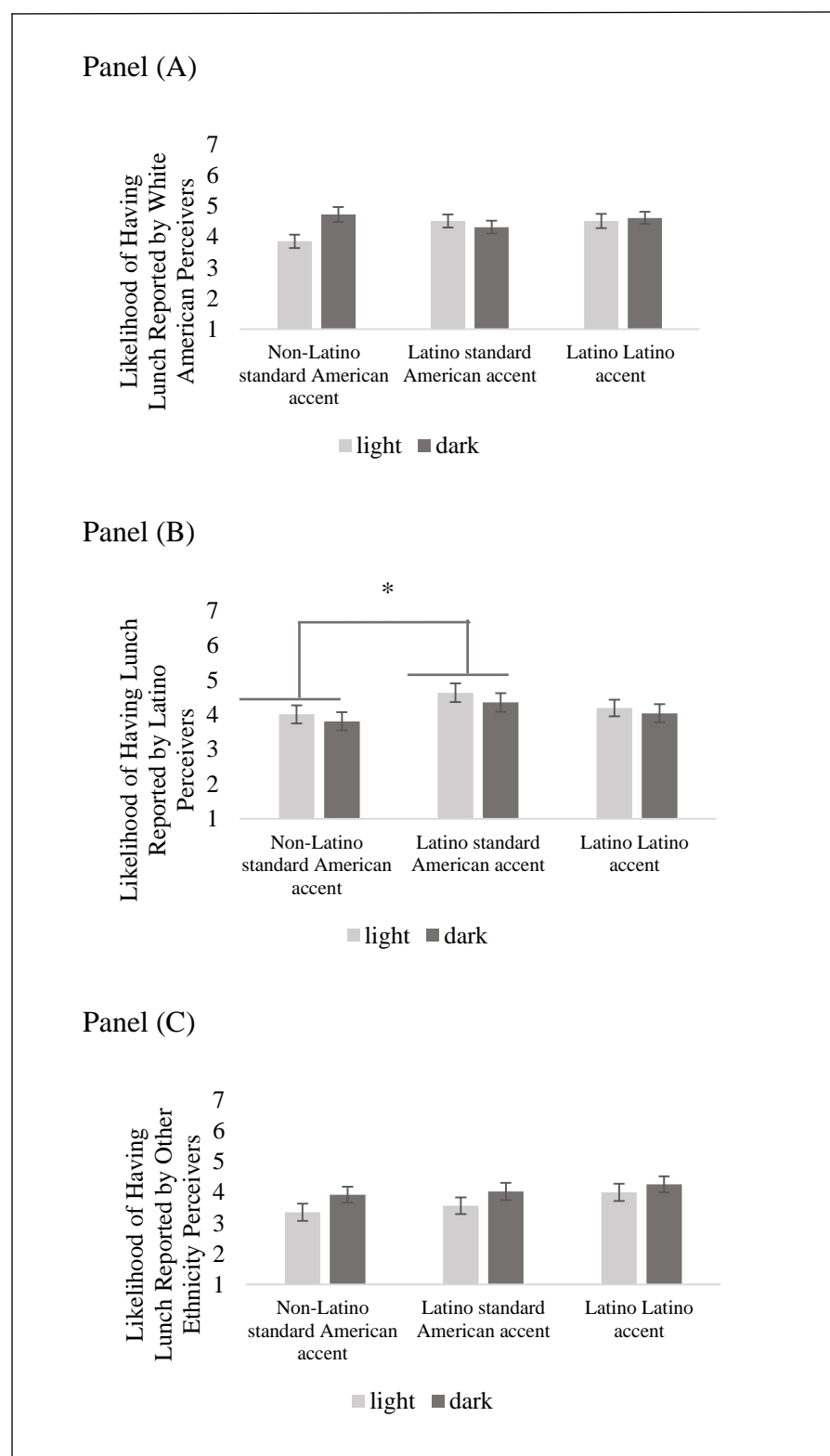


Figure 28. Mean scores for likelihood of having lunch ratings across conditions in Study 3. Higher scores show higher likelihood. Adjusted mean scores were used. * denotes $p < .05$.

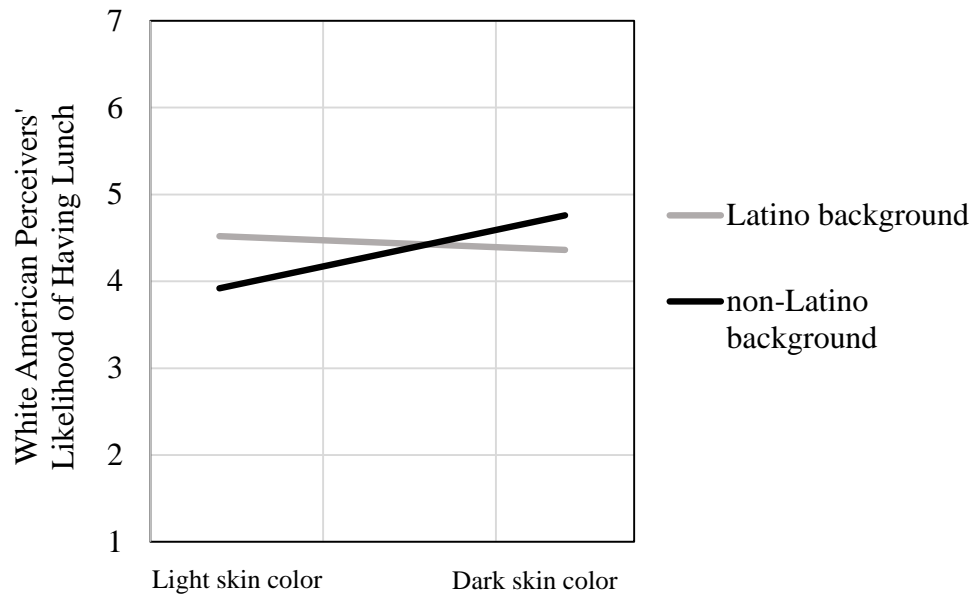
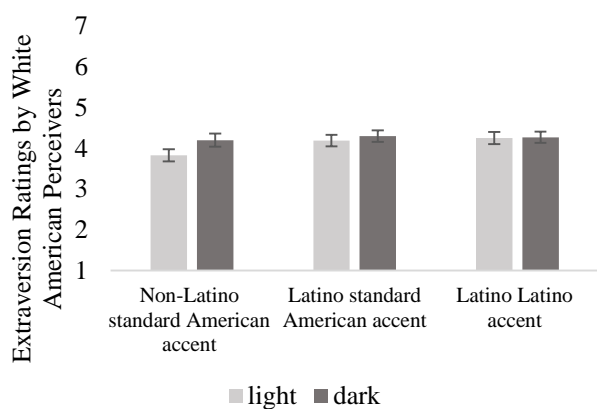
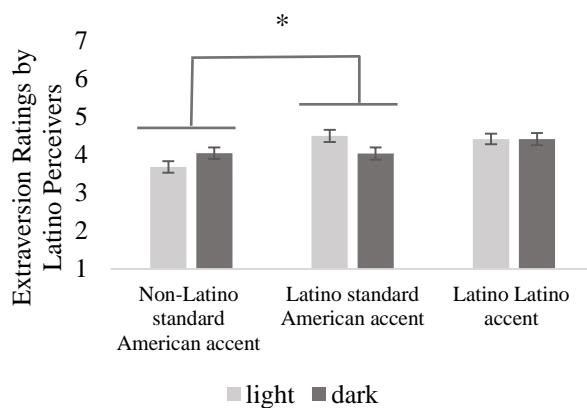


Figure 29. The interaction between background and race regarding White perceivers' likelihood of having lunch in Study 3.

Panel (A)



Panel (B)



Panel (C)

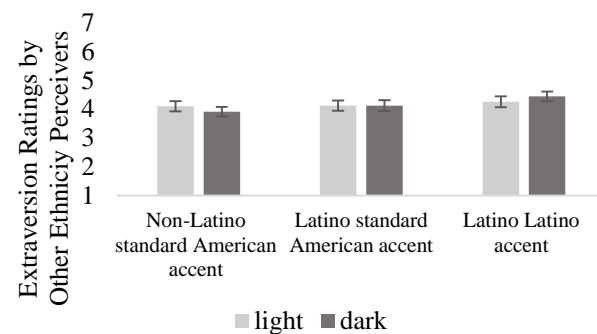
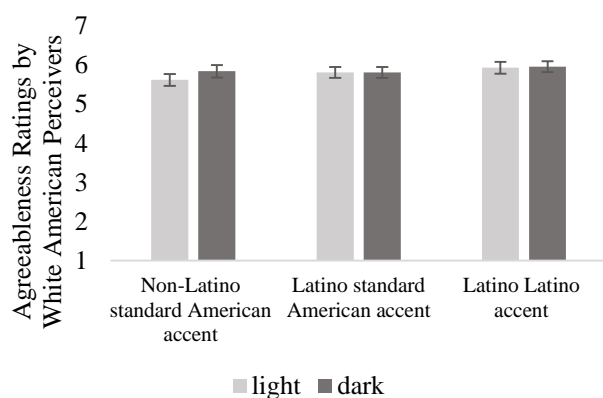
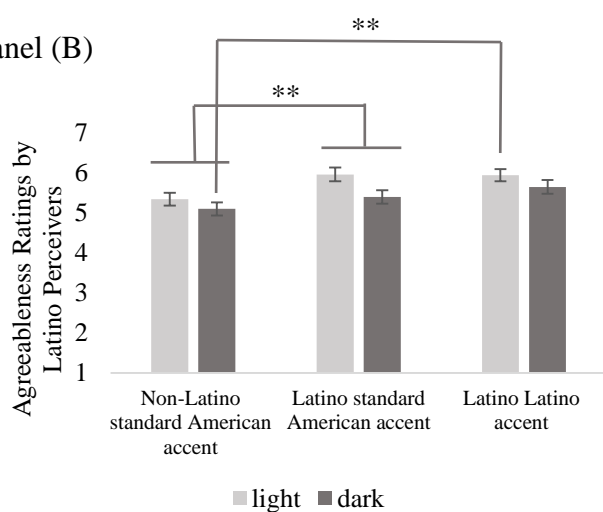


Figure 30. Mean scores for extraversion ratings across conditions in Study 3. Higher scores show higher perceived extraversion. Adjusted mean scores were used. * denotes $p < .05$.

Panel (A)



Panel (B)



Panel (C)

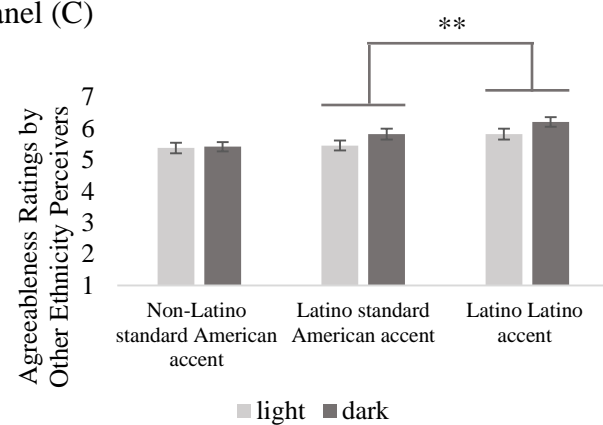
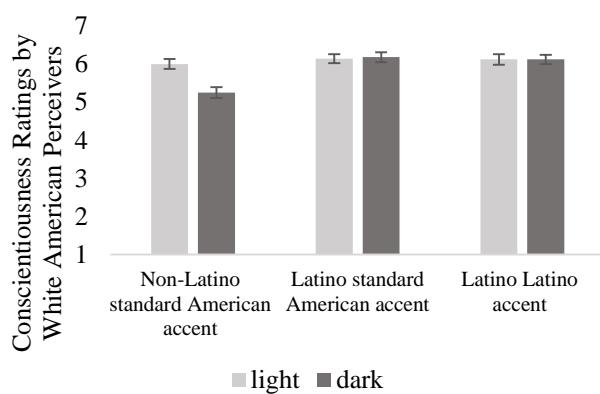
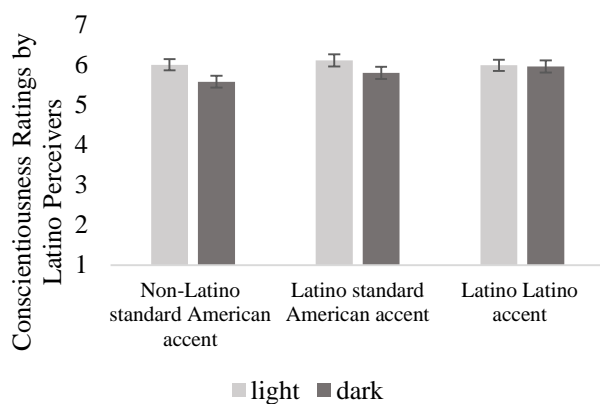


Figure 31. Mean scores for agreeableness ratings across conditions in Study 3. Higher scores show higher perceived agreeableness. Adjusted mean scores were used. ** denotes $p < .01$.

Panel (A)



Panel (B)



Panel (C)

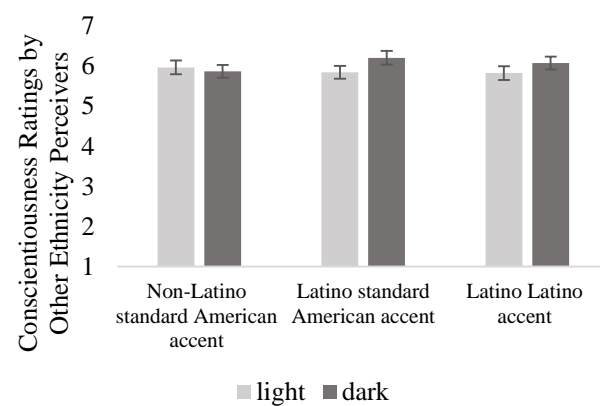
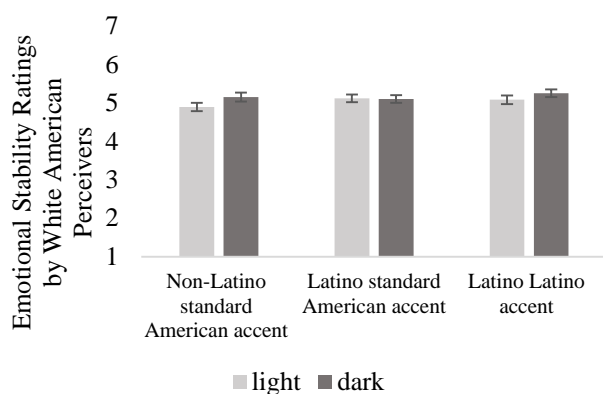
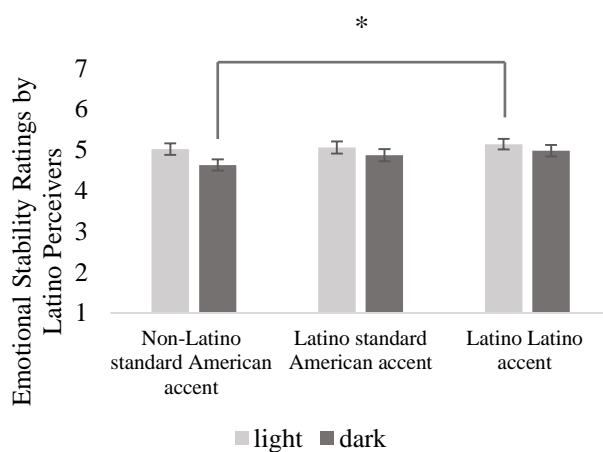


Figure 32. Mean scores for conscientiousness ratings across conditions in Study 3. Higher scores show higher perceived conscientiousness. Adjusted mean scores were used.

Panel (A)



Panel (B)



Panel (C)

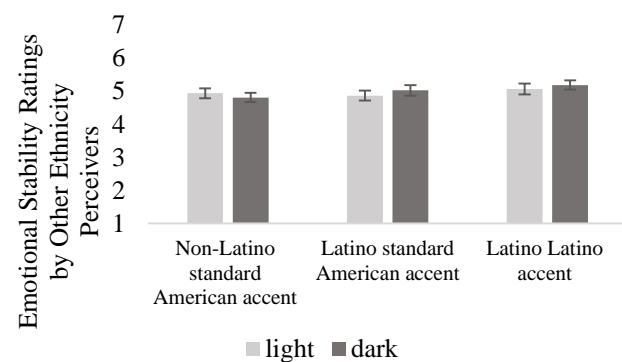
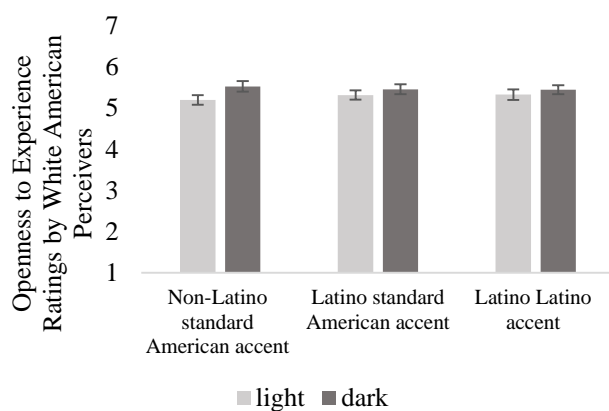
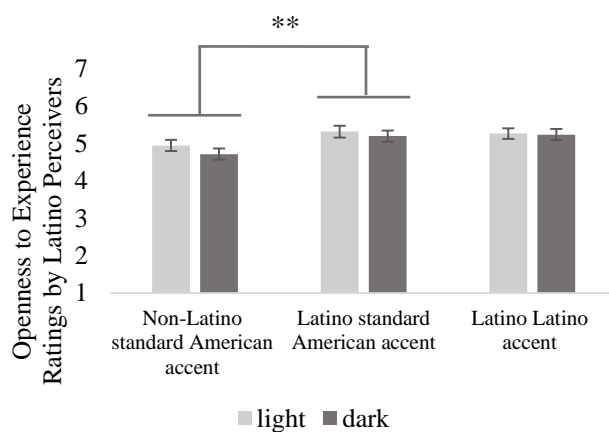


Figure 33. Mean scores for emotional stability ratings across conditions in Study 3. Higher scores show higher perceived emotional stability. Adjusted mean scores were used. * denotes $p < .05$.

Panel (A)



Panel (B)



Panel (C)

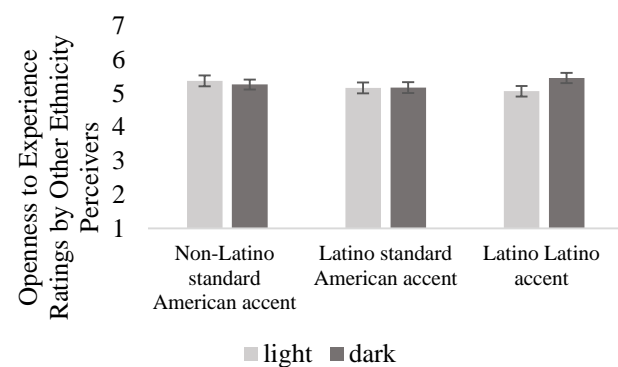


Figure 34. Mean scores for openness to experience ratings across conditions in Study 3. Higher scores show higher perceived openness to experience. Adjusted mean scores were used. ** denotes $p < .01$.